

**Mid-Western**

# Local Flood Emergency Sub Plan



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# **MID-WESTERN REGIONAL FLOOD EMERGENCY SUB PLAN**

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**A Sub Plan of the Local Emergency Management Plan (EMPLAN)**

**Volume 1 of the Mid-Western Regional Flood Emergency Sub Plan**

**Endorsed by the Mid-Western Local Emergency Management Committee**

**12 March 2024  
Version 3.0**

# AUTHORISATION

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

## Authorised

Signature:



\_\_\_\_\_  
*NSW SES Local/Unit Commander*

Print Name:

*Jason Thurlow*

Date:

*10/5/2024*

## Endorsed

Signature:



\_\_\_\_\_  
*Chair, Local Emergency Management Committee*

Print Name:

**Julian Geddes**

Date:

**Mar 12, 2024**

## VERSION HISTORY

Version Number	Description	Date
1.0	Mid-Western Regional Local Flood Plan	2007
2.0	Mid-Western Regional Local Flood Plan	July 2013

## AMENDMENT LIST

Suggestions for amendments to this plan should be forwarded to:

Manager Emergency Planning  
NSW State Emergency Service  
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Amendments in the list below have been entered in this plan.

Amendment Number	Description	Updated by	Date

## DISTRIBUTION LIST

Available for general use and distribution on the NSW State Emergency Service website

[www.ses.nsw.gov.au](http://www.ses.nsw.gov.au)

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# 1 OUTLINE AND SCOPE

## 1.1 PURPOSE

1.1.1 The purpose of this plan is to set out the multi-agency arrangements for the emergency management of flooding in the Mid-Western Regional Local Government Area (LGA).

## 1.2 AUTHORITY

1.2.1 This plan is written and issued under the authority of the [State Emergency and Rescue Management Act 1989 \(NSW\)](#) ('SERM Act'), the [State Emergency Service Act 1989 \(NSW\)](#) ('SES Act') and the NSW State Emergency Management Plan (EMPLAN).

1.2.2 This plan is a sub plan to the Mid-Western Regional Local Emergency Management Plan (EMPLAN) and is endorsed by the Mid-Western Regional Local Emergency Management Committee (LEMC).

## 1.3 ACTIVATION

1.3.1 This plan does not require activation. The arrangements set out in this plan are always active.

1.3.2 The Mid-Western Regional Emergency Management Plan (EMPLAN) is active at all times in anticipation of the need to coordinate support and resources requested by combat agencies, including the NSW State Emergency Service (NSW SES).

## 1.4 SCOPE

1.4.1 The area covered by this plan is the Mid-Western Regional LGA. The Mid-Western Regional LGA and its principal towns, villages, rivers and creeks are shown in Appendix A.

1.4.2 The council area is in the NSW SES Western Zone and for emergency management purposes, is part of the Central West Emergency Management Region.

1.4.3 The plan sets out the Mid-Western Regional level emergency management arrangements for prevention, preparation, response and initial recovery for flooding in the Mid-Western Regional LGA.

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

1.4.5 This plan outlines the local level arrangements for the management of downstream consequences of flooding due to dam failure, however it does not cover the management of flooding of an underground mine by inrush or other cause, which should be covered by the Mine Emergency Sub Plan for the respective mine.

## **1.5 GOALS**

- 1.5.1 The primary goals for flood emergency management in NSW are:
- a. Protection and preservation of life.
  - b. Establishment and operation of flood warning systems.
  - c. Issuing of community information and community warnings.
  - d. Coordination of evacuation and welfare of affected communities.
  - e. Protection of critical infrastructure and community assets essential to community survival during an emergency incident.
  - f. Protection of residential property.
  - g. Protection of assets and infrastructure that support individual and community financial sustainability and aid assisting a community to recover from an incident.
  - h. Protection of the environment and conservation values considering the cultural, biodiversity and social values of the environment.

## **1.6 KEY PRINCIPLES**

- 1.6.1 The protection and preservation of human life (including the lives of responders and the community) is the highest priority.
- 1.6.2 Evacuation is the primary response strategy for people impacted by flooding.

## **1.7 ROLES AND RESPONSIBILITIES**

- 1.7.1 General responsibilities of emergency service organisations and Functional Areas are set out in the NSW State EMPLAN and NSW State Flood Sub Plan.
- 1.7.2 Specific roles and responsibilities for agencies, Functional Areas and organisations in relation to flooding within Mid-Western Regional Council are detailed within this plan, Appendix B and Appendix C.
- 1.7.3 Any agency with agreed responsibilities in this plan which are temporarily unable or no longer able to fulfil their responsibilities in response operations must, as soon as possible, notify:
- a. The NSW SES Incident Controller (for local or zone level responsibilities during response operations).
  - b. The NSW SES Zone Duty Commander and/or the NSW SES Western Zone Office (for regional level responsibilities outside of response operations).

## **1.8 PLAN MAINTENANCE AND REVIEW**

- 1.8.1 The NSW SES will maintain the currency of this plan by:
- a. Ensuring that all supporting emergency services and Functional Areas, organisations and officers mentioned in it are aware of their roles and responsibilities.
  - b. Conduct a minimum of one exercise every five years or within two years of the plan being reviewed.
  - c. Reviewing the contents of the plan:

- When there are changes which alter agreed plan arrangements.
  - When changes to land use strategic plans and policies increase the population at risk.
  - After a flood including recommendations from after action reviews, reports or inquiries.
  - As determined by the NSW SES Commissioner.
- d. The plan is to be reviewed no less frequently than every five years or after a significant flood event.

## 1.9 SUPPLEMENTARY DOCUMENTS

- 1.9.1 Supplementary and supporting material of the Local Flood Emergency Sub Plan is maintained on the NSW SES website at: <https://www.ses.nsw.gov.au/about-us/flood-storm-and-tsunami-plans/> including:
- a. Flood Plan Glossary.
  - b. The NSW SES Dam Failure Notification Flowchart.
  - c. The NSW SES Resupply Flowchart.

## 2 OVERVIEW OF NSW FLOOD HAZARD AND RISK

### 2.1 THE FLOOD THREAT

- 2.1.1 The NSW SES maintains information on the nature of flooding and effects of flooding on the community in the Mid-Western Regional LGA.
- 2.1.2 Declared dams in or upstream of the Mid-Western Regional Local Government Area.

Dam Name	Owner	High Risk Dam
Burrendong Dam	Water NSW	No
Windamere Dam	Water NSW	No
Rylstone Dam	Mid-Western Regional Council	No

## 3 PREVENTION/ MITIGATION

### 3.1 INTRODUCTION

- 3.1.1 The Floodplain Risk Management Manual outlines the NSW Government's Flood Prone Land Policy which details the framework for managing flood prone land in New South Wales. Incorporation of floodplain risk management into land use planning is one of the key means to limit the exposure to flood risks to our communities and help build long term resilience to future flood events.

### 3.2 LAND USE PLANNING

- 3.2.1 **Strategy:** Effective land use planning is a key focus for minimising the impacts of flooding. The NSW SES will work with land use planning and consent authorities to inform and influence the consideration of the risks arising from flood, storm and tsunami, to prevent the creation of intolerable impacts of these hazards on the community.

**Actions:**

- a. The NSW SES will provide strategic input about land use planning matters which have or will create significant flood risk to life and/or property due to flooding.
- b. The NSW SES will provide responses to land use planning proposal referrals that have or will create significant flood risk to life and/or property due to flooding.

### **3.3 FLOODPLAIN RISK MANAGEMENT**

3.3.1 **Strategy:** Advocate for consideration of emergency management in decision making to reduce risks to the existing community and minimise the growth in future, continuing and residual risk due to development through input to the floodplain management program.

**Actions:**

- a. The NSW SES will provide coordinated and consistent emergency management advice to councils and other agencies in relation to the management of land that is subject to flooding.
- b. The NSW SES will provide advice, support, technical resources and training for the NSW SES representatives to contribute effectively on local Floodplain Risk Management Committees.

## **4 PREPARATION**

### **4.1 INTRODUCTION**

4.1.1 Preparation includes arrangements or plans to deal with an emergency or the effects of an emergency.

### **4.2 FLOOD EMERGENCY PLANNING**

4.2.1 **Strategy:** The NSW SES develop, review and maintain Flood Emergency Sub Plans.

**Actions:**

- a. Develop and review this the NSW SES Local Flood Emergency Sub Plan as required. Local Flood Emergency Sub Plans outline the specific arrangements for management of flood events within an LGA and may include cross boundary arrangements.
- b. Review plans as per [Section 1.8](#).

4.2.2 Local EMPLAN Consequence Management Guides (CMGs) for flood are not required for communities covered by the NSW SES Local Flood Emergency Sub Plans however may be utilised in place of Local Flood Emergency Sub Plans if agreed to by the NSW SES.

### **4.3 FLOOD INTELLIGENCE SYSTEMS**

4.3.1 **Strategy:** The NSW SES develop and maintain a flood intelligence system to identify flood behaviour, its impact on the community and required response actions.

**Actions:**

- a. Gather and assess flood information for the full range of flood types and severities.
- b. Collect, collate, and assess information on the characteristics of communities at risk and the potential effects of flooding on communities at risk.
- c. Share flood intelligence information with supporting agencies.

#### **4.4 DEVELOPMENT OF WARNING SYSTEMS**

4.4.1 **Strategy:** Develop, maintain and prepare systems for the provision of flood warnings and associated warning services.

