



May 2014

To be reviewed no later than May 2019

SHOALHAVEN FLOOD EMERGENCY SUB PLAN

A Sub-Plan of the Shoalhaven City Local Emergency Management Plan (EMPLAN)

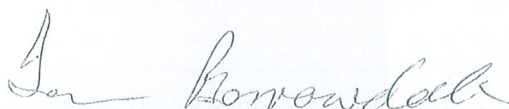
Volume 1 of the Shoalhaven Local Flood Plan



AUTHORISATION

The Shoalhaven Flood Emergency Sub Plan is a sub plan of the Shoalhaven Local Emergency Management Plan (EMPLAN). It has been prepared in accordance with the provisions of the **State Emergency Service Act 1989 (NSW)** and is authorised by the Local Emergency Management Committee in accordance with the provisions of the **State Emergency and Rescue Management Act 1989 (NSW)**.

Recommended



NSW SES Shoalhaven City Local Controller

Date: 12/6/2014

Approved



Chair, Local Emergency Management Committee

Date: 12/6/2014

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DISTRIBUTION LIST

Recipient	Number of copies
NSW SES Shoalhaven City Local Controller	1
NSW SES Saint Georges Basin Unit	
NSW SES Nowra Unit	1
NSW SES Ulladulla Unit	1
NSW SES Illawarra South Coast Region Headquarters	1
NSW SES State Headquarters	1
Shoalhaven City, Local Emergency Operations Controller	1
NSW Police Force, Shoalhaven Local Area Command	1
Shoalhaven City, Local Emergency Management Committee Members	4
Shoalhaven City, Local Emergency Management Officer	1
Shoalhaven City, Local Emergency Operations Centre	1
Shoalhaven City Council, Mayor	1
Shoalhaven City Council, General Manager	1
Shoalhaven City Council, Technical Services Department	1
Fire and Rescue NSW, Nowra, Berry, and Ulladulla	1
Rural Fire Service, Shoalhaven	1
Ambulance Service of NSW, Kangaroo Valley, Bomaderry, Culburra, Huskisson, and Ulladulla	1
Marine Rescue NSW	1
Surf Life Saving NSW	1
Office of Environment and Heritage	1
Evacuation Centres	1 each
Hospitals	1 each
Schools	1 each
Caravan Parks	1 each
Council Libraries	1 each
Total	

VERSION HISTORY

The following table lists all previously endorsed versions of this plan.

Description	Date

AMENDMENT LIST

Suggestions for amendments to this plan should be forwarded to:

Illawarra South Coast Region HQ
PO Box 1460
Wollongong, NSW 2500

Amendments promulgated in the amendments list below have been entered in this plan.

Amendment Number	Description	Updated by	Date

LIST OF ABBREVIATIONS

The following abbreviations have been used in this plan:

AEP	Annual Exceedance Probability
AHD	Australian Height Datum
AIIMS	Australasian Inter-service Incident Management System
ARI	Average Recurrence Interval (Years)
ALERT	Automated Local Evaluation in Real Time
AWRC	Australian Water Resources Council
BUREAU	Australian Government Bureau of Meteorology
CBR	Chemical, Biological and Radiation
DCF	Dam Crest Flood
DSC	Dams Safety Committee
DSEP	Dam Safety Emergency Plan
DVR	Disaster Victim Registration
EMPLAN	Emergency Management Plan
FRNSW	Fire and Rescue NSW
NOW	NSW Office of Water
GIS	Geographic Information System
GRN	Government Radio Network
IAP	Incident Action Plan
IFF	Imminent Failure Flood
LEMC	Local Emergency Management Committee
LEOCON	Local Emergency Management Controller
LGA	Local Government Area
OEH	Office of Environment and Heritage (previously DECCW)

MHL	Manly Hydraulics Laboratory
PMF	Probable Maximum Flood
PMR	Private Mobile Radio
PMP	Probable Maximum Precipitation
RFS	Rural Fire Service
RMS	Roads and Maritime Services
SEOCON	State Emergency Operations Controller
SERCON	State Emergency Recovery Controller
NSW SES	NSW State Emergency Service
SEWS	Standard Emergency Warning Signal
VRA	Volunteer Rescue Association
WICEN	Wireless Institute Civil Emergency Network

GLOSSARY

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).

Assistance Animal. A guide dog, a hearing assistance dog or any other animal trained to assist a person to alleviate the effect of a disability (Refer to Section 9 of the Disability Discrimination Act 1992).

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. The loss of land along the shoreline predominantly by the offshore movement of sand during storms.

Dambreak Study. A Dambreak Study is undertaken to determine the likely downstream inundation areas in case of a dam failure. Modelling is undertaken for a range of dam breach possibilities and design floods. The dambreak study includes information such as the extent of flooding, flood travel times and flood water velocities. The study can assist dam owners, regulators, and emergency agencies in the preparations of evacuation plans, dam break and other flood warning systems, and hazard classification of affected areas.

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 ie other than flood flow into the reservoir. Causes of "Sunny Day" dam failure can include internal erosion, landslide, piping, earthquake 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 dambreak warning procedures to be prepared for prescribed dams where persons may be at risk downstream, if the dam failed.

Design flood (or flood standard). A flood of specified magnitude that is adopted for 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.

Emergency Alert. A national telephony based alerting system available for use by emergency service agencies to send SMS and voice messages to landlines and/or mobile telephones (by billing address or location) in times of emergency.

EMPLAN (Emergency Management Plan). The object of a EMPLAN is to ensure the coordinated response by all agencies having responsibilities and functions in emergencies.

Essential services. Those services, often provided by local government authorities, that are considered essential to the life of organised communities. Such services include power, lighting, water, gas, sewerage and sanitation clearance.

Evacuation. The temporary movement of people from a dangerous or potentially dangerous place to a safe location, and their eventual return. It is a safety strategy which uses distance to separate people from the danger created by the hazard.

Evacuation Order. Notification to the community, authorised by the NSW SES, when the intent of an Incident Controller is to instruct a community to immediately evacuate in response to an imminent threat.

Evacuation Warning. Notification to the community, authorised by the NSW SES, when the intent of an Incident Controller is to warn a community of the need to prepare for a possible evacuation

Flash flooding. Flooding which is sudden and often unexpected because it is caused by sudden local or nearby heavy rainfall. It is sometimes defined as flooding which occurs within six hours of the rain that causes it.

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 overtopping coastline defences, including Tsunami.

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 used by the State Emergency Service and the Australian Government Bureau of Meteorology in flood bulletins and flood warnings.

Flood intelligence. The product of collecting, collating, analysing and interpreting flood-related data to produce meaningful information (intelligence) to allow for the timely preparation, planning and warning for and response to a flood.

Flood fringe. The remaining area of flood prone land after floodway and flood storage have been defined

Flood liable land (also referred to as flood prone land). Land susceptible to flooding by the Probable Maximum Flood. (PMF) event. This term also describes the maximum extent of a **floodplain** which is an area of a river valley, adjacent to the river channel, which is subject to inundation in floods up to this event.

Flood of record. Maximum observed historical flood.

Floodplain Management Plan. A plan developed 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.

Flood Plan. A response strategy plan that deals specifically with flooding and is a sub-plan of a Emergency Management Plan. Flood plans describe agreed roles, responsibilities, functions, strategies and management arrangements for the conduct of flood operations and for preparing for them. A flood plan contains information and arrangements for all floods whereas an IAP is for a specific flood/event.

Flood Rescue. The safe removal of persons or domestic animals from actual or threatened danger of physical harm by floodwaters.

Flood storage areas. Those parts of the floodplain that are important for the temporary storage of floodwaters during the passage of a flood. The extent and behaviour of

flood storage areas may change with flood severity, and loss of flood storage can increase the severity of flood impacts by reducing natural flood attenuation.

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 Watch. A Flood Watch is a notification of the potential for a flood to occur as a result of a developing weather situation and consists of short generalised statements about the developing weather including forecast rainfall totals, description of catchment conditions and indicates streams at risk. The Bureau will also attempt to estimate the magnitude of likely flooding in terms of the adopted flood classifications. Flood Watches are normally issued 24 to 36 hours in advance of likely flooding. Flood watches are issued on a catchment wide basis.

Flood Warning. A Flood Warning is a gauge specific forecast of actual or imminent flooding. Flood Warnings specify the river valley, the locations expected to be flooded, the likely severity of flooding and when it will occur.

Functional Area. A category of services involved in the preparations for an emergency, including the following:

- Agriculture and Animal Services;
- Energy and Utility Services;
- Engineering Services;
- Environmental Services;
- Health Services;
- Public Information Services;
- Telecommunication Services;
- Transport Services; and
- Welfare Services.
- Defence HMAS Albatross and Creswell

Geographic Information System (GIS). A geographic information system (GIS) integrates hardware, software, and data for capturing, managing, analysing, and displaying all forms of geographically referenced information.

Incident Action Plan (IAP). An action plan for managing a specific event. Information from the Local Flood Plan is used to develop the flood IAP.

Indirect Effect. Indirect effects are generally a consequence of infrastructure damage or interruption of services and can affect communities distant from the actual flood footprint i.e. floodplain. Indirect effects can also refer to indirect losses due to disruption of economic activity, both in areas which are inundated or isolated. Indirect effects are one of the three primary sources of risk in the context of flooding (the other two are inundation and isolation).

Inundation. See definition for Flood.

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).

Local overland flooding. Inundation by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.

Major flooding. Flooding which causes inundation of extensive rural areas, with properties, villages and towns isolated and/or appreciable urban areas flooded.

Minor flooding. Flooding which causes inconvenience such as closing of minor roads and the submergence of low-level bridges. The lower limit of this class of flooding, on the reference gauge, is the initial flood level at which landholders and/or townspeople begin to be affected in a significant manner that necessitates the issuing of a public flood warning by the Australian Government Bureau of Meteorology.

Moderate flooding. Flooding which inundates low-lying areas, requiring removal of stock and/or evacuation of some houses. Main traffic routes may be covered.

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

Prescribed Dam. "Prescribed" dams are those listed in Schedule 1 of the Dams Safety Act 1978. The NSW Dam Safety Committee will prescribe those dams with the potential for a failure which could have a significant adverse effect on community interests.

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).

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.

Stage height. A level reached, at a nominated gauging station, during the development of a particular flood event.

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 or rating curve.

PART 1 - INTRODUCTION

1.1 PURPOSE

- 1.1.1 This plan covers preparedness measures, the conduct of response operations and the coordination of immediate recovery measures from flooding within the Shoalhaven City Council area. It covers operations for all levels of flooding within the council area.
- 1.1.2 The plan also covers arrangements for the management of coastal erosion in the council area.

1.2 AUTHORITY

- 1.2.1 This plan is issued under the authority of the State Emergency and Rescue Management Act 1989 and the State Emergency Service Act 1989. It has been approved by the NSW SES Shoalhaven City Local Controller and the NSW SES Illawarra South Coast Region Controller as a NSW SES plan and endorsed by the Shoalhaven Local Emergency Management Committee as a sub plan of the Local EMPLAN.

1.3 AREA COVERED BY THE PLAN

- 1.3.1 The area covered by the plan is the Shoalhaven City Council area which includes: the city of Nowra, North Nowra and the urban areas and villages of Bomaderry, Berry, Cambewarra, Shoalhaven Heads, Greenwell Point, Kangaroo Valley, Culburra, Currarong, Callala Bay and Beach, Huskisson, Mollymook, Vincentia, Sanctuary Point, St Georges Basin, Sussex Inlet, Tomerong, Wandandian, Lake Conjola, Milton, Ulladulla, Burrill Lake, Lake Tabourie Termeil, Bawley Point and Durras North.
- 1.3.2 The council area and its principal rivers and creeks are shown in Attachment 3.
- 1.3.3 The council area is in the NSW SES Illawarra South Coast Region and for emergency management purposes is part of the Illawarra South Coast Emergency Management Region.

1.4 DESCRIPTION OF FLOODING AND ITS EFFECTS

- 1.4.1 The NSW SES maintains information on the nature of flooding and effects of flooding on the community in the Shoalhaven City Council area.

1.5 RESPONSIBILITIES

- 1.5.1 The general responsibilities of emergency services organisations and support agencies (functional areas) are listed in the Local and State Emergency

Management Plans (EMPLAN). Some specific responsibilities are expanded upon in the following paragraphs. The extent of their implementation will depend on the severity of the flooding. Specific responsibilities of agencies and organisations as they relate to tsunami are detailed in the State Tsunami Emergency Sub Plan.

- 1.5.2 **NSW SES Shoalhaven City Local Controller.** The NSW SES Shoalhaven City Local Controller is responsible for dealing with floods as detailed in the State Flood Plan, and will:

Preparedness

- a. Maintain a Local Headquarters at 92 Albatross Road, South Nowra in accordance with the NSW SES Controllers' Guide and the NSW SES Operations Manual.
- b. Ensure that NSW SES members are trained to undertake operations in accordance with current policy as laid down in the NSW SES Controllers' Guide and the NSW SES Operations Manual.
- c. Coordinate the development and operation of a flood warning service for the community.
- d. Participate in floodplain and coastal risk management initiatives organised by the Shoalhaven City Council.
- e. Coordinate a public education program.
- f. Identify and monitor people and/or communities at risk of flooding and coastal erosion.
- g. Ensure that the currency of this plan is maintained.

Response

- h. Appoint an appropriate NSW SES Local Incident Controller to undertake response roles. The NSW SES Local Incident Controller will:
- i. Control flood and storm response operations. This includes:
 - Directing the activities of the NSW SES units operating within the council area.
 - Coordinating the activities of supporting agencies and organisations and ensuring that liaison is established with them.
 - Contribute to preparation of Region IAP.
- j. Provide an information service in relation to:
 - Flood heights and flood behaviour.
 - Coastal erosion / inundation.
 - Road conditions and closures.
 - Advice on methods of limiting property damage.

- Confirmation of evacuation warnings and evacuation orders.
- k. Direct the conduct of flood rescue operations.
- l. Direct the evacuation of people and/or communities.
- m. Provide immediate welfare support for evacuated people.
- n. Coordinate the provision of emergency food and medical supplies to isolated people and/or communities.
- o. Coordinate operations to protect property, for example by:
 - Arranging resources for sandbagging operations.
 - Lifting or moving household furniture.
 - Lifting or moving commercial stock and equipment.
- p. Arrange for support (for example, accommodation and meals) for emergency service organisation members and volunteers assisting them.
- q. Ensure that the managers of caravan parks are advised of flood warnings and the details of any evacuation order.
- r. If NSW SES resources are available, assist with emergency fodder supply operations conducted by Agriculture and Animal Services.
- s. If NSW SES resources are available, assist the NSW Police Force, RMS and Council with road closure and traffic control operations.
- t. Exercise financial delegations relating to the use of emergency orders as laid down in the NSW SES Controllers' Guide.
- u. Coordinate the collection of flood and coastal erosion/inundation information for development of intelligence.
- v. Submit Situation Reports to the NSW SES Illawarra South Coast Region Headquarters and agencies assisting within the council area. These will contain information on:
 - Road conditions and closures.
 - Current flood behaviour.
 - Current operational activities.
 - Likely future flood behaviour.
 - Likely future operational activities.
 - Probable resource needs.
- w. Keep the Local Emergency Operations Controller advised of the flood and coastal erosion/inundation situation and the operational response.
- x. Issue the 'All Clear' when flood and/or coastal erosion/inundation operations have been completed.

Recovery

- y. Ensure that appropriate After Action Reviews are held after floods and/or coastal erosion/inundation.
- z. Provide appropriate representation to the recovery committee for the duration of the response phase of an event and as agreed during the recovery phase.

1.5.3 NSW SES Nowra, St Georges Basin and Ulladulla Unit Controllers:

- a. Assist the NSW SES Shoalhaven Local Controller with flood and coastal preparedness activities, including:
 - Flood planning.
 - Training of unit members.
 - The development of flood and coastal erosion/inundation intelligence.
 - The development of warning services.
 - Floodplain and coastal risk management initiatives.
 - Public education.
- b. Conduct flood and coastal erosion operations within the area as directed by the NSW SES Shoalhaven City Local Controller.
- c. Submit Situation Reports to the NSW SES Local Headquarters, the NSW SES Region Headquarters and agencies assisting within the local area.

1.5.4 NSW SES Nowra, St Georges Basin and Ulladulla Unit Members:

- a. Carry out flood and coastal erosion response tasks. These may include:
 - The management of the NSW SES Shoalhaven City Local and Unit Headquarters Operations Centres.
 - Assist in the collection of flood and coastal erosion/inundation information for the development of intelligence.
 - Flood rescue.
 - Evacuation.
 - Providing immediate welfare for evacuated people.
 - Delivery of warnings and information.
 - Resupply.
 - Levee monitoring.
 - Sandbagging.
 - Lifting and/or moving household furniture and commercial stock.
 - Animal rescue.

- Assisting with road closure and traffic control operations.
- Assisting with emergency fodder supply operations.
- b. Assist with preparedness activities.
- c. Undertake training in flood and storm response operations.

1.5.5 **Agriculture and Animal Services Functional Area:**

- a. When requested by NSW SES;
 - Activate the Agriculture and Animal Services Supporting Plan as required and coordinate the provision of required services which may include:
 - Co-ordinate response for all animals including pets, livestock and wildlife.
 - Supply and delivery of emergency fodder.
 - Emergency water replacement in certain circumstances.
 - Coordinate the management of livestock and farm animals.
 - Advice on dealing with dead and injured farm animals.
 - Financial, welfare and damage assessment assistance to flood affected farmers.
 - Co-ordinate the establishment of animal shelter compound facilities for the domestic pets and companion animals of evacuees.
 -
- b. Forestry Corporation of NSW
 - Close and evacuate at risk camping grounds in Forests NSW managed areas.

1.5.6 **The Ambulance Service of NSW:**

- a. Assist with the evacuation of at risk communities (in particular elderly and/or infirm people).
- b. Deploy ambulance resources to appropriate locations if access is expected to be lost.
- c. Assist the NSW SES with flood rescue operations.

1.5.7 **Australian Government Bureau of Meteorology (The Bureau):**

- a. Provide Flood Watches for the Shoalhaven River Basin.
- b. Provide Flood Warnings, incorporating height-time predictions, for Nowra (AWRC no. 215903) gauge.
- c. Provide severe weather warnings when large waves and/or storm surge conditions are forecast to result in coastal erosion/inundation.
- d. Provide severe weather warnings when flash flooding is likely to occur.

1.5.8 Caravan Park Proprietor(s):

- a. Prepare a Flood Emergency Plan for the Caravan Park in accordance with Shoalhaven City Councils Caravan Parks in Flood Prone Areas Policy.
- b. Ensure that owners and occupiers of caravans are aware that the caravan park is flood liable by:
 - Handing a written notice to occupiers taking up residence. The notice will indicate that the caravan park is liable to flooding and define the location of flood liable land within the caravan park.
 - Requesting park owners display this notice prominently in each van.
 - Requesting park owners display the Flood Emergency Management Plan in a prominent location in the caravan park.
- c. Ensure that owners and occupiers of caravans are aware that if they are expecting to be absent from their vans for extended periods, they must:
 - Provide the manager with a contact address and telephone number in case of an emergency.
- d. Ensure that occupiers are informed of Flood Warnings and Flood Watches. At this time, occupiers should be advised to:
 - Ensure that they have spare batteries for their radios.
 - Listen to a local radio station for updated flood information.
 - Prepare for evacuation.
- e. Owners of caravans situated on flood liable land, should ensure that the wheels, axles and draw bar of the caravan are not removed, and are maintained in proper working order to facilitate evacuation and van relocation.
- f. Inform the NSW SES of the progress of evacuation and/or van relocation operations and of any need for assistance in the conduct of these tasks.

1.5.9 Child Care Centres and Preschools:

- a. Childcare Centres are to be contacted by the NSW SES in the event of possible flooding or isolation.
- b. When notified the child care centres and preschools should:
 - Liaise with the NSW SES and arrange for the early release of children whose travel arrangements are likely to be disrupted by flooding and/or road closures.
 - Assist with coordinating the evacuation of preschools and child care centres.

1.5.10 Commonwealth Department of Defence

- a. Where available resources are deemed to be insufficient, the Commonwealth Department of Defence may be requested to provide assistance under the Defence Assistance to the Civil Community (DACC) provisions as outlined within EMPLAN.
- b. Support may include:
 - Accommodation and catering;
 - Transport;
 - Personnel (within the constraints of individual competencies);
 - Access to airfield and airfield support services such as hard standing and re-fuelling;
 - Potentially access to aircraft.

1.5.11 Office of Environment and Heritage:

- a. Provide specialist policy, engineering and scientific advice to councils and the NSW SES on flood related matters including assistance with:
 - The identification of flood problems.
 - The preparation of Floodplain Risk Management Plans and associated studies.
 - The implementation of floodplain risk management plans. This involves floodplain management projects which include flood mitigation works, flood warning, strategic land use planning and upgrade of evacuation routes.
 - The exercising of Local Flood Plans.
- b. Provide specialist advice on flood related matters as follows:
 - Provide the NSW SES with access to relevant studies regarding flooding, including Flood Studies and Floodplain Risk Management Studies.

- Coordinate the collection of post event flood data, in consultation with the NSW SES.
- Provide advice to the NSW SES about conditions which may lead to coastal flooding or retarded river drainage near the coast.
- Collect and maintain flood data relating to flood heights, velocities and discharges in coastal areas of NSW (through a contract with MHL as discussed separately).
- Provide data to the Bureau of Meteorology and NSW SES real-time or near real-time access to river height gauges and height data for the development of official flood warnings (through a contract with MHL as described in the Response section of this plan).

c. **National Parks and Wildlife Service**

- Close and evacuate at risk camping grounds in National Parks managed areas.
- Manage the entrance of Lake Wollumboola.