**Actions:**

- a. All levels of government work in partnership to develop and maintain flood warning infrastructure.
- b. The NSW SES maintains a list of the requirements for flood warnings for flood gauges in NSW (including flood classifications, warning times required and key statistics) and can be found in the supplementary document to the NSW State Flood Plan (see Section 1.9).
- c. The NSW SES will recommend new warning services and changes to warning alert levels for gauges to the NSW and ACT Flood Warning Consultative Committee.
- d. The State Government, in partnership with Local Government, is responsible for developing and maintaining flash flood warning systems for local catchments where required.
- e. The NSW SES maintains a dedicated dam failure hotline and procedures to ensure priority dissemination of dam failure warnings.
- f. The NSW SES develops and maintains warning and flood information products by:
  - Utilising flood intelligence data.
  - Developing warning and flood information products.
  - Continuously reviewing warning and flood information products.
  - Consulting with affected communities, key stakeholders, Dam Safety NSW and the NSW and ACT Flood Warning Consultative Committee, and maintains Operational Readiness.
  - Participating in the development of public information and warning systems.
- g. Gauge owners adequately maintain flood warning gauges and systems, including those identified in the 'Service Level Specification' maintained by the Bureau of Meteorology (Bureau) and those identified in the 'Provision and Requirements for Flood Warning in New South Wales' maintained by the NSW SES.

## 4.5 BRIEFING, TRAINING AND EXERCISING

4.5.1 **Strategy:** Ensure the NSW SES, supporting agencies, Functional Areas and the community are prepared and familiar with the strategies and arrangements within the Flood Emergency Sub Plan and supporting documents.

**Actions:**

- a. The NSW SES will consult stakeholders throughout the development of plans.
- b. The NSW SES will inform stakeholders of content changes after revisions.
- c. The NSW SES will ensure their facilities and resources are maintained and operationally ready.
- d. The NSW SES will train personnel for their expected flood operation roles.
- e. The NSW SES will regularly brief stakeholders on the exercise arrangements contained in the NSW Flood Emergency Sub Plan.

## 4.6 COMMUNITY RESILIENCE TO FLOODING

4.6.1 **Strategy:** The NSW SES provides and maintains a flexible volunteer workforce to support community resilience.

**Actions:**

- a. Ensure ongoing recruitment and training of a diverse range of volunteers.
- b. Ensure pre-planning to facilitate the management of spontaneous volunteers and community members during a flood.

4.6.2 **Strategy:** The NSW SES works with individuals, communities, businesses and government agencies to build flood resilience.

**Actions:**

- a. Partners with and engage communities to understand and manage the risks associated with floods, including providing business continuity guidance (NSW SES Business FloodSafe), family preparedness (NSW SES Home FloodSafe) and other engagement strategies.
- b. The NSW SES will collate, assess and disseminate flood information to the community.
- c. Collaborate with individuals, businesses, government agencies and communities when developing flood intelligence, preparedness and response information.
- d. Plan for floods collaboratively with communities through community and stakeholder participation and engagement.
- e. Collaborate with community sector and recognise the needs of individuals within communities who have an increased susceptibility during floods.



## 5 RESPONSE

### 5.1 INTRODUCTION

5.1.1 Flood response operations will begin:

- a. On receipt of a Bureau Severe Weather Warning or Thunderstorm Warning that includes heavy rain or storm surge; or
- b. On the receipt of a Bureau Flood Watch or Flood Warning; or
- c. On receipt warnings for flash flood; or
- d. On receipt of a dam failure alert; or
- e. When other evidence leads to an expectation of flooding.

### 5.2 INCIDENT MANAGEMENT ARRANGEMENTS

5.2.1 **Strategy:** Maintain effective control of flood operations across NSW.

**Actions:**

- a. The NSW SES uses the Australasian Inter-service Incident Management System (AIIMS) to manage the flood response.
- b. Control of flood response will be at the lowest effective level and may be scaled to suit the incident.
- c. The NSW SES State Controller (or delegate) will appoint Incident Controllers and establish Incident Control Centres (see NSW SES facilities on map in Appendix A).
- d. The NSW SES Incident Controller, in consultation with participating supporting emergency services and Functional Areas will determine the appropriate breakdown of an Area of Operations into Divisions and/or Sectors in accordance with the principles of AIIMS.

5.2.2 **Strategy:** Maintain Incident Control Centre(s).

**Actions:**

- a. The NSW SES will operate Incident Control Centre(s) as required.
- b. The NSW SES Incident Control Centre(s) will:
  - Control resources from the NSW SES and coordinate resources of supporting emergency services and Functional Areas.
  - Manage incident tasking and ensure they are actioned in a timely manner.
  - Undertake response planning and determine future resourcing requirements.
  - Coordinate information flow, including warnings, public information and social media.

5.2.3 **Strategy:** Provide effective liaison between the NSW SES and supporting agencies or Functional Areas in accordance with the local EMPLAN.

**Actions:**

- a. Supporting emergency services and Functional Areas should provide Liaison Officers to the NSW SES Incident Control Centre(s) and/or Emergency Operation Centres as required.
- b. The NSW SES will provide Liaison Officer(s) to Emergency Operations Centres as required.
- c. Where possible Emergency Operation Centres are to be co-located with the NSW SES Incident Control Centres for Flood Emergency Response.

5.2.4 **Strategy:** Coordinate resources and logistics support to ensure operational effectiveness.

**Actions:**

- a. The NSW SES Incident Controller will notify agencies of potential access issues between locations, for the consideration of pre-deploying of resources.
- b. The NSW SES may request resources and logistics support directly from a supporting emergency service or Functional Area.
- c. Wherever possible, supporting organisations are to provide their own logistic support in consultation with the NSW SES where appropriate.
- d. The NSW SES Incident Controller will control air support operations and may utilise supporting agencies in the management of aircraft.

### **5.3 USE OF INFORMATION AND COLLECTION OF INTELLIGENCE**

5.3.1 **Strategy:** Ensure flood information is effectively utilised, communicated and collected during and post a flood.

**Actions:**

- a. Information relating to the consequences of flooding, response strategies, situational awareness and operational updates will be distributed by the NSW SES to supporting emergency services and Functional Areas listed under this plan.
- b. All supporting emergency services and Functional Areas and Council will accurately record and report information relevant to their activities and any real time flood information (including road closure information) to the NSW SES Incident Controller. This may be in the form of a combined Emergency Operations Centre (EOC) report, or direct from agencies where an EOC has not been established.
- c. The NSW SES may establish and operate a Joint Intelligence Unit to coordinate the collection, collation, interpretation, mapping, actioning and dissemination of information.
- d. Reconnaissance, mapping, damage assessments, intelligence validation and post flood evaluation will be coordinated by the NSW SES. This may occur post impact and continue into the recovery phase.
- e. The NSW SES may request the Engineering Services Function Area to assist with the gathering of flood intelligence including (not limited to) maximum flood

extents, peak flood heights, recording major flood damage at key high velocity locations and preparation of the after-flood report.

5.3.2 **Strategy:** Ensure flood intelligence is incorporated into operational decision-making.

**Action:** The NSW SES will use flood intelligence, official forecasts, warnings, and flood scenario products to undertake an assessment of the predicted impact of a flood and to inform operational decision-making.

## 5.4 PROVISION OF INFORMATION AND WARNINGS TO THE COMMUNITY

5.4.1 **Strategy:** Timely and effective warnings are distributed to the community.

### **Actions:**

- a. The Bureau issues public weather and flood warning products before and during a flood. These may include:
  - Severe Thunderstorm Warnings – Detailed - Issued for all capital cities and surrounding areas when individual severe thunderstorms are within range of the capital city radars.
  - Severe Thunderstorm Warnings - Broad-based - Issued for the entire Australian state or territories affected highlighting broad areas where severe storms may occur within the next 3 hours.
  - Severe Weather Warnings with reference to heavy rainfall and/or storm surge.
  - Flood Watches.
  - Flood Warnings.
- b. Dam Owners will utilise the Dam Emergency Plan to provide warnings and information to the NSW SES and communities (where appropriate).
- c. The NSW SES Incident Controllers will issue the following the NSW SES Flood Warnings aligning to the Australian Warning System:
  - Advice
  - Watch and Act
  - Emergency Warning
- d. The NSW SES liaises with the Bureau to discuss the development of flood warnings as required.
- e. The NSW SES provides alerts and deliver flood information to affected communities using a combination of public information.
- f. The NSW SES may request supporting agencies redistribute the NSW SES alerts and information, including through the provision of doorknocking teams.
- g. Road closure information will be provided to the community through the following agencies/methods:
  - Local Government websites.

- Transport for NSW 'Live Traffic' website: [www.livetraffic.com](http://www.livetraffic.com) or 'Transport InfoLine': 131 500. VMS messaging on roadways may also be used to advise motorists.
- h. The Public Information and Inquiry Centre will be established by NSW Police Force where required to provide information regarding evacuees and emergency information. Contact details will be broadcast once the centre is established.
- i. The Disaster Welfare Assistance Line will be established by the Disaster Welfare Services Functional Area where required to provide information on welfare services and assistance. Assistance line contact details will be broadcast once Disaster Welfare services commence.

## 5.5 PROTECTION OF PROPERTY

5.5.1 **Strategy:** Coordinate the protection of property from destruction or damage arising from floods.

**Action:** The NSW SES, supporting agencies, and community volunteers will assist the community (where resources are available, feasible and safe to do so) in:

- a. The protection of properties including critical infrastructure through flood protection systems (e.g. sandbagging) to minimise entry of water into buildings.
- b. The raising or moving of household furniture and commercial stock/equipment.