1.5.12 **Energy and Utility Services Functional Area:**

a. When requested by NSW SES:

- Implement the Energy and Utilities Services Functional Area Supporting Plan.
- Where required, coordinate energy and utility services emergency management planning, preparation, response and recovery, including the restoration of services following a flood event.
- Coordinate advice to the NSW SES of any need to disconnect electricity, gas, water or wastewater services.
- Assist the NSW SES to identify infrastructure at risk of flooding for incorporation into planning and intelligence.
- Identify interdependencies between flooding and utility services due to secondary impacts of flooding and advise the NSW SES.
- Assist the NSW SES with advisory notices relating to hazards from utility services during flooding.
- Coordinate with utilities on restoration of services, including advisory notices relating to estimated time for restoration and mandatory safety checks prior to reconnection. Advise the NSW SES and the relevant recovery committee and coordinator of the timetable for restoration.

b. Local Providers (gas, water, waste water) Endeavour Energy (electricity): Shoalhaven City Council (water, waste water) Jemina (gas)

- Provide advice to the NSW SES Shoalhaven City Local Controller of any need to disconnect power/gas/water/waste water supplies or of any timetable for reconnection.
- Advise the NSW SES of any hazards from utility services during flooding and coastal erosion/inundation.
- Advise the public with regard to electrical hazards during flooding and coastal erosion/inundation, and to the availability or otherwise of the electricity supply.
- Clear or make safe any hazard caused by power lines or electrical reticulation equipment.
- Inspect, test and reconnect customers' electrical/ gas/ water/waste water installations as conditions allow.
- Assist the NSW SES to identify infrastructure at risk of flooding for incorporation into planning and intelligence.

1.5.13 Engineering Services Functional Area:

- a. When requested by NSW SES:
 - Provide engineering advice regarding the integrity of damaged structures.
 - Assist the NSW SES with damage assessment on Council's public infrastructure.
 - Acquire and/or provide specialist technical engineering expertise.
 - Assist the NSW SES and councils with the assessment and operation of flood protection levees when requested.
 - Assist with property protection, including the construction or repair of levees.
 - Coordinate the restoration of critical public facilities.
- b. When requested by the Recovery Coordinator:
 - Establish Recovery Centres by the procurement and fit-out of suitable properties.

1.5.14 Environmental Services Functional Area:

- a. When requested by NSW SES:
 - Implement the Environmental Services Functional Area (Enviroplan) Supporting Plan if required.

1.5.15 Health Services Functional Area:

- a. When requested by NSW SES:
 - Activate Healthplan if required.

- Ensure that appropriate business continuity plans are developed for essential health infrastructure and are activated during floods.
- Provide medical support to the NSW SES.
- Establish health surveillance in affected areas.
- Assess potential public health risks that either acutely endanger the health of human populations or are thought to have longer term consequences.
- Provide environmental health advice.
- Provide public health warnings and advice to affected communities.
- Assist the NSW SES with the warning and evacuation of hospitals.

1.5.16 Marine Rescue NSW:

- a. Assist the NSW SES with the delivery of evacuation warnings and evacuation orders.
- b. Assist the NSW SES with the conduct of evacuations.

1.5.17 Fire and Rescue NSW, Nowra, Berry, and Ulladulla:

- a. FRNSW responsibilities are primarily confined to the FRNSW Fire District. Any deployment of FRNSW resources to assist NSW SES in Flood events rests with the respective FRNSW Zone Commander.
- b. The FRNSW Zone Commander will, assess the capability of FRNSW to assist NSW SES in the following tasks:
 - Assist with the delivery of evacuation warnings and evacuation orders.
 - Assist with the conduct of evacuations.
 - Assist with the provision of equipment for pumping flood water out of buildings and from low-lying areas.
 - Assist with clean-up operations, including the hosing out of flood affected properties.
- c. FRNSW will use its best endeavours to deploy appliances and or resources into locations where access is expected to be lost.

1.5.18 NSW Office of Water

- a. Collect and maintain flood data including data relating to flood heights, velocities and discharges.
- b. Provide the Bureau of Meteorology and NSW SES real-time or near real-time access to river height gauges and height data for the development of official flood warnings.
- c. Provide flow rating charts for river height gauges.

- d. Manage (with technical support from OEH) the approval process under the Water Act 1912 and Water Management Act 2000 for flood control works (earthworks, embankments and levees which can affect the distribution of floodwaters) including:
- Assessment and approval of flood control works (including flood mitigation works) in rural areas designated under the Acts.
 - Use of floodplain management plans prepared by OEH in rural areas designated under the Acts to assess flood control work approvals.
 - Giving the NSW SES access to relevant studies regarding flooding and studies supporting floodplain management plans prepared by OEH including flood studies, floodplain risk management studies and flood behaviour investigations.

1.5.19 NSW Police Force, Shoalhaven Local Area Command (LAC):

- Assist the NSW SES with the delivery of evacuation warnings and evacuation orders.
- Assist the NSW SES with the conduct of evacuation operations.
- Conduct road and traffic control operations in conjunction with council and/or RMS.
- Coordinate the registration of evacuees.
- Secure evacuated areas.

1.5.20 NSW Rural Fire Service (RFS Shoalhaven):

- Provide personnel in rural areas and villages to:
 - inform the NSW SES Shoalhaven City Local Controller about flood conditions and response needs in their own communities, and
 - disseminate flood information.
- Provide personnel and high-clearance vehicles for flood related activities.
- Assist the NSW SES with the delivery of evacuation warnings and evacuation orders.
- Assist the NSW SES with the conduct of evacuations.
- Provide equipment for pumping flood water out of buildings and from low-lying areas.
- If time and resources permit, assist with the removal of caravans.
- Provide back-up radio communications.
- Assist with 'clean-up' operations, including the hosing of flood affected properties.

- i. Deploy fire resources to appropriate locations if access is expected to be lost.
- 1.5.21 **Public Information Functional Area:**
- a. When requested by NSW SES:
 - Assist the NSW SES in the establishment and operation of a Joint Media Information Centre.
- 1.5.22 **Sydney Trains will:**
- Close and reopen railway lines affected by flood waters and advise the NSW SES.
- 1.5.23 **Roads and Maritime Services will:**
- Close and reopen roads under their management and control affected by flood waters and advise the NSW SES Shoalhaven City Local Controller of their status.
 - Facilitate the safe reliable access of emergency resources on RMS managed roads.
 - Assist the NSW SES with identification of road infrastructure at risk of flooding.
 - Manage traffic.
 - Assist the NSW SES with the communication of warnings and information provision to the public through variable message signs.
- 1.5.24 **School Administration Offices (including Catholic Education Office - Diocese of Wollongong, Department of Education - Illawarra and South East Regional Office and Private Schools):**
- a. Liaise with the NSW SES and arrange for the early release of students whose travel arrangements are likely to be disrupted by flooding and/or road closures (or where required, for students to be moved to a suitable location until normal school closing time).
 - b. Pass information to school bus drivers/companies and/or other schools on expected or actual impacts of flooding.
 - c. Assist with coordinating the evacuation of schools when flooding or isolation is expected to occur.
 - d. Provide space in schools for evacuation centres where necessary.
- 1.5.25 **Service and Sporting Clubs - Rotary Clubs: Nowra, South Nowra, and Ulladulla; and Lions Clubs: Nowra and Ulladulla and Nowra 4WD Club:**
- a. Assist with:
 - Delivery of evacuation warnings.
 - Conduct of evacuations.

- Lifting and/or moving household furniture and commercial stock.
- Sandbagging.
- Monitoring of levees.
- Relocation of caravans.

1.5.26 Transport Services Functional Area:

- a. When requested by NSW SES:
 - Assist with the coordination of transport for evacuation purposes.
 - Assist with the resupply of isolated communities and/or properties

1.5.27 Welfare Services Functional Area:

- a. When requested by NSW SES;
 - Establish and manage evacuation centres, and provide disaster welfare services from recovery centres.
 - Administer the Personal Hardship and Distress component of the NSW Disaster Relief Scheme established to provide financial assistance to people affected by emergencies.

1.5.28 Shoalhaven City Local Emergency Operations Controller (LEOCON):

- a. Monitor flood operations.
- b. Coordinate support to the NSW SES Shoalhaven City Local Controller if requested to do so.

1.5.29 Shoalhaven City Council Local Emergency Management Officer:

- a. Provide executive support to the LEMC and LEOCON in accordance with the Shoalhaven City Council Local Emergency Management Plan.
- b. At the request of the NSW SES Shoalhaven City Local Controller, advise appropriate agencies and officers of the start of response operations.

1.5.30 Shoalhaven City Council:

Preparedness

- a. Establish and maintain floodplain and coastal risk management committees and ensure that key agencies are represented on such committees.
- b. Provide levee studies, flood studies, floodplain management studies and coastal management studies to the NSW SES.
- c. Maintain Dam Safety Emergency Plans for the Bamarang, Danjerra and Porters Creek dams and provide copies to the NSW SES.
- d. Provide information on the consequences of dam failure to the NSW SES for incorporation into planning and flood intelligence.

- e. Maintain the Riverview Road and Terara levees, the notch at the river mouth at Shoalhaven Heads and drains and floodgates on the lower floodplain of the Shoalhaven River.
- f. Provide the NSW SES with real-time access to information from the Shoalhaven River ALERT and other telemetered Gauges.
- g. Maintain a plant and equipment resource list for the council area.
- h. Contribute to the development and implementation of a public education program.

Response

- i. At the request of the NSW SES Shoalhaven City Local Controller, deploy personnel and resources for flood and coastal erosion related activities (where practical).
- j. Close and reopen council roads and advise the NSW SES Shoalhaven City Local Controller and the Police.
- k. Provide information on the status of roads.
- l. Provide filled sandbags to urban and village areas in which flooding is expected (where reasonably practical).
- m. If time and resources permit, assist with the removal of caravans from caravan parks.
- n. Provide back-up radio communications.
- o. In the event of evacuations, assist with making facilities temporarily available for the domestic pets and companion animals of evacuees. Provide access to showgrounds that are suitable for temporary livestock and pet accommodation.
- p. During periods of coastal erosion from ocean storms:
 - Assist the NSW SES with reconnaissance of coastal erosion risk areas.
 - Liaise with the NSW SES Local Controller to provide advice regarding the need for response actions by the NSW SES such as evacuations.
 - Activate the Shoalhaven City Council Coastal Zone Management Plan – Emergency Action Plan.

Recovery

- q. Provide for the management of health hazards associated with flooding. This includes removing debris and waste.
- r. Ensure premises are fit and safe for reoccupation and assess any need for demolition.