## 5.6 ROAD AND TRAFFIC CONTROL

5.6.1 **Strategy:** Coordinate the closing and re-opening of flood affected roads.

**Actions:**

- a. Mid-Western Regional Council will coordinate the closure and reopening of council managed roads once inspections have been carried out by the relevant authority.
- b. Transport for NSW will coordinate the closure and reopening of the state road network.
- c. The NSW Police Force may close and re-open roads but will normally only do so (if the Mid-Western Regional Council or Transport for NSW have not already acted and if public safety requires such action).
- d. The NSW SES will assist with erecting road closure signs and barriers when time and resources permit.

5.6.2 **Strategy:** Coordinate traffic control measures in flood affected areas.

- a. The NSW SES Incident Controller may direct the imposition of traffic control measures into flood affected areas in accordance with the provisions of the *State Emergency Service Act, 1989* and the *State Emergency Rescue Management Act, 1989*.
- b. The NSW SES Incident Controller may request the Local Emergency Operations Controller provide suitable personnel to assist with traffic coordination.

## 5.7 PROTECTION OF ESSENTIAL SERVICES

5.7.1 Local and Region EMPLANS contain infrastructure inventories.

5.7.2 **Strategy:** Minimise disruption to the community by ensuring protection of infrastructure and supply of essential energy, utility services and lifelines.

### **Actions:**

- a. The Transport Services Functional Area is to coordinate the provision of information about the assessment and restoration of transport network infrastructure.
- b. The Energy and Utility Services Functional Area is to coordinate the assessment and restoration of essential energy and utility services (not including telecommunications).
- c. The Telecommunications Services Functional Area is to coordinate the assessment and restoration of telecommunications and the Public Safety Network.
- d. The Engineering Services Functional Area is to:
  - Coordinate the assessment and restoration of critical public buildings for example hospitals.
  - Assessment and operation of flood protection levees.
  - Protection of property.
  - Construction and repair of levees.
  - Dam safety assessment and dam stability.
  - Water supply and sewerage operations.
  - Other critical infrastructure.
- e. The Functional Areas and Mid-Western Regional Council will keep the NSW SES informed of the status of utilities and infrastructure.

## 5.8 EVACUATION

5.8.1 Evacuation is the NSW SES' primary response strategy for managing the population at risk of flooding.

5.8.2 **Strategy:** Conduct planning to ensure all evacuation constraints are considered.

### **Actions:**

- a. Evacuations will take place when there is a risk to public safety. Circumstances may include:
  - Evacuation of people when their homes or businesses are likely to flood.
  - Evacuation of people who are unsuited to living in isolated circumstances, due to flood water closing access.
  - Evacuation of people where essential energy and/or utility services are likely to fail or where buildings have been or may be made uninhabitable.

- b. The NSW SES will consider the following in evacuation decisions:
  - Duration of evacuation.
  - Characteristics of the community.
  - Numbers requiring evacuation.
  - Availability of evacuation routes and transport.
  - The ability for existing levees or other flood protection works to fulfil their intended function.
  - Time available for evacuation.
  - Evacuee management requirements.
  - Resources and delivery of evacuation information.
  - Length of isolation.
- c. The NSW SES Incident Controllers, planning and intelligence officers will carefully consider the risks involved in conducting evacuations.
- d. All evacuation decisions will be made as per the current the NSW SES policies and procedures, and consistent with the NSW Evacuation Management Guidelines.
- e. Potential Evacuation Centres are located in the Local EMPLAN.
- f. The NSW Police Force will coordinate the provision of overall security for evacuated areas.

5.8.3 **Strategy:** Evacuate people pre-emptively from dangerous or potentially dangerous places and or locations created by the flood hazard to safe locations away from the hazard.

- a. The NSW SES will control and coordinate the evacuation of affected communities.
- b. The NSW SES Commissioner (or delegate) will warn communities to prepare for a possible evacuation, where circumstances allow such lead time.
- c. The NSW SES Commissioner (or delegate) will order any necessary evacuations and provide information to the community about when and how to evacuate.
- d. Support to evacuation operations may be requested from other emergency services and supporting agencies using arrangements in the local EMPLAN and supporting plans.
- e. The Health Services Functional Area will coordinate the evacuation of hospitals, health centres and aged care facilities (including nursing homes) in consultation with the NSW SES and Welfare Services Functional Area.
- f. School administration offices (government and private) will coordinate the evacuation of schools in consultation with the NSW SES and the Welfare Services Functional Area, if not already closed.
- g. Caravan Park proprietors will inform the NSW SES Incident Controller when caravan park evacuations have been completed.

- h. People who are reluctant or refuse to comply with any Emergency Warning will be referred to the NSW Police Force.

## 5.9 EVACUEE MANAGEMENT AND WELFARE

5.9.1 Research and experience in flood operations shows that most evacuees go to family, friends and commercial accommodation outside the impact area.

5.9.2 **Strategy:** Maintain the welfare of communities and individuals affected by the impact of a flood.

### **Actions:**

- a. The NSW SES will provide initial welfare for evacuees where required but will hand the responsibility over to the Welfare Services Functional Area as soon as possible. The NSW SES will brief the Welfare Services Functional Area at the earliest opportunity regarding the level of assistance required.
- b. The Welfare Services Functional Area will manage evacuation centres for affected residents and travellers in accordance with the Welfare Services Functional Area Supporting Plan.
- c. Schools Administration (government and private) will manage the safety of students directly affected by flooding and will work with the NSW SES in the temporary closure of schools and will coordinate with the NSW SES, the Transport and Welfare Services Functional Areas in the management of school evacuees.
- d. Disaster Victim Registration will be controlled and coordinated by the NSW Police Force with the assistance of the NSW SES and the Welfare Services Functional Area.
- e. The NSW SES will provide details of all residents assisted in evacuations to the Welfare Services Functional Area as early as possible.
- f. Where the expected remaining number of evacuees and the duration of evacuation is assessed to be beyond the capability and capacity of the established evacuation centre arrangements the State Emergency Operations Controller (SEOC) may establish Major Evacuation Centres or Mass Care facilities.
- g. The decision to establish Major Evacuation Centres or Mass Care Facilities will be made by the NSW SES and SEOC in consultation with members of the State Emergency Management Committee (SEMC).

5.9.3 **Strategy:** Coordinate available and accessible health services for flood affected communities.

**Action:** The provision of environmental health advice, assessment of public health risks and coordination of immediate mental health support will be provided by the Health Services Functional Area.

5.9.4 **Strategy:** Maintain the welfare of animals impacted by a flood.

**Actions:**

- a. The Agriculture and Animal Services Functional Area will coordinate the welfare of livestock, pets, companion animals and wildlife including support to primary producers, animal holding establishments and community members.
- b. The Agriculture and Animal Services Functional Area role will coordinate the evacuation, emergency care and assessment of animals, the humane destruction and disposal of affected animals, and the supply of emergency fodder and water (with aerial support where necessary).

## 5.10 FLOOD RESCUE

5.10.1 **Strategy:** Control and coordinate flood rescue of people and domestic animals.

**Actions:**

- a. The NSW SES will perform flood rescue, where training and equipment is suitable and where a risk assessment has indicated that the risk to rescuers is acceptable.
- b. Flood rescue operations will be conducted in accordance with the State Rescue Board NSW State Rescue Policy which sets out the framework, governance, responsibilities and requirements for the management and conduct of flood rescue in NSW.
- c. The NSW SES may request other supporting emergency services to undertake flood rescues on behalf of the NSW SES. Agencies must be authorised/accredited to undertake flood rescue operations in accordance with State Rescue Board requirements, as prescribed by the NSW SES. Supporting emergency services must supply information regarding rescues performed to the NSW SES. Notification arrangements with the NSW Police Force are outlined in the State Rescue Board NSW State Rescue Policy.
- d. Rescue agencies will conduct rescue of domestic small and large animals as per the State Rescue Board NSW State Rescue Policy (and may include large animal rescue of family horses and cows at a residence or property). The rescue of livestock (which includes commercial animals found on farming and breeding enterprises) will be coordinated through the Animal and Agriculture Services Functional Area.

## 5.11 RESUPPLY

5.11.1 **Strategy:** Coordinate resupply to towns and villages isolated by flooding to minimise disruption to the community.

**Actions:**

- a. The NSW SES will advise communities and businesses if flood predictions indicate that areas are likely to become isolated, and indicative timeframes where possible.
- b. Retailers should be advised to ensure sufficient stock is available for the duration of the flood.



- c. When isolation occurs, the NSW SES will establish loading points where retailers can instruct suppliers to deliver goods.
- d. The NSW SES will endeavour to support the delivery of mail to isolated communities but may not be able to do so according to normal Australia Post timetables.
- e. The NSW SES will assist hospitals with resupply of linen and other consumables where able.
- f. The NSW SES may request resupply assistance from supporting agencies.
- g. The NSW SES may conduct resupply operations as per the designated resupply plan for the event.
- h. Where additional supplies are required Engineering Services Functional Area be requested to coordinate the supply of goods and services in response to and recovery from the emergency.

5.11.2 **Strategy:** Coordinate resupply to rural properties isolated by flooding.

**Actions:**

- a. When requested, the NSW SES will establish a resupply schedule and coordinate the resupply for isolated rural properties.
- b. The NSW SES will provide local suppliers with designated loading points. Resupply items are to be packaged by the supplier.
- c. Isolated households unable to afford resupply items will be referred to the Welfare Services Functional Area for assistance.

## 5.12 RETURN

5.12.1 **Strategy:** Coordinate the safe return of communities to flood affected areas when the immediate danger to life and property has passed.

**Actions:**

- a. The NSW SES Incident Controller will determine when it is safe to progressively return in consultation with the relevant Emergency Operations Controller and supporting agencies considering the ongoing risk to public safety.
- b. The NSW SES Incident Controller will specify the level of access to affected communities as the following:
  - Not suitable for access; or
  - Limited access by emergency services and response agencies; or
  - Limited access by residents and/or business operators; or
  - Full access.
- c. The NSW SES Incident Controller will issue an Advice Warning advising “Reduced Threat: Return with Caution” when the immediate danger to life and property has passed for areas.
- d. The NSW SES will facilitate the return of evacuees to their homes.

## 5.13 END OF RESPONSE OPERATIONS

5.13.1 **Strategy:** Conclude response operations.

**Actions:**

- a. Response operations will conclude when:
  - There is a reduced likelihood of additional flooding within the Area of Operation and flood waters have receded.
  - All requests for assistance related to the flood have been completed.
  - The need for warning and evacuation no longer exist.
  - There is no further likelihood of rescuing people.
  - Resupply is no longer required (resupply operations may occur concurrently with the recovery phase).
  - Response to fire and hazardous material incidents have concluded (not including subsequent clean-up of contaminated sites).
  - All affected areas have had an 'Reduced threat: Return with Caution' issued.

## 5.14 POST IMPACT ACTIONS

5.14.1 **Strategy:** Learnings from the event are used to inform recovery and future events.

**Actions:**

- a. The NSW SES will continue to engage with communities after significant floods through convening one or more community forums, workshops or other opportunities to provide communities a chance to provide feedback, address any concerns and provide input into the recovery process. These will typically include other agencies such as the Bureau, the Welfare Services Functional Area and Mid-Western Regional Council representatives.
- b. The NSW SES will conduct After Action Reviews, at the conclusion of response operations, which will involve all stakeholders. Findings will be shared and incorporated into improved disaster resilience planning.
- c. The NSW SES will provide information and data throughout the emergency response to inform community recovery. A report will be developed at the request of the SERCON at the conclusion of the response within an area. Should a response summary report be required it will include the following:
  - The emergency action plan in place at conclusion of the response emphasising any continuing activities including community meetings/ engagement activities.
  - Resources allocated to the emergency response and associated exit strategies.
  - Details of any areas or situations with potential to re-escalate the emergency.

- A recommendation for the conclusion of the NSW SES as lead agency to transition to the NSW Reconstruction Authority as the lead agency for recovery.
  - Any actions that are incomplete or outstanding.
  - Damage assessment data and Information obtained throughout the response phase which will further support the long-term recovery of communities.
- d. The NSW SES will undertake/coordinate a comprehensive review of intelligence and plans following significant flood events.

5.14.2 **Strategy:** Participate in post flood data collection analysis.

**Actions:** The NSW SES works with relevant stakeholders and Mid-Western Regional Council on post flood data collection analysis including review of flood intelligence where necessary.

## 6 RECOVERY OPERATIONS

### 6.1 INTRODUCTION

6.1.1 Recovery is the process of returning an affected community to its proper level of functioning after an emergency. It will generally commence simultaneously with the response phase.

6.1.2 Recovery operations will be initiated and conducted as outlined in the NSW State EMPLAN and as further detailed in the NSW Recovery Supporting Plan.

### 6.2 NSW SES RECOVERY ROLE

6.2.1 **Strategy:** The NSW SES will support recovery operations and established Recovery Committees.

6.2.2 **Actions:**

- a. The NSW SES will provide representation to Recovery Committees as required and may have an ongoing role in the recovery phase.
- b. The NSW SES roles on Recovery Committees may include providing information about any continuing response, guidance on mitigation strategies and general advice and assistance to the committee as a subject matter specialist and or expert.
- c. The NSW SES will provide information to the NSW Reconstruction Authority to support applications to Treasury for Natural Disaster Relief and Recovery Arrangements.
- d. The NSW SES, in conjunction with a Recovery Committee, will provide a service to support the information needs of a community immediately following a flood.
- e. The NSW SES and where required supporting agencies, will assist with clean-up operations after floods, where possible when resources and personnel permit.

- f. The NSW SES may coordinate immediate relief in collaboration with SEOCON and State Emergency recovery Controller (SERCON).

## 7 ABBREVIATIONS

For a full list of abbreviations refer to the NSW State Flood Plan – Abbreviations.

## 8 GLOSSARY

Common emergency service terminology can be found within the Australian Disaster Resilience Glossary.

Readers should refer to EMPLAN Annex 9 – Definitions.

Refer to the NSW State Flood Plan for a complete glossary of terminology used throughout this plan and within the NSW SES Flood Plans.

**For a full list of definitions refer to the Supporting Document - State Flood Plan Glossary**  
<https://www.ses.nsw.gov.au/media/2650/glossary.pdf>

# 9 Appendix A – Map of Mid-Western Regional Council Area



## 10 Appendix B – Roles and Responsibilities

AGENCY	RESPONSIBILITIES
NSW State Emergency Service	The NSW SES is the designated Combat Agency for floods, storms and tsunami and controls response operations. The NSW SES roles and responsibilities in relation to floods are outlined in the <a href="#">NSW State Flood Emergency Sub Plan</a> .

AGENCY	RESPONSIBILITIES
Agriculture and Animal Services Functional Area	The roles and responsibilities for the Agriculture and Animal Services are outlined in the Agriculture and Animal Services Supporting Plan and NSW State Flood Plan.
Australian Government Bureau of Meteorology	The roles and responsibilities for the Australian Government Bureau of Meteorology (Bureau) are outlined in the NSW State Flood Plan.
Caravan Park Proprietor(s)	<ul style="list-style-type: none"> <li>• Prepare a flood emergency plan for the caravan park.</li> <li>• Ensure that owners and occupiers of movable dwellings are aware that the caravan park is flood liable by providing a written notice to occupiers taking up residence and displaying this notice and emergency management arrangement within the park.</li> <li>• Ensure that owners and occupiers of movable dwellings are aware that if they are expecting to be absent for extended periods, they should:             <ul style="list-style-type: none"> <li>– Provide the manager of the caravan park with a contact address and telephone number in case of an emergency.</li> <li>– Leave any movable dwelling in a condition allowing it to be relocated in an emergency (i.e.: should ensure that the wheels, axles and draw bar of the caravans are not removed and are maintained in proper working order).</li> </ul> </li> <li>• Ensure that occupiers are informed of Flood Information. At this time, occupiers should be advised to:             <ul style="list-style-type: none"> <li>– Ensure that they have spare batteries for their radios.</li> <li>– Listen to a local radio station for updated flood information.</li> <li>– Prepare for evacuation and movable dwelling (cabins) relocation.</li> </ul> </li> <li>• Ensure that owners and occupiers of caravans are aware of what they must do to facilitate evacuation and movable dwelling relocation when flooding occurs.</li> <li>• Coordinate the evacuation of people and the relocation of movable dwellings when floods are rising and their return when flood waters have subsided. Movable dwellings will be relocated back to the caravan park(s) by owners or by vehicles and drivers arranged by the park managers.</li> </ul>

AGENCY	RESPONSIBILITIES
	<ul style="list-style-type: none"> <li>• Secure any movable dwellings that are not able to be relocated to prevent floatation.</li> <li>• Inform the NSW SES of the progress of evacuation and/or movable dwellings relocation operations and of any need for assistance in the conduct of these tasks.</li> </ul>
<b>Childcare Centres and Preschools</b>	<ul style="list-style-type: none"> <li>• When notified of possible flooding or isolation, childcare centres and preschools should: <ul style="list-style-type: none"> <li>– 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.</li> <li>– Assist with coordinating the evacuation of preschools and childcare centres.</li> </ul> </li> </ul>
<b>Dams Safety NSW</b>	The roles and responsibilities for Dams Safety NSW (formerly NSW Dam Safety Committee) are outlined in the NSW State Flood Plan.
<b>Department of Defence</b>	Arrangements for Defence Assistance to the Civil Community are detailed within the State EMPLAN (section 448).
<b>Energy and Utilities Services Functional Area</b>	<p>The roles and responsibilities for the Energy and Utilities Services are outlined in the Energy and Utility Services Supporting Plan (EUSPLAN).</p> <p>Roles and responsibilities in addition to the supporting plan are:</p> <ul style="list-style-type: none"> <li>• Assist the NSW SES with identification of infrastructure at risk of flood damage where resources are available.</li> <li>• Facilitate local utility service distribution providers (electricity, gas, water, wastewater) to: <ul style="list-style-type: none"> <li>– Provide advice to the NSW SES of any need to disconnect power/gas/water/wastewater supplies or of any timetable for reconnection.</li> <li>– Advise the NSW SES of any hazards from utility services during flooding and coastal erosion/inundation.</li> <li>– Advise the public with regard to electrical hazards during flooding and coastal erosion/inundation, and to the availability or otherwise of the electricity supply.</li> <li>– Clear or make safe any hazard caused by power lines or electricity distribution equipment.</li> <li>– Reconnect customers’ electrical/ gas/ water/wastewater installations, when certified safe to do so and as conditions allow.</li> <li>– Assist the NSW SES to identify infrastructure at risk of flooding for incorporation into planning and intelligence.</li> </ul> </li> </ul>
<b>Engineering Services Functional Area</b>	The roles and responsibilities for the Engineering Services Functional Area are outlined in the Engineering Services Supporting Plan and NSW State Flood Plan.