1.5.31 Owners of Prescribed Dams within or upstream of Shoalhaven:

Dam	Owner
Bamarang Dam	Shoalhaven City Council
Danjera Dam	Shoalhaven City Council
Porters Creek Dams	Shoalhaven City Council
Comberton Grange Retarding Basin	Shaolin Buddhist Order
Bendeela Pondage	Sydney Catchment Authority
Tallowa Dam	Sydney Catchment Authority
Fitzroy Falls Reservoir	Sydney Catchment Authority
Kangaroo Pipeline Control Structure	Sydney Catchment Authority

- a. Maintain and operate the Dam Failure Warning System for for their Dam(s) and structures. Contribute to the development and implementation of a public education program on flooding within the council area.
- b. Consult with NSW SES on the determination of dam failure alert levels and notification arrangements when developing Dam Safety Emergency Plans.
- c. Maintain a Dam Safety Emergency Plan and provide copies to the NSW SES.
- d. Provide information on the consequences of dam failure to the NSW SES for incorporation into planning and flood intelligence.
- e. Close and evacuate at risk camping grounds/recreational areas in Shoalhaven City Council and Sydney Catchment Authority managed areas.

1.5.32 Shoalhaven Flood Warden and Observer Network:

- a. A network of community members in the Shoalhaven exists to:
 - Provide flood information to the NSW SES Shoalhaven City Local Controller.
 - Distribute flood warnings and flood information provided by the NSW SES Shoalhaven City Local Controller.

PART 2 - PREPAREDNESS

2.1 MAINTENANCE OF THIS PLAN

- 2.1.1 The NSW SES Shoalhaven City Local Controller will maintain the currency of this plan by:
- a. Ensuring that all agencies, organisations and officers mentioned in it are aware of their roles and responsibilities.
 - b. Conducting exercises to test arrangements.
 - c. Reviewing the contents of the plan:
 - After each flood operation.
 - When significant changes in land-use or community characteristics occur.
 - When new information from flood studies become available.
 - When flood control or mitigation works are implemented or altered.
 - When there are changes that alter agreed plan arrangements.
- 2.1.2 The plan is to be reviewed no less frequently than every five years.

2.2 FLOODPLAIN AND COASTAL RISK MANAGEMENT

- 2.2.1 The NSW SES Shoalhaven City Local Controller will ensure that:
- a. NSW SES participates in local floodplain and coastal risk management committee activities when those committees are formed, in accordance with the protocols outlined in the NSW SES Controllers Guide.
 - b. The NSW SES Illawarra South Coast Region Headquarters is informed of involvement in floodplain and coastal risk management activities.

2.3 DEVELOPMENT OF FLOOD INTELLIGENCE

- 2.3.1 Flood intelligence describes flood behaviour and its effects on the community.
- 2.3.2 The NSW SES maintains a centralised flood intelligence system.

2.4 DEVELOPMENT OF WARNING SYSTEMS

- 2.4.1 The NSW SES may establish a total flood warning system for areas of the Shoalhaven affected by flooding. This requires:
- a. An identification of the potential clients of flood warning information at different levels of flooding (ie. who would be affected in floods of differing severities).

- b. Available information about the estimated impacts of flooding at different heights.
 - c. Identification of required actions and the amounts of time needed to carry them out.
 - d. Appropriate means of disseminating warnings to different clients and at different flood levels.
- 2.4.2 Council and the Bureau have installed hardware and software (Enviromon) to monitor water levels in the Shoalhaven. Data gathered provides the NSW SES with real-time access to data from the system.

2.5 PUBLIC EDUCATION

- a. The NSW SES Shoalhaven City Local Controller, with the assistance of the Shoalhaven City Council and the NSW SES is responsible for ensuring that the residents of the council area are aware of the potential flood and coastal erosion threat in their vicinity and how to protect themselves from it.
- 2.5.2 Specific strategies to be employed include:
- a. Dissemination of flood-related brochures and booklets in flood liable areas.
 - b. Dissemination of coastal erosion related brochures in coastal erosion liable areas.
 - c. Talks and displays orientated to community organisations, businesses and schools.
 - d. Publicity given to this plan and to flood-orientated NSW SES activities through local media outlets, including articles in local newspapers about the flood threat and appropriate responses.

2.6 TRAINING

- 2.6.1 Throughout this document there are references to functions that must be carried out by the members of the NSW SES Nowra and Ulladulla Units. The NSW SES Shoalhaven City Local Controller is responsible for ensuring that the members are:
- a. Familiar with the contents of this plan.
 - b. Trained in the skills necessary to carry out the tasks allocated to the NSW SES.

2.7 RESOURCES

- 2.7.1 The NSW SES Nowra Unit Controller is responsible for maintaining the condition and state of readiness of NSW SES equipment and the NSW SES Nowra Unit Headquarters.
- 2.7.2 The NSW SES St Georges Basin Unit Controller and NSW SES Ulladulla Unit Controller has similar responsibilities in relation to the NSW SES St Georges Basin Unit and NSW SES Ulladulla Unit Headquarters and equipment respectively.

PART 3 - RESPONSE

CONTROL

3.1 CONTROL ARRANGEMENTS

- 3.1.1 The NSW SES is the legislated Combat Agency for floods and is responsible for the control of flood operations. This includes the coordination of other agencies and organisations for flood management tasks.
- 3.1.2 The NSW SES is the designated Combat Agency for damage control for storms. This includes damage control for coastal erosion and inundation from storm activity, specifically the protection of life and the coordination of the protection of readily moveable household goods and commercial stock and equipment. The NSW SES is not responsible for planning or conduct of emergency beach protection works or other physical mitigation works.
- 3.1.3 The Local EMPLAN will operate to provide support as requested by the NSW SES Local Incident Controller.

3.2 OPERATIONAL MANAGEMENT

- 3.2.1 NSW SES utilises the Australasian Inter-service Incident Management System (AIIMS), which is based on three principles:
 - a. functional management;
 - b. management by objectives; and
 - c. span of control.
- 3.2.2 AIIMS provides for different incident levels based on the complexity of management.
- 3.2.3 The Local Government Area may be divided into sectors and divisions to manage the flood and/or coastal erosion event (divisions are usually a group of sectors).
- 3.2.4 Sectors and divisions may be based on floodplain classifications, geographical, physical or functional boundaries. A town, city or suburb may be one sector or split into several sectors and divisions.

- 3.2.5 For the purpose of managing flood response operations and evacuations during severe floods, the Shoalhaven Local Government area will be divided into three operational divisions based on NSW SES unit boundaries

3.3 START OF RESPONSE OPERATIONS

- 3.3.1 This plan is always active to ensure that preparedness actions detailed in this plan are completed.
- 3.3.2 Response operations will begin:
- a. On receipt of a Bureau of Meteorology Preliminary Flood Warning, Flood Warning, Flood Watch, Severe Thunderstorm Warning or a Severe Weather Warning for flash flooding or severe ocean conditions.
 - b. On receipt of a dam failure alert.
 - c. When other evidence leads to an expectation of flooding or coastal erosion within the council area.
- 3.3.3 Contact with the Bureau of Meteorology to discuss the development of flood warnings will normally be through the NSW SES Illawarra South Coast Region Headquarters and/or NSW SES State Headquarters
- 3.3.4 The following persons and organisations will be advised of the start of response operations regardless of the location and severity of the flooding and coastal erosion anticipated:
- a. NSW SES Illawarra South Coast Region Headquarters.
 - b. NSW SES Nowra, St Georges Basin and Ulladulla Unit Controllers.
 - c. NSW SES Nowra, St Georges Basin and Ulladulla Units.
 - d. Shoalhaven Local Emergency Operations Controller (for transmission to the NSW Police Force Local Area Command Headquarters).
 - e. Shoalhaven Local Emergency Management Officer (for transmission to appropriate council officers and departments).
 - f. Shoalhaven City Council Mayor.
 - g. Other agencies listed in this plan will be advised by the Local Emergency Management Officer on the request of the NSW SES Local Incident Controller and as appropriate to the location and nature of the threat.

3.4 RESPONSE STRATEGIES

- 3.4.1 The main response strategies for NSW SES flood and coastal erosion operations include:
- a. Information Provision and Warning:
 - Provision of warnings, information and advice to communities regarding the potential impacts of a flood and what actions to undertake in preparation for flooding.
 - Inform the community regarding the potential impacts of coastal erosion and what preparatory actions to undertake.

- Provide timely and accurate information to the community.
 - b. Property protection
 - Protect the property of residents and businesses at risk of flood damage.
 - Assistance with property protection by way of sandbagging and the lifting or transporting of furniture, personal effects, commercial stock and caravans.
 - Assistance with the relocation of readily moveable household goods and commercial stock and equipment from properties threatened by coastal erosion.
 - Assistance with the protection of essential infrastructure.
 - c. Evacuation
 - Evacuation is 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.
 - d. Flood Rescue
 - The rescue or safe retrieval of persons or companion animals trapped by floodwaters.
 - e. Resupply
 - Minimise disruption upon the community by resupplying towns and villages which have become isolated as a consequence of flooding.
 - Ensure supplies are maintained to property owners by coordinating the resupply of properties which have become isolated as a consequence of flooding.
- 3.4.2 The NSW SES Local Incident Controller will select the appropriate response strategy to deal with the expected impact of the flood and coastal erosion in each sector and/or community. The impact may vary so a number of different strategies may need to be selected and implemented across the whole operational area. The available strategies for each sector and/or community are maintained by the NSW SES.
- 3.4.3 Supporting strategies may include:
- a. Protect the community from incidents involving fire and hazardous materials
 - b. Maintain the welfare of communities and individuals affected by the impact of a flood and coastal erosion.
 - c. Minimise disruption to the community by ensuring supply of essential energy and utility services.

- d. Ensure coordinated health services are available to and accessible by the flood affected communities.
- e. Maintain the welfare of animals affected by the impact of a flood.

3.5 OPERATIONS CENTRES

- 3.5.1 The NSW SES Shoalhaven City Operations Centre and Shoalhaven City Council Emergency Operations Centre is located at 92 Albatross Road, South Nowra
 - a. The NSW SES Nowra Unit Operations Centre is located at:
 - 92 Albatross Road, South Nowra
 - b. The NSW SES Ulladulla Unit Operations Centre is located at:
 - 180 Camden Street, Ulladulla

3.6 LIAISON

- 3.6.1 Any agency with responsibilities identified in this plan may be requested by the NSW SES to provide liaison (including a liaison officer where necessary) to the NSW SES Shoalhaven City Operations Centre.
- 3.6.2 Liaison officers will:
 - a. maintain communication with and convey directions/requests to their organisation or functional area;
 - b. provide advice on the status, resource availability, capabilities, actions and requirements of their organisation or functional area, and
 - c. where appropriate, have the authority to deploy the resources of their parent organisation at the request of the NSW SES Local Incident Controller.

3.7 END OF RESPONSE OPERATIONS

- 3.7.1 When the immediate danger to life and property has passed the NSW SES Region Incident Controller or the NSW SES Local Incident Controller will issue an 'all clear' message signifying that response operations have been completed. The message will be distributed through the same media outlets as earlier evacuation messages. The relevant Controller will also advise details of recovery coordination arrangements, arrangements made for 'clean-up' operations prior to evacuees being allowed to return to their homes, and stand-down instructions for agencies not required for recovery operations.

PLANNING

3.8 COLLATING SITUATIONAL INFORMATION

Strategy

- 3.8.1 The NSW SES maintains and records situational awareness of current impacts and response activities.

Actions

- 3.8.2 The NSW SES Shoalhaven City Local Headquarters collates information on the current situation in the Shoalhaven City Council LGA and incorporates in Situation Reports.
- 3.8.3 The NSW SES Illawarra South Coast Region Headquarters collates Region-wide information for inclusion in Region NSW SES Situation Reports.
- 3.8.4 Sources of situational information during times of flooding and coastal erosion are:
- Agency Situation Reports.** Agencies and functional areas provide regular situation reports (SITREPs) to the NSW SES.
 - Active Reconnaissance.** The NSW SES Local Incident Controller is responsible for coordinating the reconnaissance of impact areas, recording and communicating observations. Reconnaissance can be performed on the ground and using remote sensing (more commonly aerial). The NSW SES monitors the following problem areas:
 - Terara Levee
 - Riverview Road Levee
 - Burrill Lake Bridge
 - Mollymook (for coastal erosion)
 - Collingwood Beach (for coastal erosion)
 - Callala Beach (for coastal erosion)
 - The **Bureau of Meteorology's Flood Warning Centre** provides river height and rainfall information, data is available on the website <http://www.bom.gov.au/nsw/flood/>
 - Manly Hydraulics Laboratory (a business unit within NSW Public Works)** automated river watch system funded by the Office of Environment and Heritage. This system provides river height and rainfall readings for a number of gauges in the Shoalhaven City Council area. Recent data from this system is available on the Manly Hydraulic Laboratory website: <http://www.mhl.nsw.gov.au>. A history of area floods is also available upon request via the website.

- e. **NSW Office of Water.** This office advises flow rates and rates of rise for the Shoalhaven River. Daily river reports containing information on gauge heights and river flows are available from the website:
<http://waterinfo.nsw.gov.au/>
 - f. **Tallowa, Fitzroy Falls Reservoir and Kangaroo Pipeline Control Structure Dam Storage Monitoring System.** This system provides information on Tallowa, Fitzroy Falls Reservoir and Kangaroo Pipeline Control Structure Dams.
 - g. **NSW SES Illawarra South Coast Region Headquarters.** The Region Headquarters provides information on flooding and its consequences, including those in nearby council areas (this information is documented in Bulletins and Situation Reports).
 - h. **Shoalhaven City Council.** The Council jointly operates the Shoalhaven River ALERT system with the Bureau of Meteorology and provides the NSW SES with real-time access to data from the system known as Enviromon.
- 3.8.5 During flood operations sources of information on roads closed by flooding include:
- a. Shoalhaven City Council:
<http://shoalhaven.nsw.gov.au/MyCommunity/Roadconditions.aspx>
 - b. Shoalhaven Local Area Command, NSW Police Force
 - c. Roads and Maritime Services (website and/or telephone service)
 - d. NSW SES Illawarra South Coast Region Headquarters
 - e. NSW SES Nowra Headquarters.
 - f. NSW SES St Georges Basin Headquarters.
 - g. NSW SES Ulladulla Headquarters.
- 3.8.6 Situational information relating to consequences of flooding and/or coastal erosion should be used to verify and validate NSW SES Flood Intelligence records.

3.9 PROVISION OF FLOOD AND COASTAL EROSION INFORMATION AND WARNINGS

Strategy

- 3.9.1 The NSW SES Shoalhaven City Local Headquarters provides advice to the NSW SES Illawarra South Coast Region Headquarters on current and expected impacts of flooding and coastal erosion in the Shoalhaven LGA.
- 3.9.2 The NSW SES Illawarra South Coast Region Headquarters issues NSW SES Flood Bulletins, NSW SES Livestock and Equipment Warnings, Evacuation

Warnings and Evacuation Orders to media outlets and agencies on behalf of all NSW SES units in the Region.

Actions

- 3.9.3 The NSW SES Local Incident Controller will ensure that the NSW SES Illawarra South Coast Region Incident Controller is regularly briefed on the progress of operations.
- 3.9.4 NSW SES Shoalhaven City Local Headquarters operations staff will be briefed regularly so that they can provide information in response to inquiries received in person or by other means such as phone or fax.
- 3.9.5 **Bureau of Meteorology Severe Thunderstorm Warning.** These are issued direct to the media by the Bureau when severe thunderstorms are expected to produce dangerous or damaging conditions, including flash flooding. Severe thunderstorms are usually smaller in scale than events covered by Flood Watches and Severe Weather Warnings.
- 3.9.6 **Bureau of Meteorology Severe Weather Warnings for Flash Flooding.** These are issued direct to the media by the Bureau and provide a warning of the possibility for flash flooding as a result of intense rainfall. These warnings are issued when severe weather is expected to affect land based communities within 6 to 24 hours. Severe Weather Warnings may also include other conditions such as Damaging Surf, Dangerous Surf or tides, or Damaging Winds.
- 3.9.7 **Bureau of Meteorology Flood Watches.** Flood Watches are issued by the Bureau to advise people of the potential for flooding in a catchment area based on predicted or actual rainfall. Flood Watches will be included in NSW SES Flood Bulletins issued by the NSW SES Illawarra South Coast Region Headquarters.
- 3.9.8 **Bureau of Meteorology Flood Warnings.** The NSW SES Illawarra South Coast Region Headquarters will send a copy of Bureau Flood Warnings to the NSW SES Shoalhaven City Unit. On receipt the NSW SES Local Incident Controller will provide the NSW SES Illawarra South Coast Region Headquarters with information on the estimated impacts of flooding at the predicted heights for inclusion in NSW SES Region Flood Bulletins.
- 3.9.9 **NSW SES Livestock and Equipment Warnings.** Following heavy rain or when there are indications of significant creek or river rises (even to levels below Minor Flood heights), the NSW SES Local Incident Controller will advise the NSW SES Illawarra South Coast Region Headquarters which will issue NSW SES Livestock and Equipment Warnings.
- 3.9.10 **NSW SES Local Flood Advices.** The NSW SES Local Incident Controller may issue Local Flood Advices for locations not covered by Bureau Flood Warnings. They may be provided verbally in response to phone inquiries but will normally be incorporated into NSW SES Region Flood Bulletins.

- 3.9.11 **NSW SES Flood Bulletins.** The NSW SES Illawarra South Coast Region Headquarters will regularly issue NSW SES Flood Bulletins which describe information on the estimated impacts of flooding at the predicted heights (using information from Bureau Flood Warnings and NSW SES Local Flood Advices) to NSW SES units, media outlets and agencies on behalf of all NSW SES units in the Region. When operations relating to coastal erosion/inundation are being undertaken, NSW SES Region Bulletins will contain information and advice about property damage mitigation measures and evacuation in affected areas.
- 3.9.12 **NSW SES Evacuation Warnings and Evacuation Orders.** These are usually issued to the media by the NSW SES Region Incident Controller on behalf of the NSW SES Local Incident Controller.
- 3.9.13 **Dam Failure Alerts.** Dam failure alerts are issued to NSW SES by the dam owner, in accordance with arrangements in the Dam Safety Emergency Plan (DSEP), the system involves the Dam Owner notifying NSW SES State Headquarters Operations Communications Centre, who in turn distribute the warning to the NSW SES Region Headquarters and NSW SES Unit Headquarters.
- 3.9.14 A flow chart illustrating the notification arrangements for potential dam failure is shown in Attachment 2.
- 3.9.15 Dam failure alert levels are set in consultation with the NSW SES and are used to trigger appropriate response actions. The conditions that define each of the alert levels are listed in the relevant DSEP. Responses escalate as the alert level migrates from white to amber to red. Table 1 briefly outlines example defining conditions and appropriate NSW SES responses associated with each alert.

Alert Level	Example Defining Condition	NSW SES Response	NSW SES Warning Product
White	May be a structural anomaly.	Implements notification flowchart.	This is a preliminary alert to assist the NSW SES in its preparation. This is not a public alert.
	May be increased monitoring in response to a heavy rainfall event	Check operational readiness.	
Amber	Failure possible if storage level continues to rise or structural anomaly not fixed	Implements notification flowchart. Warn downstream population at risk to prepare to evacuate	NSW SES Evacuation Warning
Red	Failure imminent or occurred	Implements notification flowchart.	NSW SES Evacuation Order

		Evacuation of downstream populations	
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Table 1: Dam Failure Alert Levels

Note: Some DSEPs will have alert levels that proceed directly from White to Red. This is the case if adequate time does not exist between the three alert levels to evacuate the downstream population at risk. The decision to omit the Amber Alert level, and the general setting of Alert levels should be undertaken in consultation with the NSW SES.

- 3.9.16 The NSW SES / Dam Owner will disseminate warnings to the population at risk of dam failure (these arrangements are specific to each dam, are negotiated between the Dam Owner and NSW SES, and are documented in the DSEP).
- 3.9.17 **Standard Emergency Warning Signal (SEWS).** This signal may be played over radio and television stations to alert communities to Evacuation Warnings, Evacuation Orders, Special Warnings or Dam-Failure Warnings. Approval to use the signal is associated with who approves the warning/order message.
- 3.9.18 **The Public Information and Inquiry Centre (PIIC)** (operated by the NSW Police Force) will answer calls from the public regarding registered evacuees.
- 3.9.19 **The Disaster Welfare Assistance line** is a central support and contact point for disaster affected people inquiring about welfare services advice and assistance.
- 3.9.20 **The RMS Transport Information Line** will provide advice to callers on the status of roads. The RMS website also lists road closure information.
- 3.9.21 **Shoalhaven City Council** will provide information on the status of roads at: <http://shoalhaven.nsw.gov.au/MyCommunity/Roadconditions.aspx>.
- 3.9.22 Collation and dissemination of road information is actioned as follows:
 - a. As part of Situation Reports, the NSW SES Local Incident Controller provides road status reports for main roads in the council area to the NSW SES Illawarra South Coast Region Headquarters.
 - b. The NSW SES Illawarra South Coast Region Headquarters distributes information on main roads to NSW SES units, media outlets and agencies as part of NSW SES Flood Bulletins.

3.10 AIRCRAFT MANAGEMENT

- 3.10.1 Aircraft can be used for a variety of purposes during flood operations including evacuation, rescue, resupply, reconnaissance and emergency travel.
- 3.10.2 Air support operations will be conducted under the control of the NSW SES Region Headquarters, which may allocate aircraft to units if applicable.
- 3.10.3 NSW SES maintains the following information for the Shoalhaven City Council area:

- a. Locations of suitable helicopter landing points.
- b. Locations of suitable airports and records detailing aircraft size and type that can land at airports.
- c. Intelligence on when access to these locations is expected to be lost.

3.11 ASSISTANCE FOR ANIMALS

- 3.11.1 Matters relating to the welfare of livestock, companion animals and wildlife are to be referred to Agriculture and Animal Services Functional Area.
- 3.11.2 Requests for emergency supply and/or delivery of fodder to stranded livestock, or for livestock rescue, are to be referred to Agriculture and Animal Services Functional Area.
- 3.11.3 Requests for companion animal rescue should be referred to the NSW SES.