AGENCY	RESPONSIBILITIES
<b>Environmental Services Functional Area</b>	The roles and responsibilities for the Environmental Services Functional Area are outlined in the Environmental Services (ENVIROPLAN) Supporting Plan.
<b>Floodplain Management Australia</b>	The roles and responsibilities for Floodplain Management Australia are outlined in the NSW State Flood Plan.
<b>Fire and Rescue NSW</b>	The roles and responsibilities for Fire and Rescue NSW are outlined in the NSW State Flood Plan.
<b>Forestry Corporation of NSW</b>	The roles and responsibilities for Forestry Corporation of NSW are outlined in the NSW State Flood Plan.
<b>Health Services Functional Area</b>	The roles and responsibilities for the Health Services Functional Area are outlined in the Health Services (HEALTHPLAN) Supporting Plan and NSW State Flood Plan.
<b>Local Emergency Operations Controller (LEOCON)</b>	<ul style="list-style-type: none"> <li>• Monitor flood operations.</li> <li>• If requested, coordinate support for the NSW SES Incident Controller.</li> </ul>
<b>Local Emergency Management Officer (LEMO)</b>	<ul style="list-style-type: none"> <li>• If requested by the NSW SES Incident Controller, advise appropriate agencies and officers of the start of response operations.</li> </ul>
<b>Manly Hydraulics Laboratory (MHL)</b>	The roles and responsibilities for Manly Hydraulic Laboratory are outlined in the NSW State Flood Plan.
<b>Marine Rescue NSW</b>	The roles and responsibilities for Marine Rescue NSW are outlined in the NSW State Flood Plan.
<b>Mid-Western Regional Council</b>	<p><b>Preparedness</b></p> <ul style="list-style-type: none"> <li>• Establish and maintain floodplain and coastal risk management committees and ensure that key agencies are represented.</li> <li>• Develop and implement floodplain risk management plans in accordance with the NSW Government’s Flood Prone Land Policy and the Floodplain Risk Management Manual.</li> <li>• Provide levee studies, flood studies and floodplain management studies to the NSW SES.</li> <li>• Maintain Dam Emergency Plans for the Rylstone Dam and provide copies to the NSW SES.</li> <li>• Provide information on the consequences of dam failure to the NSW SES for incorporation into planning and flood intelligence.</li> <li>• Maintain council-owned flood warning networks and flood mitigation works.</li> <li>• Participate in the NSW SES-led flood emergency planning meetings, to assist in the preparation of Flood Sub Plans.</li> <li>• Maintain a plant and equipment resource list for the council area.</li> </ul>



AGENCY	RESPONSIBILITIES
	<ul style="list-style-type: none"> <li>• Contribute to community engagement activities.</li> </ul> <p><b>Response</b></p> <ul style="list-style-type: none"> <li>• Subject to the availability of council resources, assist the NSW SES with flood operations including: <ul style="list-style-type: none"> <li>– Traffic management on council managed roads.</li> <li>– Provision of assistance to the NSW SES (plant, equipment and personnel where able and requested).</li> <li>– Property protection tasks including sandbagging.</li> <li>– Assist with the removal of caravans from caravan parks.</li> <li>– Warning and/or evacuation of residents and other people in flood liable areas.</li> <li>– Provision of back-up radio communications.</li> <li>– Resupply of isolated properties.</li> <li>– Technical advice on the impacts of flooding.</li> <li>– Close and reopen council roads (and other roads nominated by agreement with Transport for NSW) and advise the NSW SES, NSW Police Force and people who contact the council for road information.</li> <li>– Assist the NSW SES to provide filled sandbags and filling facilities to residents and business in areas which flooding is expected.</li> </ul> </li> <li>• Assist with making facilities available for domestic pets and companion animals of evacuees during evacuations.</li> <li>• Operate flood mitigation works including critical structures such as detention basins and levees and advise the NSW SES regarding their operation.</li> <li>• Manage and protect council-owned infrastructure facilities during floods.</li> <li>• Provide advice to the NSW SES and the Health Services Functional Area during floods about key council managed infrastructure such as sewerage treatment and water supply.</li> <li>• Advise the Environmental Protection Authority of any sewerage overflow caused by flooding.</li> <li>• Work with the NSW SES and NSW Department of Planning and Environment to collect flood related data during and after flood events.</li> </ul> <p><b>Recovery</b></p> <ul style="list-style-type: none"> <li>• Provide for the management of health hazards associated with flooding including removing debris and waste.</li> <li>• Ensure premises are fit and safe for reoccupation and assess any need for demolition.</li> </ul>

AGENCY	RESPONSIBILITIES
	<ul style="list-style-type: none"> <li>• Provide services, assistance and advice to State Government in accordance with the State Recovery Plan.</li> </ul>
<b>NSW Ambulance</b>	The roles and responsibilities for NSW Ambulance are outlined in the Health Services (HEALTHPLAN) Supporting Plan and NSW State Flood Plan.
<b>NSW Department of Education, Association of Independent Schools of NSW, and National Catholic Education Commission</b>	The roles and responsibilities for NSW Department of Education, Association of Independent Schools of NSW, and National Catholic Education Commission are outlined in the NSW State Flood Plan.
<b>NSW Department of Planning and Environment (Environment and Heritage Group)</b>	The roles and responsibilities for NSW Department of Planning and Environment (Environment and Heritage Group) are outlined in the NSW State Flood Plan (referred to as DPIE EES).
<b>NSW Department of Planning and Environment (Water)</b>	The roles and responsibilities for NSW Department of Planning and Environment (Water) are outlined in the NSW State Flood Plan.
<b>NSW Food Authority</b>	The roles and responsibilities for the NSW Food Authority are outlined in the Food Safety Emergency Sub Plan.
<b>NSW National Parks and Wildlife Services</b>	The roles and responsibilities for NSW National Parks and Wildlife Services are outlined in the NSW State Flood Plan.
<b>NSW Police Force</b>	The roles and responsibilities for the NSW Police Force are outlined in the NSW State Flood Plan.
<b>NSW Reconstruction Authority</b>	The roles and responsibilities for the NSW Reconstruction Authority are outlined in the NSW State Flood Plan.
<b>NSW Rural Fire Service</b>	The roles and responsibilities for the NSW Rural Fire Service are outlined in the NSW State Flood Plan.
<b>Owners of Declared Dams within or upstream of the LGA</b>	The roles and responsibilities for owners of declared dams are outlined in the NSW State Flood Plan.
<b>Public Information Services Functional Area</b>	The roles and responsibilities for the Public Information Services Functional Area are outlined in the Public Information Services Supporting Plan and NSW State Flood Plan.
<b>State Emergency Operations Controller (SECON)</b>	The roles and responsibilities for the SECON/SEOC are outlined in the NSW State Flood Plan.
<b>Surf Life Saving NSW</b>	The roles and responsibilities for Surf Life Saving NSW are outlined in the NSW State Flood Plan.
<b>Telecommunications Services Functional Area</b>	The roles and responsibilities for the Telecommunications Services Functional Area are outlined in the Telecommunications Services (TELCOPLAN) Supporting Plan.

<b>AGENCY</b>	<b>RESPONSIBILITIES</b>
<b>Transport for NSW</b>	<ul style="list-style-type: none"> <li>• Transport for NSW coordinates information on road conditions for emergency services access.</li> <li>• Transport for NSW coordinates the management of the road network across all modes of transport.</li> <li>• Transport for NSW in conjunction will assist the NSW SES with the evacuation of at-risk communities by maintaining access and egress routes.</li> <li>• Assist the NSW SES with the communication of flood warnings and information provision to the public through Live Traffic and Social Media according to the VMS protocols and procedures.</li> <li>• Assist the NSW SES with identification of road infrastructure at risk of flooding.</li> </ul>
<b>Transport Services Functional Area</b>	The roles and responsibilities for the Transport Services Functional Area are outlined in the Transport Services Functional Area Supporting Plan and NSW State Flood Plan.
<b>VRA Rescue NSW</b>	The roles and responsibilities for VRA Rescue NSW are outlined in the NSW State Flood Plan.
<b>Water NSW</b>	The roles and responsibilities for Water NSW are outlined in the NSW State Flood Plan.
<b>Welfare Services Functional Area</b>	The roles and responsibilities for the Welfare Services Functional Area are outlined in the Welfare Services Functional Area Supporting Plan and NSW State Flood Plan.