3.12 COMMUNICATION SYSTEMS

- 3.12.1 The primary means of communications between fixed locations is by telephone, email and facsimile.
- 3.12.2 The primary means of communication to and between deployed NSW SES resources is by GRN.
- 3.12.3 All liaison officers will provide their own communication links back to their parent agencies.
- 3.12.4 All other organisations will provide communications as necessary to their deployed field teams.

3.13 PRELIMINARY DEPLOYMENTS

- 3.13.1 When flooding is expected to be severe enough to cut road access to towns, within towns and/or rural communities, the NSW SES Local Incident Controller will ensure that resources are in place for the distribution of foodstuffs and medical supplies to the areas that could become isolated.
- 3.13.2 When Greenwell Point, Shoalhaven Heads, Callala Bay, Sussex Inlet, Burrill Lake, Lake Tabourie or Nowra are expected to be isolated the NSW SES Shoalhaven City Local Controller will advise appropriate agencies so that resources (including sandbags, fire fighting appliances, ambulances, etc.) are deployed to ensure that operational capability is maintained.

3.14 ROAD AND TRAFFIC CONTROL.

- 3.14.1 A number of roads within the council area are affected by flooding. NSW SES maintains details of these roads.
- 3.14.2 The council closes and re-opens its own roads.
- 3.14.3 The NSW Police Force has the authority to close and re-open roads but will normally only do so (if the Council or the RMS have not already acted) if public safety requires such action.
- 3.14.4 Shoalhaven City Council operates a vehicular ferry at:
 - a. Comerong Island Ferry which will cease operation during flooding.

- 3.14.5 When resources permit, the NSW SES assists Council, RMS or the Police by erecting road closure signs and barriers.
- 3.14.6 In flood events, the NSW SES Local Incident Controller may direct the imposition of traffic control measures. The entry into flood affected areas will be controlled in accordance with the provisions of the State Emergency Service Act, 1989 (Part 5, Sections 19, 20, 21 and 22) and the State Emergency Rescue Management Act, 1989 (Part 4, Sections 60KA, 60L and 61).
- 3.14.7 Police, RMS or Council officers closing or re-opening roads or bridges affected by flooding are to advise the NSW SES Shoalhaven City Local Headquarters, which will then provide a road information service to local emergency services, the public and the NSW SES Illawarra South Coast Region Headquarters. All such information will also be passed to the Police, RMS and the Council.

3.15 STRANDED TRAVELLERS

- 3.15.1 Flood waters can strand travellers. Travellers seeking assistance will be referred to the Welfare Services Functional Area for the arrangement of emergency accommodation.

3.16 MANAGING PROPERTY PROTECTION OPERATIONS

Strategy

- 3.16.1 Protect the property of residents and businesses at risk of flood damage.

Actions

- 3.16.2 The NSW SES is the responsible agency for the coordination of operations to protect property.
- 3.16.3 Property may be protected from floods by:
- Lifting or moving of household furniture.
 - Lifting or moving commercial stock and equipment.
 - Sandbagging to minimise entry of water into buildings.
- 3.16.4 The NSW SES maintains stocks of empty sandbags.
- 3.16.5 Property protection options are however very limited in the Shoalhaven City Council Area due to the large number of properties that can be affected and the depth of floodwaters arising from severe flooding.
- 3.16.6 Property protection measures for the threat of coastal erosion involves the relocation of readily moveable household goods and commercial stock and equipment. The NSW SES is not responsible for planning or conduct of emergency beach protection works or other physical mitigation works.

3.17 MANAGING FLOOD RESCUE OPERATIONS

Strategy

- 3.17.1 Rescue of people and animals from floods.

Actions

- 3.17.2 The NSW SES Local Incident Controller controls flood rescue in Shoalhaven Local Government Area during a flood emergency.
- 3.17.3 Flood rescues, may be carried out by accredited units in accordance with appropriate standards.
- 3.17.4 Additional flood boats and crews can be requested through the NSW SES Illawarra South Coast Region Headquarters.
- 3.17.5 There may be some residual population which did not evacuate during the early stages of flooding and which require rescue.

3.18 MANAGING EVACUATION OPERATIONS

Strategy

- 3.18.1 When there is a risk to public safety, evacuation is the primary strategy. Circumstances may include:
- a. Evacuation of people when their homes or businesses are likely to flood.
 - b. Evacuation of people who are unsuited to living in isolated circumstances, due to flood water closing access.
 - c. Evacuation of people where essential energy and utility services are likely to fail, have failed or where buildings have been made uninhabitable.
 - d. Evacuation of people when their homes or business are at threat of collapse from coastal erosion

Actions

- 3.18.2 The evacuation operation will have the following stages:
- a. Decision to evacuate.
 - b. Mobilisation (mobilisation may begin prior to the decision to evacuate).
 - c. Evacuation Warning delivery.
 - d. Evacuation Order delivery.
 - e. Withdrawal.
 - f. Shelter.
 - g. Return.
- 3.18.3 During floods and coastal erosion evacuations will be controlled by the NSW SES. Small-scale evacuations will be controlled by the NSW SES Local Incident Controller. Should the scale of evacuation operations be beyond the

capabilities of local resources control may be escalated to the NSW SES Illawarra South Coast Region Incident Controller.

Decision to evacuate

- 3.18.4 In most cases the decision to evacuate rests with the NSW SES Local Incident Controller who exercises his/her authority in accordance with Section 22(1) of The State Emergency Service Act 1989. However, the decision to evacuate will usually be made after consultation with the NSW SES Illawarra South Coast Region Incident Controller and the Local Emergency Operations Controller.
- 3.18.5 In events that require large scale evacuations, the decision to evacuate may be escalated to the Region or the State Incident Controller.
- 3.18.6 Some people will make their own decision to evacuate earlier and move to alternate accommodation, using their own transport. This is referred to as self-managed evacuation.

Mobilisation

- 3.18.7 The NSW SES Local Incident Controller will request the following to provide personnel for doorknock teams for designated sectors/locations:
 - a. NSW SES Nowra, St Georges Basin and Ulladulla Unit members,
 - b. RFS Shoalhaven members via the RFS Fire Control Officer,
 - c. Local Police Force officers via the Local Area Command.
- 3.18.8 The NSW SES Illawarra South Coast Region Incident Controller will request any additional personnel required to assist with doorknock teams using:
 - a. NSW SES members from the NSW SES Illawarra South Coast Region and surrounding NSW SES Regions,
 - b. FRNSW personnel arranged via the FRNSW Liaison Officer,
 - c. RFS personnel arranged via the RFS Liaison Officer.
- 3.18.9 The NSW SES Local Incident Controller will request the Council Liaison Officer to provide Council personnel to assist with traffic coordination within Sector(s) or affected communities.
- 3.18.10 The NSW SES Local Incident Controller will arrange liaison officers for Sector Command Centres.
- 3.18.11 The NSW SES Illawarra South Coast Region Incident Controller will mobilise the required number of buses for Sectors via the Transport Services Functional Area.

Delivery of Evacuation Warnings and Evacuation Orders

- 3.18.12 The NSW SES will advise the community of the requirements to evacuate. The NSW SES will issue an **Evacuation Warning** when the intent of an NSW SES

Incident Controller is to warn the community of the need to prepare for a possible evacuation.

- 3.18.13 The NSW SES will issue an **Evacuation Order** when the intent of the NSW SES Incident Controller is to instruct a community to immediately evacuate in response to an imminent threat.
- 3.18.14 The NSW SES Local Incident Controller will distribute Evacuation Warnings and Evacuation Orders to:
- a. Sector/Division Command Centres (where established).
 - b. Shoalhaven Local Emergency Operations Centre.
 - c. Shoalhaven City Council.
 - d. Shoalhaven Local Area Command , NSW Police Force
 - e. Shoalhaven Rural Fire Service Control Centre.
 - f. Other local agencies and specified individuals.
- 3.18.15 The NSW SES Illawarra South Coast Region Incident Controller will distribute Evacuation Warnings and Evacuation Orders to:
- a. The NSW SES State Operations Centre.
 - b. The NSW SES Local Incident Controller.
 - c. Illawarra South Coast Regional Emergency Management Officer
 - d. Regional Emergency Operations Controller, NSW Police Force
 - e. Radio Stations: ABC Radio Illawarra, Power FM, 2UUU, i98 FM, WAVE FM and 2ST.
 - f. Affected communities via dial-out warning systems where installed or applicable.
 - g. Relevant media outlets and agencies.
- 3.18.16 Evacuation Warnings and Evacuation Orders may be delivered through:
- a. Radio and television stations.
 - b. Doorknocking by emergency service personnel.
 - c. Public address systems (fixed or mobile).
 - d. Telephony-based systems (including Emergency Alert).
 - e. Two-way Radio.
 - f. Direct access to Radio Station 2ST and ABC Illawarra.
- 3.18.17 The Standard Emergency Warning Signal (SEWS) may be used to precede all Evacuation Orders broadcast on Radio Stations.
- 3.18.18 Sector Command Centres, where established, will distribute Evacuation Orders via Emergency Service personnel in doorknock teams to areas under threat of inundation.

- 3.18.19 Doorknock teams will work at the direction of:
- The Sector Commander if a Sector Command Centre is established;
 - The relevant Division Commander where a Sector Command Centre has not been established; or
 - The NSW SES Local Incident Controller.
- 3.18.20 Field teams conducting doorknocks will record and report back the following information to their Sector Commander/Division Commander/Local Incident Controller:
- Addresses and locations of houses doorknocked and/or evacuated.
 - The number of occupants and animals.
 - Details of support required (such as transport, medical evacuation, assistance to secure house and/or property and raise or move belongings).
 - Details of residents who refuse to comply with the Evacuation Order.
- 3.18.21 Refusal to evacuate. Field teams cannot afford to waste time dealing with people who are reluctant or refuse to comply with any Evacuation Order. These cases are to be referred to the NSW Police Force.

Withdrawal

- 3.18.22 Evacuations will generally be carried out in stages starting from the lowest areas, low flood islands and low trapped perimeters; and progressively from higher areas.
- 3.18.23 The most desirable method of evacuation is via road using private transport. This may be supplemented by buses for car-less people. However, other means of evacuation may also be used if available and as necessary (eg by foot, rail, air).
- 3.18.24 Evacuees who require emergency accommodation or disaster welfare assistance will be directed to designated evacuation centres. Evacuees who have made their own accommodation arrangements will not be directed to evacuation centres. It is not possible to determine in advance how many will fall into this category.
- 3.18.25 Evacuees will:
- Move under local traffic arrangements from the relevant Sectors/Community.
 - Continue along the suburban/regional/rural road network to allocated Evacuation Centres.
- 3.18.26 **Health Services.** The Health Services Functional Area will coordinate the evacuation of hospitals, health centres, and aged care facilities (including nursing homes).

- 3.18.27 **Schools.** School administration offices (Department of Education and Communities, Catholic Education Office and Private Schools) will coordinate the evacuation of schools if not already closed.
- 3.18.28 If there is sufficient time between the start of response operations and the evacuation of communities, the NSW SES Illawarra South Coast Region Incident Controller will discuss the temporary closure of appropriate schools with the Regional Director, Illawarra South East Region, Department of Education and Communities. This will enable pupils to stay at home or be returned home so they can be evacuated (if required) with their families.
- 3.18.29 Note that in the Shoalhaven City Council LGA, school principals may close some schools affected by flooding in the early stages of flooding.
- 3.18.30 **Caravan parks.** When an evacuation order is given occupiers of non-movable vans should:
- a. Secure their vans by tying them down to prevent flotation.
 - b. Isolate power to their vans by unplugging all leads.
 - c. Collect personal papers, medicines, a change of clothing, toiletries and bedclothes.
 - d. Lift the other contents of their vans as high as possible within the van.
 - e. Move to friends, relatives or a designated evacuation centre if they have their own transport, or move to the caravan park office to await transport and contact the NSW SES.
- 3.18.31 Where possible, vans that can be moved will be relocated by their owners in accordance with the caravan park's Flood Emergency Plan. Park managers may arrange for the relocation of mobile vans whose owners do not have a vehicle. Council, Nowra 4WD club and NSW SES personnel will assist if required and may be able to provide additional vehicles if resources are available.
- 3.18.32 Caravan park managers will ensure that their caravan park is capable of being evacuated within the allocated time.
- 3.18.33 Caravan park managers will advise the NSW SES Shoalhaven City Local Controller of:
- a. The number of people and animals requiring transport.
 - b. Details of any medical evacuations required.
 - c. Whether additional assistance is required to effect the evacuation.
- 3.18.34 Check that no people remain in non-removable vans that are likely to be inundated.
- 3.18.35 Inform the NSW SES Shoalhaven City Local Controller when the evacuation of the caravan park has been completed.

- 3.18.36 Provide the NSW SES Shoalhaven City Local Controller with a register of people that have been evacuated.
- 3.18.37 **Assistance Animals, Pets and Companion Animals of Evacuees:** Assistance animals (guide dogs, hearing assistance animals, etc) will remain in the care of their owners throughout the evacuation. This includes transport and access into evacuation centres etc. Due to safety restrictions, it may not be possible to allow companion animals to accompany their owners when being transported via aircraft or flood rescue boats. Agriculture and Animal Services will make separate arrangements for the evacuation and care of companion animals.
- 3.18.38 **Transport and storage:** Transport and storage of furniture from flood and/or coastal erosion threatened properties will be arranged as time and resources permit.
- 3.18.39 **Security:** The NSW Police Force will coordinate the provision of overall security for evacuated areas..
- 3.18.40 The NSW SES Local Incident Controller is to provide the following reports to the NSW SES Illawarra South Coast Region Headquarters:
- a. Advice of commencement of the evacuation of each Sector
 - b. Regular progress reports (by Sectors) during evacuations including numbers evacuated
 - c. Advice of completion of the evacuation of each Sector.
- 3.18.41 **Assembly areas.** An assembly area is a designated location established by the NSW SES away from the hazard or danger area. It is used for the assembly of affected persons prior their movement 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.

Shelter

- 3.18.42 **Evacuation.** Evacuees will be advised to go to friends or relatives or else be taken to the nearest accessible evacuation centre, which may initially be established at the direction of the NSW SES Local Incident Controller, but managed as soon as possible by Welfare Services.
- 3.18.43 The following locations may be suitable for use as evacuation centres or assembly areas dependant on the scale and type of the event. Appropriate evacuation centres and/or assembly areas will be confirmed at the time of the event:
- a. Berry:
 - School of Arts, Alexander Street (Can be flood affected)
 - Showgrounds, Alexander Street (Can be flood affected)
 - b. Bomaderry:

- Bomaderry High School, Cambewarra Road
 - Bomaderry Bowling Club, 154 Meroo Road
 - Community Centre, 13-17 Birrelly Street
 - Basketball Stadium, Cambewarra Road
- c. Nowra:
- Nowra Showgrounds, West Street
 - Shoalhaven Entertainment Centre, 44 Bridge Road
 - Senior Citizens Centre, Graham Place
 - Police Boys Club, Park Road
- d. Kangaroo Valley:
- Showgrounds, Moss Vale Road
- e. Shoalhaven Heads:
- Community Centre, Shoalhaven Heads Road
 - Celia Hall, Celia Place
- f. Greenwell Point:
- RSL Hall, Greenwell Point Road (Note: Greenwell Point may become isolated)
- g. Culburra:
- Community Centre, Prince Edward Drive
- h. Currarong:
- Tennis Courts, Walton Way
- i. Callala Bay:
- Community Centre
 - Callala Bay Hall
- j. Callala Beach:
- Community Hall
- k. Huskisson:
- Senior Citizens Centre, Huskisson Road
 - Lady Denman Complex, Dent Street
- l. Sanctuary Point:
- Community Centre, Paradise Beach Road
 - Sanctuary Point, Primary School

- m. St Georges Basin:
 - Community Centre, Meriton Street
- n. Erowal Bay:
 - Progress Hall
- o. Vincentia:
 - Sailing Club
 - Vincentia Public School, The Wool Road
- p. Sussex Inlet:
 - Community Facilities, Thompson Street
 - RSL Club
- q. Lake Conjola:
 - Lake Conjola Bowling Club, Lake Conjola Road
- r. Milton:
 - Showgrounds, Croobyar Road
 - Milton Public School, Thomas Street
- s. Mollymook:
 - Surf Club, Mitchell Parade (Note: Potentially affected by coastal erosion)
- t. Ulladulla:
 - Civic Centre, Princes Highway
 - Ulladulla Oval, Deering Street
 - Ulladulla High School, South Street
- u. Kioloa:
 - Community Centre, Murramarang Road
- v. Lake Tabourie:
 - Tabourie Lake Motor Inn, Princes Highway

3.18.44 **Registration:** The NSW Police Force NSW Police Force will facilitate the requirement of Disaster Victim Registration for people evacuated to designated evacuation centres.

3.18.45 **Animal shelter compounds:** Animal shelter compounds will be set up for the domestic pets and companion animals of evacuees if required. Facilities will be managed by Agriculture and Animal Services.

Return

- 3.18.46 The NSW SES Local Incident Controller will advise when return to evacuated areas is safe after flood waters have receded and reliable access is available.
- 3.18.47 The NSW SES Local Incident Controller will determine when it is safe for evacuees to return to their homes in consultation with:
- a. the Recovery Coordinating Committee (if established),
 - b. Welfare Services Functional Area Coordinator (welfare of evacuees),
 - c. Engineering Services Functional Area Coordinator (electrical safety of buildings, structural integrity of levees/dams),
 - d. Energy and Utility Services Functional Area Coordinator,
 - e. Health Service Functional Area Coordinator (public health),
 - f. Transport Services Functional Areas Coordinator (arrangement of transport),
 - g. the Shoalhaven LEOCON,
 - h. the Shoalhaven City Council,
 - i. NSW SES Illawarra South Coast Region Incident Controller,
 - j. Other appropriate agencies/functional areas as required (mitigation and advice regarding identified risks resulting from the flood and/or coastal erosion event).
- 3.18.48 Once it is considered safe to do so, the NSW SES Local Incident Controller will authorise the return of evacuees.
- 3.18.49 The return will be controlled by the NSW SES Local Incident Controller and may be conducted, at their request, by the Recovery Coordinator.

3.19 MANAGING RESUPPLY OPERATIONS

- 3.19.1 The NSW SES is responsible for the coordination of the resupply of isolated communities and properties.
- 3.19.2 If isolation is expected to occur, residents should be encouraged to consider their needs and suitability for an unknown period of isolation.
- 3.19.3 If properties/communities are going to remain in locations expected to become isolated, households/retailers should be encouraged to stock up on essential supplies.
- 3.19.4 Where practicable, once supplies are delivered to the NSW SES designated loading point, the NSW SES Local Incident Controller will arrange for the delivery of essential foodstuffs, fuels or urgent medical supplies required by an isolated property or community.
- 3.19.5 All reasonable effects will be made to deliver supplies, however where necessary the NSW SES will prioritise the delivery of items.

Resupply of Isolated Towns and Villages

Strategy

- 3.19.6 Minimise disruption upon the community by resupplying towns and villages which have become isolated as a consequence of flooding.

Actions

- 3.19.7 The NSW SES is responsible for the coordination of the resupply of isolated communities.
- 3.19.8 If flood predictions indicate that areas are likely to become isolated, the NSW SES Local Incident Controller should advise retailers that they should stock up.
- 3.19.9 When isolation occurs, retailers will be expected to place orders with suppliers where they have a line of credit and to instruct those suppliers to package their goods and deliver them to loading points designated by the NSW SES.
- 3.19.10 The NSW SES is prepared to deliver mail to isolated communities but may not be able to do so according to normal Australia Post timetables.
- 3.19.11 The NSW SES will assist hospitals with resupply of linen and other consumables where able.

Resupply of Isolated Properties

Strategy

- 3.19.12 Ensure supplies are maintained to properties by coordinating the resupply of properties which have become isolated as a consequence of flooding.

Actions

- 3.19.13 The resupply of isolated properties is a common requirement during floods and coordination can be difficult because requests can emanate from a variety of sources. Isolated properties may call their suppliers direct, place their orders through their own social networks or contact the NSW SES.
- 3.19.14 The principles to be applied when planning for the resupply of isolated properties are:
- The NSW SES will coordinate resupply and establish a schedule.
 - Some isolated households will not have the ability to purchase essential grocery items due to financial hardship. If an isolated household seeks resupply from the NSW SES and claims to be, or is considered to be, in dire circumstances, he/she is to be referred to Welfare Services for assessment of eligibility. Where financial eligibility criteria are met, Welfare Services will assist with the purchase of essential grocery items. Welfare Services will deliver the essential grocery items to the NSW SES designated loading point for transport.

- c. Local suppliers will liaise with the NSW SES regarding delivery of resupply items to the designated loading point.
 - d. Local suppliers are responsible for packaging resupply items for delivery.
- 3.19.15 A flowchart illustrating the Resupply process is shown in Attachment 1. Please note that the flowchart outlines the resupply process but does not encompass all potential situations and/or outcomes.