## 11 Appendix C – Community Specific Roles and Responsibilities

<p><b>Community Members</b></p>	<p><b>Preparedness</b></p> <ul style="list-style-type: none"> <li>• Understand the potential risk and impact of flooding.</li> <li>• Prepare homes and property to reduce the impact of flooding.</li> <li>• Understand warnings and other triggers for action and the safest actions to take in a flood.</li> <li>• Households, institutions and businesses develop plans to manage flood risks, sharing and practicing this with family, friends, employees and neighbours.</li> <li>• Have an emergency kit.</li> <li>• Be involved in local emergency planning processes.</li> </ul> <p><b>Recovery</b></p> <ul style="list-style-type: none"> <li>• Assist with community clean-up if required and able to do so.</li> <li>• Participate in After Action Reviews if required.</li> </ul>
<p><b>Aboriginal Organisations or Groups</b></p>	<p><b>Mudgee Local Aboriginal Land Council</b></p> <ul style="list-style-type: none"> <li>• Act as the point of contact between the NSW SES and the local Aboriginal community.</li> <li>• Inform the NSW SES Unit Commander about flood conditions and response needs.</li> <li>• Disseminate flood information, including flood and evacuation warnings, to the local Aboriginal community.</li> </ul>

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# HAZARD AND RISK IN MID-WESTERN REGIONAL

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**Volume 2 of the Mid-Western Regional Local Flood Plan**

Last Update: July 2007

## ANNEX A - THE FLOOD THREAT

### Landforms and River Systems

1. Most of the western part of the Council area is drained by the Cudgegong River system, although the northern portion falls within the Talbragar River catchment and the south is drained by Pyramul Creek and other minor tributaries of the Macquarie. These main drainage lines flow in a generally east-west direction to the main stem of the Macquarie River.
2. The Cudgegong River, an important tributary of the Macquarie, rises east of Rylstone and Kandos in the Great Dividing Range at Mt Coricudgy (1,274 metres). In its upper reaches the river passes through comparatively rugged country until it reaches the section downstream from the site of Windamere Dam.
3. Around Mudgee, extensive river flats have been developed along both the Cudgegong River and Lawson Creek upstream from their confluence with Pipeclay Creek. The valley floor then narrows as the river flows in a loop, north, west and then south through undulating country en route to Burrendong Dam, being joined by major tributaries Wyaldra and Meroo creeks on the way. The lower portion of the Cudgegong River valley forms a sizeable arm of Lake Burrendong.
4. Rylstone area is located in mountainous and undulating country mainly to the west of the Great Dividing Range. Its numerous creeks and streams are fast flowing and steep, and flooding occurs with little warning. Floodplain areas are narrow and of limited extent, and floods tend to be of short duration and cover relatively small areas. Few records exist of flooding within the council area.
5. Except for a small and lightly-populated area in the north-west which drains to the Talbragar River, the council area is drained by the Goulburn River and tributaries entering it from the north. The principal tributaries are the Munmurra, Krui, Bow and Merriwa rivers, Worondi Rivulet and Halls Creek, which together drain the Warrumbungle and Liverpool ranges of the Great Dividing Range and flow through wide valleys across the Merriwa Plateau.

### Storage Dams

6. **Windamere Dam**, is a 69 metre high, earth and rock fill embankment dam on the Cudgegong River. It is located about 19 km south-west of Rylstone and was completed in 1984 for the purposes of supplementing Burrendong Dam storage as well as meeting the growing demand of water for Mudgee, vegetable production and sheep and cattle grazing between Cudgegong Village and Burrendong storage. Windamere Dam is located 22 kilometres upstream of Mudgee and has a catchment of 1,030 square kilometres, and a limited ability to mitigate floods. The reservoir is ungated, however, and

once it is filled its overflow is uncontrolled. It was not designed for mitigation purposes and can only pond floods of minor severity and then only when it is below full supply level. The Dam Wall is constructed of Rock fill with clay core and has been assessed and has no threats. The Dams storage capacity is 368,000megalitres at 552 meters. It is believed that the dam can safely pass flows of up to about 4,801 cubic metres per second. The dam is not deemed deficient by the Dams Safety Committee.

- a. **Rylstone Dam**, a concrete arch dam with earth fill embankments at each end, and located on the Cudgegong River about 1.5 kilometres above Rylstone. The dam can safely pass flows of up to about 1,280 cubic metres per second which represents no more than 22% of the flow in the Probable Maximum Flood (PMF) at the site. If the dam were to fail, a large volume of water would be released and would travel down the valley as a flood wave inundating large areas to close to the river. The dam is not deemed deficient by the Dams Safety Committee.
- b. **Redbank Dam** is a concrete arch dam with earth fill embankments at each end, and located two kilometres south of Mudgee, has been assessed as being incapable of withstanding a very severe flood on Redbank Creek or a very strong earthquake. The Dam is monitored by council and kept drained. If the dam would fail there would be little notice time and approximately 80 homes would be affected. The dam is deemed deficient by the Dams Safety Committee. Arrangements for dam failure of Redbank Dam are detailed in Annex H.

## Weather Systems and Flooding

7. Flooding can occur at any time of year in the Mudgee Council area, but different mechanisms are responsible for producing floods at different times of year. Three main types of weather system cause floods within the council area:
  - a. **Well-developed low-pressure troughs** crossing southern Australia from west to east. Sequences of such troughs can produce high rainfall totals over a period of weeks, the flooding resulting not from individual rain events but from a cumulation of them. The August 1990 flood on the Cudgegong River was preceded by significant rainfalls in April and July.
  - b. **Cyclonic depressions** forming troughs extending from northern Australia and directing northerly streams of moist, unstable air into northern and central western NSW. Such systems, which occur during the warmer months, frequently produce intense short-period rainfalls leading to flooding. The record flood of February 1955 on the Cudgegong, Talbragar and Goulburn rivers was of this origin.
  - c. **High-intensity, short-duration convective thunderstorms** bringing very heavy rain causing 'flash' flooding on minor tributaries and the surcharging of artificial drainage systems in built-up areas. Such storms affect small areas, are largely confined to the late spring, summer and early autumn months and do not create mainstream flooding

## Characteristics of Flooding

8. Most of the land in the east and south of the council area is undulating or hilly in nature, creek gradients are relatively steep and flood warning times and durations of inundation are short. In the west and north the terrain is flatter, floodplain areas are more extensive and warning times and duration of inundation are longer.
9. The Cudgegong first breaks its bank on the southern side near Mullamuddy. As the river rises, the bank is overtopped on the northern side further upstream and on the northern side downstream near Burrendulla. Most of the flow is carried in depressions through these areas, but virtually all of the flats are inundated in a major flood.
10. The most extensive and frequent flooding occurs on the southern side of the river, where about 40 floods have been noted in the last 30 years. The northern side is flooded on average of about once in every five years although up to three floods have been experienced in a single year.
11. Flood flows break both banks of Lawson Creek when it emerges from the hills and such breakouts occur roughly every couple of years. Flooding is most extensive on the northern bank, but is confined to a fairly narrow strip on the southern bank. However, just upstream from Mudgee, the creek approaches to within a few hundred metres of the Cudgegong, and roughly parallels it for about four kilometres until the junction downstream from Mudgee. Over this reach the flood waters mingle on the shared floodplain and form a continuous strip of water over a kilometre wide.
12. Downstream from Mudgee the flood waters break out principally on the western side and extend up to a kilometre from the river. Along the eastern side, the flats are generally only a couple of hundred metres wide or less, before rising to a range of low hills.
13. The floodplain narrows near the Pipeclay Creek confluence and then broadens over Wilbertree Flat. Pipeclay Creek can be a major contributor to flooding in this area breaking out just above the confluence and sending a torrent across the flats to the north. A strip a few hundred metres wide is also flooded on the southern side of the river before the valley narrows again.

## Flood History

14. The highest recorded flood on the Cudgegong River occurred in February, 1955, although the flood of March 1956 was almost as high. Another flood (the third highest on record) occurred in November, 1969. In these serious events, the Cudgegong River and Lawson Creek were in flood together. Generally, in the Mudgee area, the extent of inundation in major floods is little different from that in lesser events.



15. The history of flooding in and around Mudgee dates back to 1870. Significant floods have occurred in
  - a. 1955 / Feb
  - b. 1956 / Mar
  - c. 1969 / Nov
  - d. 1971 / Jan
  - e. 1974 / Jan
  - f. 1990 / Aug

### **Flood Mitigation Systems**

16. Between the Windamere Dam and Mudgee there are a number of properties that have their own rural levees which provide protection for farmlands from minor flooding. There are no other known systems in place.

### **Extreme Flooding**

17. The worst floods ever experienced in the Mid-Western Regional Council area in living memory, such as the 1955 flood on the Cudgegong River, should not be regarded as the most severe which can occur there. Worst floods than have been seen by present residents are possible. Such floods will be rare, but they may reach considerably greater heights than have previously been experienced. In addition, they would be likely to be both faster to rise and more dangerous in terms of depth and velocity than previous events
18. Extreme flooding would also occur if Redbank Creek Dam were to fail. This small dam, a 16-metre high concrete structure which was constructed in 1898 and which has withstood all flooding since then, is in relatively poor condition. It is possible that it could fail in a very severe flood or perhaps in a serious earthquake. It must be stressed, however, that failure would be likely only in floods or earthquakes much worse than those previously experienced at the site of the dam

## ANNEX B - EFFECTS OF FLOODING ON THE COMMUNITY

### Community Profile

Census Description	Mudgee	Rylstone	Gulgong	Kandos
Total Persons	8619	654	2018	1339
Total Dwellings	3607	312	846	677
Total persons aged 65 years and over	1297	107	321	274
Total persons aged below 15 years	2016	142	505	271
Total persons of indigenous origin	235	9	53	35
Total persons using Internet	2256	167	482	217
Single parent families	367	39	86	77
Persons living alone	925	67	198	189
Total persons who do not speak English well	48	0	3	5
Total persons who lived at a different address 5 years ago	3826	200	749	405
Households without vehicles	323	15	63	60
Total persons residing in caravans, cabins or houseboats	252	0	36	0
Mean household size	2.5	2.4	2.6	2.3

**Table B-1: Census of Housing and Population data (2001)**

### Specific Risk Areas

#### Mudgee

1. Mudgee itself is located on the southern bank of the Cudgegong River, most of it above the floodplain. Some low-lying residential areas in the north and east of the town could experience flooding, however, and there are six residential properties and a commercial one just outside the town which

could be inundated. In very severe events, the north western part of the town can be cut off for some days.