PART 4 - RECOVERY

4.1 RECOVERY COORDINATION AT THE LOCAL LEVEL

- 4.1.1 The NSW SES Shoalhaven City Local Controller will ensure that planning for long-term recovery operations begins at the earliest opportunity, initially through briefing the Local Emergency Management Committee (LEMC). As soon as possible the LEMC will meet to discuss recovery implications including the need for a Local Recovery Committee. The LEMC will consider any impact assessment in determining the need for recovery arrangements. This is conveyed in the first instance to the State Emergency Operations Controller (SEOCN) for confirmation with the State Emergency Recovery Controller (SERCON).
- 4.1.2 Once the need for recovery has been identified, the SERCON, in consultation with the SEOCN, may recommend the appointment of a Local Recovery Coordinator and nominate an appropriate candidate to the Minister for Police and Emergency Services.
- 4.1.3 The SERCON may send a representative to the LEMC and subsequent recovery meetings to provide expert recovery advice and guidance.
- 4.1.4 The NSW SES Shoalhaven City Local Controller and Local Emergency Operations Controller (LEOCN) attend recovery meetings to provide an overview of the emergency response operation.
- 4.1.5 The NSW SES Region Incident Controller, the Regional Emergency Management Officer and appropriate Regional Functional Area Coordinators will be invited to the initial local meeting and to subsequent meetings as required.
- 4.1.6 The recovery committee will:
- a. develop and maintain a Recovery Action Plan with an agreed exit strategy
 - b. monitor and coordinate the activities of agencies with responsibility for the delivery of services during recovery
 - c. ensure that relevant stakeholders, especially the communities affected, are involved in the development and implementation of recovery objectives and strategies and are informed of progress made
 - d. provide the SERCON with an end of recovery report
 - e. ensure the recovery is in line with the National Principles of Disaster Recovery and the NSW tenets

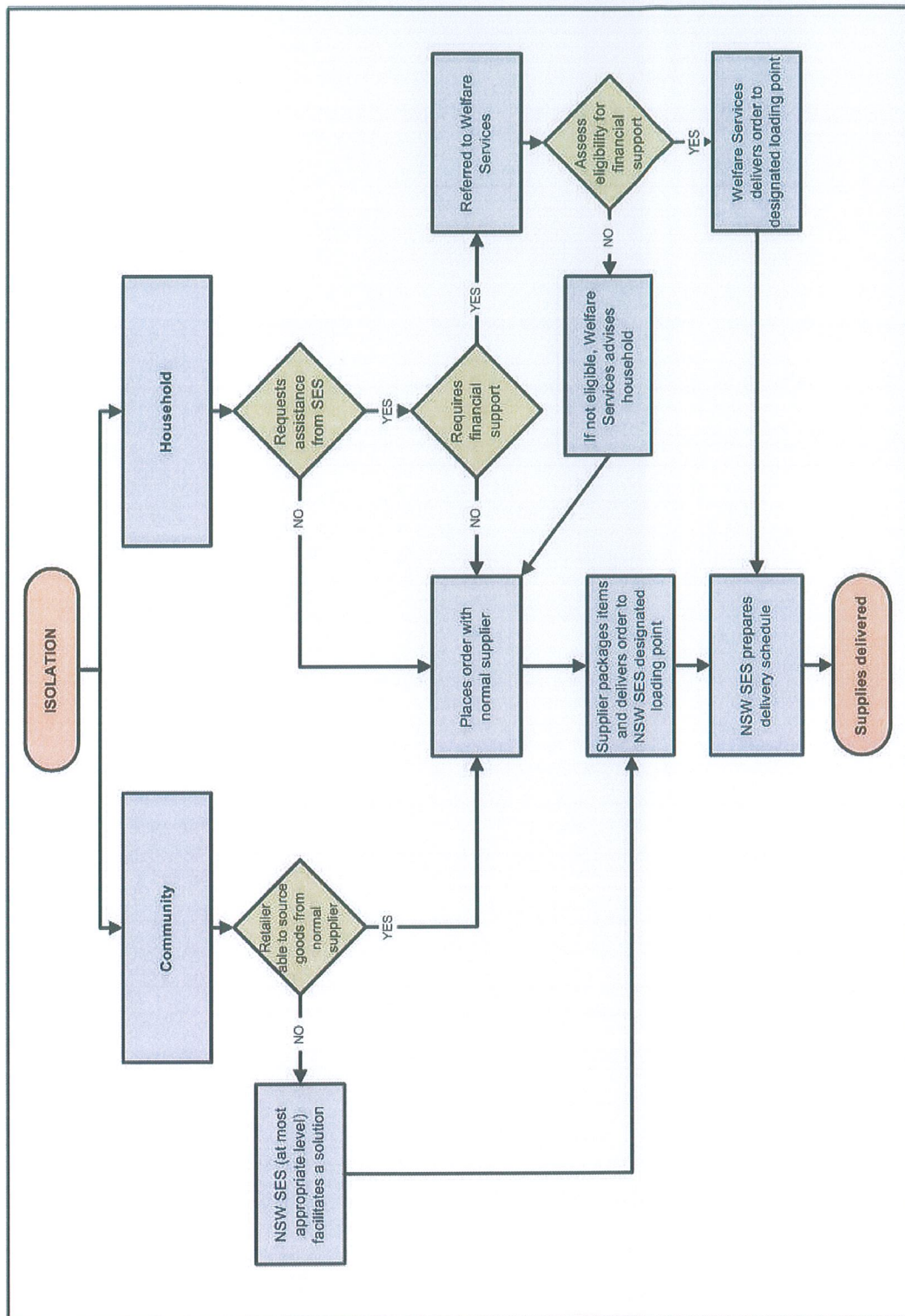
4.2 RECOVERY COORDINATION AT THE REGION AND STATE LEVEL

- 4.2.1 In the event that an emergency affects several local areas, a Regional Emergency Management Committee (REMC) will meet to discuss recovery implications including the need for a Region Recovery Committee. This is conveyed in the first instance to the SEOCON for confirmation with the SERCON.
- 4.2.2 In the event of an emergency which affects multiple Regions, or is of state or national consequence, or where complex, long term recovery and reconstruction is required, it may be necessary to establish a State Recovery Committee and the appointment of a State Recovery Coordinator.

4.3 ARRANGEMENTS FOR DEBRIEFS / AFTER ACTION REVIEWS

- 4.3.1 As soon as possible after flooding has abated, the NSW SES Shoalhaven City Local Controller will advise participating organisations of details of response operation after action review arrangements.
- 4.3.2 The NSW SES Shoalhaven City Local Controller will ensure that adequate arrangements are in place to record details of the after action review and each item requiring further action is delegated to an organisation or individual to implement.
- 4.3.3 Follow-up to ensure the satisfactory completion of these actions will be undertaken by the Shoalhaven Local Emergency Management Committee.

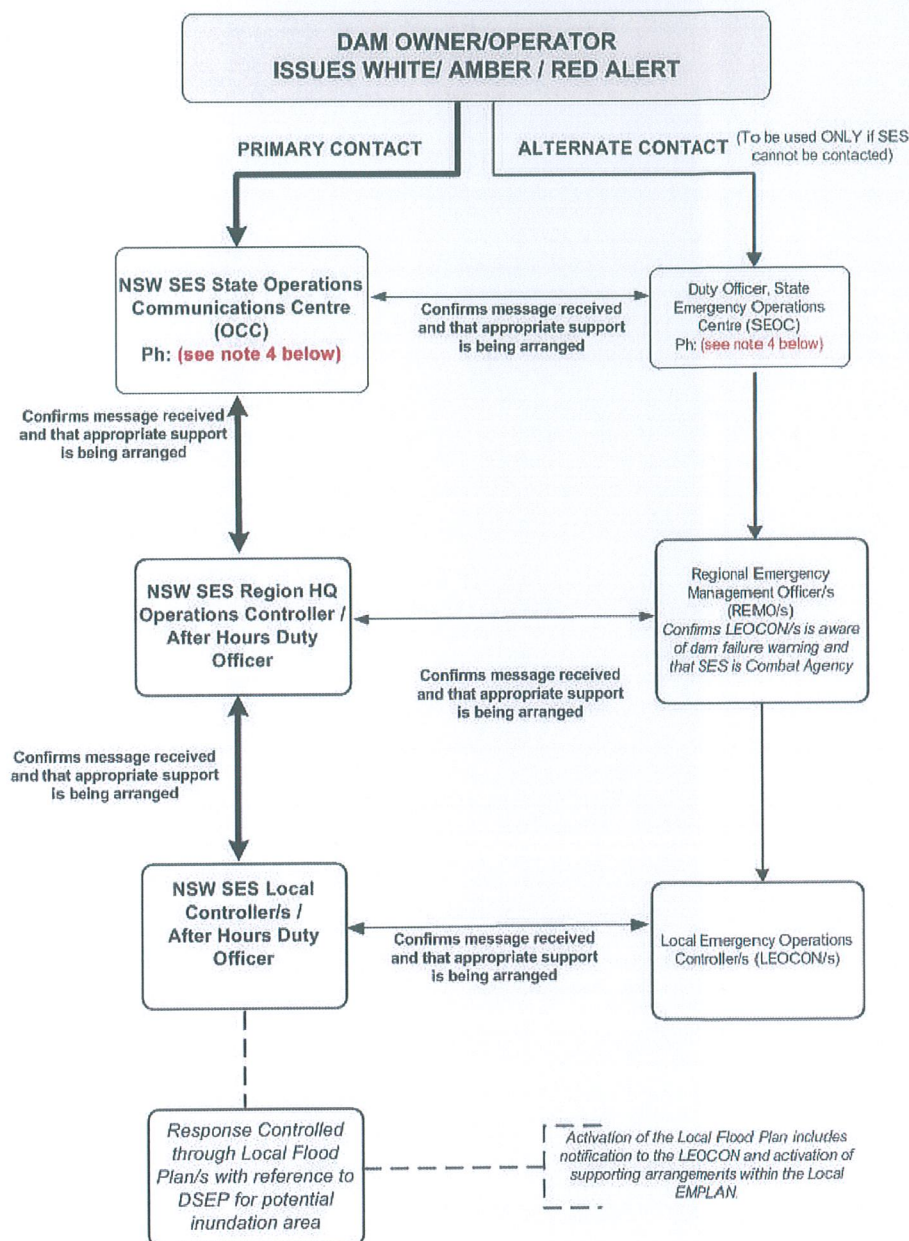
ATTACHMENT 1 - RESUPPLY FLOWCHART



Please Note: The chart outlines the resupply process, but does not encompass all potential situations and outcomes.

ATTACHMENT 2 - DAM FAILURE ALERT NOTIFICATION ARRANGEMENTS FLOWCHART

Notification Arrangements for Potential Dam Failure



NOTES:

1. Dam owners should only contact the SEOC if the SES State Operations Communications Centre (OCC) cannot be contacted.
2. The first priority for notification is to contact the next SES HQ or the next level of EOC down the flowchart. The second notification should always be across the flow chart to confirm the message is received. If the first priority notification fails or is not picked up for any reason, the second priority notification should be made before any further attempts to contact the first priority (this is why an alternate or backup system of contacts is in place).
3. The triple zero (000) number for emergency services should not be used unless contact cannot be made with SES or the SEOC, as it is likely the triple zero (000) operators will have difficulty dealing with the very unusual case of potential or actual dam failure.
4. Dam owners must contact the SES State Headquarters during the preparation of the DSEP to obtain the appropriate emergency contact numbers.

ATTACHMENT 3 - SHOALHAVEN CITY COUNCIL LGA MAP.