2. Areas needing specific attention during periods of flooding include the Putta Bucca roads area, Radio Station 2MG building and the Riverside Caravan Park..
3. Only a small extent of urban land in Mudgee is located within the 1% AEP floodplain. This includes several residential allotments, parts of special use zoned lands,
  - a. Riverside Caravan Park;
  - b. Walkers Sports Complex;
  - c. Lawson’s Park;
  - d. Swimming pool;
  - e. Approximately 100 residential allotments (of which 21 are built on);
  - f. Approximately three hectares of commercially zoned land and 221 residential properties are located within the boundary of a PMF.
4. Various public buildings are also located within the PMF boundary including
  - a. Town Hall,
  - b. Public library,
  - c. Police station and
  - d. Courthouse
5. About 21 residential homes are subjected to inundation above floor level in a 1% AEP flood event. In the event of a PMF the number of homes affected grows to 221. The following table from the study depicts the number of homes subject to flooding during the 5%, 2%, 1% AEP flood probabilities and PMF.

Area	Number of residential homes inundated above floor level			
	5% AEP	2% AEP	1% AEP	PMF
Town	0	1	4	116
Rural	2	8	12	29
Redbank Creek	4	5	5	76
Total	6	14	21	221

**Table B-2: Residential homes subject to flooding** (Source: Mudgee Floodplain Management Study and Plan, 2002)

6. Were Redbank Dam to fail, there would be very severe flooding down the Mudgee Golf Course and 84 dwellings would be inundated between the dam

and the golf course. A small number downstream of the golf course in Mulgoa Way could also be affected.

### **Rylstone**

7. Rylstone, lies on the Cudgegong River which commands a catchment area of 580 square kilometres above the town. Flooding there periodically covers the public reserves and playing fields located on the narrow floodplain, but houses have not so far been directly affected although the record flood of 1955 (which reached a gauge height of 4.0 metres on the bridge over the Cudgegong River) came close to several dwellings.
8. There are no large flood prone areas within the Rylstone area. Numerous small areas can be affected by flooding. Such areas occur on all the river systems within Rylstone, and in genuinely severe flood events the number of houses affected and needing to be evacuated could number several dozen. The Glen Davies, Glen Alice, Running Stream, Ilford and Warrangunia areas can all be flood affected, and a small number of dwellings in the town of Rylstone could experience inundation in a severe flood event. Some areas of rural land can be flooded, especially in the valleys of the Cudgegong River and Lawson's Creek in the western parts of the council area but also along the Turon, Bylong, Growee, Goulburn and Capertee rivers and the Nile and Crudine creeks.
9. Most flooding in the Rylstone area is of nuisance value. Isolation is generally a short-term problem, which on occasions can lead to a need for medical evacuations or for resupply.
10. Numerous causeways within the Rylstone area can be cut during periods of flooding, though the communication difficulties experienced tend to last for only a few hours. Problems of access mean that outside help for flood-bound people cannot always be guaranteed, and responses must often take place on a self-help basis. The roads within the council area which are liable to be closed during periods of flooding are identified in the table at the end of this annex.
11. There is a remote chance that such an event could cause the failure of Rylstone Dam. Flow equivalent to a 1 in 20 AEP flood will trigger a red alert to the SES. Should failure take place, the council's Water Treatment Plant and nine dwellings within the town would be inundated to beyond floor level by fast flowing water. Of these buildings, the Water Treatment Plant and two dwellings would be inundated by flooding before dam failure. A further two houses could also be inundated by a dam-failure flood. The risk to life from such a flood would be high, and for this reason a Special Rylstone Dam Warning and Alarm System has been installed. The operation of this system is described in Annex H.

## Rural Areas

12. Numerous roads can be cut, at low causeways and bridges, and in the more serious events bridges have been damaged as has the railway line. Little urban property damage has been recorded.
13. Flooding within the Mid-Western Council area rarely has severe implications except for market gardeners upstream and downstream of Mudgee who sometimes sustain expensive crop damage. Up to 800 hectares of farmland near the town of Mudgee can be inundated in severe floods, and farmland away from the main river and Lawson Creek can also be flooded.
14. The river flat area near Mudgee is used primarily for irrigated vegetable crop production and the commercial production of lucerne hay. The major vegetable crops grown are asparagus, gherkins, capsicums, tomatoes, zucchinis and pumpkins. Smaller areas of wheat and maize are under irrigation. Irrigated pasture and dry-land crops are grown on the more undulating country with dry-land pastures on the steeper country slopes.
15. It is estimated that a minor flood (such as the historic 1969 flood) inundates about 400 hectares of vegetables and about 400 hectares of lucerne used for commercial hay production. The area of irrigated lucerne is increasing at the expense of vegetables on the river flats. The area of irrigated wheat grown on the river flats is also increasing and it is estimated that a minor flood would inundate about 100 hectares of irrigated wheat.

## Road Closures

16. Roads can be closed at numerous locations through out the region. In some cases, these closures can cause houses to be isolated

Road	Usual point of closures	Comments/Implications
Lue-Mudgee Rd	At Grey Gum Bridge	
Gulgong Rd	adjacent to Mudgee Valley Tourist Park	
Wilbertree Rd	At Mudgee Abattoir	
Ulan Rd	At Cooyal Creek and Lawson Creek	
Mulgoa Way, Mudgee.	Mulgoa Way,	
Yarrabin Rd	At low-lying creek crossings	30-40 houses may be isolated
Sydney Rd	At Redbank Creek crossing	
Riverlea Rd	Cudgegong River crossings	30 houses may be isolated
Melrose Rd	Cudgegong River crossings	15 houses may be isolated
MR 55 Sydney to Mudgee	Jack Halls Creek (major floods).	No practical detour exists.
	Running Stream culvert	(major floods).
	Ilford near Post Office from	(major floods).

Road	Usual point of closures	Comments/Implications
	Cunningham's Creek	(major floods). (major floods). (major floods).
	Old Westwood	
	Crudine Turnoff from Crudine Creek	
	Harding's Corner from Tabrabucca Creek	
Cudgegong Road (Rylstone to Cudgegong)	Coomber Causeway (moderate floods).	Access may be available via Kandos until flooding of MR 215 occurs outside Kandos.
MR 215 Ilford to Bylong	Road cut outside Kandos (moderate floods).	No practical alternate.
	Tongbong Creek, Rylstone (minor floods).	Detour via Tongbong Road and Windles Lane
	Talooby Causeway, Bylong Creek (major floods).	No practical detour.
	100 m north of Taylors Road (moderate floods).	
	100 m north of Killen's Road (moderate floods).	
Budden Causeway (major floods).		
Growee Bridge (major floods).		
MR 215 Ilford to Bylong Cooper Drive	Road cut at 2 causeways	When cut Kandos - Ilford Road is also cut.
	Reedy Creek (moderate floods)	
Crudine Road	Cunningham's Creek Bridge (major floods)	No alternative access.
	Butter factory Bridge (major floods).	
	1 km south of Giles Hill natural causeway overtopped (moderate floods).	
	Concrete causeway near Burgess (minor floods).	
	Mudgee Bridge (major floods).	
	Rylstone Bridge (major floods).	
	Several causeways Crudine end (moderate floods).	
	Hundy's Flat (major floods).	
Glen Alice Road (Rylstone to Glen Davis)	Baby Culvert (moderate floods).	No alternative access.
	Causeway eastern side Kildare (major floods).	

Road	Usual point of closures	Comments/Implications
	500 m south Bowles Lane (major floods). Thornes Hill (major floods). Major Box Culvert 2 km north Shire boundary (major floods). Near Shire boundary floods from Capertee River (major floods).	
Narrango Road Glen Alice - Olinda	Brown's lane (major floods) Windmill Creek (major floods).	No alternative access.
Glen Alice - Olinda (cont'd)	3 causeways past Falcon (major floods).	
Cox's Creek Road MR 215, Nullo Mountain	Flat past Cox's Crown Road (major floods). Adjacent to Clarke's Road (major floods). Flat and Causeway Mills (major floods). 1.5 km adjacent Hicksons (major floods). 1 km past Merretts (major floods). 500 m from Nullo Mountain turnoff (major floods).	No alternative access.
Reedy Creek Road	Various creeks and low areas.	No alternative access.
Growee Road	Low lying areas adjacent to Growee Creek (major floods).	No alternative access.
Genowlan Road	Genowlan Bridge (major floods). Past Watervale (major floods).	No alternative access.
Ginghi Road	Ginghi Culvert (major floods).	No alternative access.
Wooley's Road	Flat area (moderate floods). Creek Crossing Bylong Creek (moderate floods).	No alternative access.
Upper Bylong	Upper Bylong, Bridge Bylong Creek (major floods).	No alternative access.
Lee Creek, Bylong, MR 215	Various creek crossings - flat areas adjacent to creeks.	No alternative access.
Breakfast Creek Road MR 215, Pyangle Road	0.5 km from MR 215 creek crossing (moderate floods) Adjacent to T Croom's (moderate floods).	No alternative access.
Pyangle Road	Low lying areas and creek	No alternative access.

Road	Usual point of closures	Comments/Implications
	crossings including Lawson's Creek (major floods) and Bingaman's Crossings (major floods)	
Bara Road, Pyangle, Mudgee Shire	Cut at low lying areas and creeks (major floods).	No alternative access.
Powell's Road	Cut at low lying areas and creek crossings (major floods).	No alternative access.
Nevels Road	Major creek crossing - Hawkins Creek (major floods). Various creek crossings.	No alternative access.
Lue Road	Hamilton's Bridge (major floods). Pitts corner (major floods).	No alternative access.
Tongbong Road, Rylstone, Lue	All creek crossings.	Via Lue Road until bridges flood.
Windles Lane	Overtopping of tributary of Tongbong Creek (major floods).	No alternative detour.
White Rock	Various creek crossings (major floods).	No alternative access.
Nullo Mountain Road, Olinda - Dead End	Box culvert (major floods) Low areas adjacent to Hidden Valley (major floods). Low areas - Spring Gully and J Foodey's.	No alternative access
Kelgoola Road	Low area near Eames, low area near Kirks, Sampson's causeway, Rotten River Bridge (all major floods).	No alternative access.
Flatland's Road	Various creek crossings (major floods).	No alternative access.
Ilford Hall Road	Creek near Mostyn entrance and Cunningham's Creek near Hall (major floods).	No alternative access.
Warrangunia Road MR 54 - Crudine Road	Various creeks and causeways (major floods)	No alternative access.
Evans Road	Ryan's Creek Crossing (major floods).	No alternative access.
Mt Vincent Road	Adjacent to Winery Road (major floods).	Access via Running Stream end.
Oliver's Road	Creek and causeway crossings (major floods).	No alternative access.
Hans Road	Creek crossing (major floods).	No alternative access.
Tara Loop	Various causeways and low lying	No alternative access.



Road	Usual point of closures	Comments/Implications
	areas.	
Upper Turon Road	Green point, Nuggetty, Gorman's and Ben's causeways, all low lying areas of road (flooded by Turon River).	No alternative access.
MR 54	Sofala Bridge (major floods).	No alternative access.
Upper Nile Road	Flat areas (major floods).	No alternative access.
Nile Road	Flat area past intersection (moderate floods).	No alternative access.
Dunville Loop	Various creeks and causeways (moderate floods).	No alternative access.
Port Macquarie Road	Various creeks (major floods).	No alternative access.
Glencoe Road	Causeway (major floods).	No alternative access.
Browns Lane	All low lying areas (moderate floods).	No alternative access.
Dabee Road	Kandos side of mine (major floods).	No alternative access.
Quarry Road	Creek crossing and low lying areas adjacent.	No alternative access.
Killens Road	Various creeks and causeways (major floods).	No alternative access.
Cafes Road	Creek crossings and low areas (major floods).	No alternative access.
Cox's Crown Road	Various creeks and low lying areas (moderate floods).	No alternative access.
Clarke's Road	Adjacent to Cox's Creek Bridge. Adjacent to all flat areas (major floods).	No alternative access.
Rylstone Dam Road	At creek crossing (moderate floods).	No alternative access.
Coomber and Carwell Streets, Rylstone	Major floods.	No alternative access.

**Table B-3: Road closures**

### Effects on Utilities and Infrastructure

17. Rylstone Water Treatment Plant; will only be affected in the case of the Rylstone dam failing. The warning system in place allows time for the council to manage this facility.
18. Mudgee Water Pumping Stations; as a general rule these facilities are managed by the council in a PMF, alternative facilities are available if those along the river system fail.

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# **SES RESPONSE ARRANGEMENTS FOR MID-WESTERN REGIONAL**

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**Volume 3 of the Mid-Western Regional Local Flood Plan**

Last Update: July 2007

## ANNEX C - GAUGES MONITORED BY THE MUDGEE SES LOCAL HEADQUARTERS

Gauge Name	Type	AWRC No	Stream	Flood Classification			Reading Arrangements	Owner
				Min	Mod	Maj		
Wilbertree Rd	Telemeter	421150	Cudgegong River	none	none	none	SES	DWE
Windamere Dam D/S	Telemeter	421079	Cudgegong River	none	none	none		DWE
Windamere Dam	Telemeter	421148	Cudgegong River	none	none	none		DWE
Yamble Bridge	Telemeter	421019	Cudgegong River	none	none	none	SES	DWE
Rocky Water Hole	Telemeter	421149	Cudgegong River	none	none	none	SES	DWE
Yamble Br	Telemeter	421019	Cudgegong River	none	none	none		DWE
Rylstone Bridge ‡	Manual	421038	Cudgegong River	none	none	none		DWE

### Notes:

1. The Bureau of Meteorology does not provide flood warnings for gauges within the Mid-Western Regional area
2. SES Local Flood Advices are currently not provided for any gauges within the local government area.
3. The SES holds a Flood Intelligence Card for the gauges marked with a double cross (‡).

## ANNEX D - DISSEMINATION OF SES FLOOD BULLETINS

The Macquarie SES Region Headquarters distributes SES Flood Bulletins and other flood related information (including Flood Warnings) to the following regional media outlets:

### Television Stations:

Station	Location
WIN TV	Orange
Prime TV	Orange
Southern Cross 10 TV	Canberra
ABC TV	Sydney

### Radio Stations:

Station	Location	Frequency	Modulation
2DU	Dubbo.	1251	AM
2CR	Orange (ABC, for transmission to 2WPR FM Dubbo)	99.5	FM
2GZ	Orange	105.1	FM
2LT	Lithgow	900	AM
2NM	Muswellbrook	981	AM
Real FM	Mudgee	93.1	FM
2MG	Mudgee	1449	AM
KRR	Mudgee	98.7	FM

### Newspapers:

Name	Location
Daily Liberal	216 Macquarie Street DUBBO
Mudgee Guardian	9 Perry Street Mudgee
The Mudgee Weekly	9 Perry Street Mudgee

### Other Agencies:

Flood bulletins will be issued to all agencies with responsibilities listed in this plan and DISPLAN

## ANNEX E - TEMPLATE EVACUATION WARNING MESSAGE FOR [ENTER NAME OF AREA]

**Evacuation Warning for** [ ]

**Date/Time of Issue:** [ ]

**Authorised By:** [ ]

The Bureau of Meteorology has predicted a flood level of [ ] metres at [ ] (*place*) at [ ] (*time*). This means that the following area(s) may be inundated [ ].

It is recommended that you prepare to evacuate/for evacuation within the next [ ] hours. If you leave it later, the roads may be congested or closed.

To prepare for evacuation, you should:

- Raise belongings by placing them on tables, beds and benches. Put electrical items on top. Some items may be able to be placed in ceilings.
- Gather medicines, personal and financial documents and mementos together to take with you.
- Listen to radio stations [enter station] for further information and to confirm this warning.
- If possible, check to see whether your neighbours need help.
- Make arrangements for care of pets or companion animals.

If evacuation is necessary:

- Turn off the electricity, gas and water.
- Take three days' supply of clothes with you.
- If you have a car, drive to the evacuation centre at [ ] (*specify route if appropriate*).
- If you don't have a car, buses will operate on normal routes. Special transport can also be provided on request if necessary, telephone [ ].
- So that you can be accounted for, it is important that you register at the evacuation centre.
- After registering, you may go to the house of a friend or relative. Alternatively, accommodation will be arranged for you.
- The Police will provide security for your property while you are away.

# ANNEX F - EVACUATION ARRANGEMENTS FOR THE MID-WESTERN REGIONAL COUNCIL AREA

## Background

1. In most floods, few evacuations are required. Most that are necessary are from rural areas on the floodplain of the Cudgegong River and Lawson Creek above and below Mudgee. In very severe events, some evacuations may be necessary from the northern and eastern parts of Mudgee including the valley of Redbank Creek in the case of dam failure.

## Arrangements

2. **Control.** During floods evacuations will be controlled by the NSW SES. Small-scale evacuations will be controlled by the Mudgee SES Local Controller. Should the evacuations operations escalate beyond the capabilities of local resources control may be handed over to the Macquarie SES Region Controller.
3. **Conduct.** Evacuations will be controlled by the SES and conducted in four phases:
  - a. Phase 1 - Warning.
  - b. Phase 2 – Withdrawal.
  - c. Phase 3 – Shelter.
  - d. Phase 4 – Return.

## Decision to Evacuate

4. **The decision to evacuate.** The responsibility for issuing any general evacuation order during flooding rests with the Mudgee SES Local 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 Local Emergency Operations Controller and the Macquarie SES Region Controller.
5. **When evacuation should occur.** As far as possible, evacuation will be carried out before inundation occurs.
6. **What to consider.** When deciding to evacuate the following should be considered
  - a. Predicted flood level and rate of rise.

- b. Rainfall situation and rainfall predictions.
  - c. Condition of evacuation routes.
  - d. Characteristics of the at risk population.
  - e. Time of day.
  - f. Likely duration of evacuation operations and time available to conduct evacuations.
  - g. Likely duration of any isolation and preparedness of the community to cope with isolation.
  - h. Condition of essential services
7. **Self-motivated evacuation.** Some people will make their own decision to evacuate earlier and move to alternative accommodation using their own transport. These evacuees will be advised, via the media, to inform the Police or SES of their evacuation and their temporary address.
8. **Evacuation triggers.**
- a. **Failure of Essential Services.** The failure of public utilities such as sewerage, power, telephones and water pose a significant health risk to residents on the floodplain or in flood affected areas. In the event of any or all of these systems failing or potentially failing, the need for evacuations will be discussed with the members of the LEMC.
  - b. **Flooding affecting properties.** Evacuations are to occur, if it is likely properties will be flooded.
  - c. **Isolation of properties.** Persons who are not prepared for isolation or unsuited due to medical conditions etc, should be encouraged to evacuate.
  - d. **Dam Failure.** Evacuations are to occur when advised by State Water of Imminent Dam failure. **See annex H**

9. **Operations Management of Evacuations.** To assist with the Operational management of the Mudgee. Sub Sectors have been identified and will be established

Mudgee Sectors	Boundaries
<b>A</b>	<b>North</b> Cudgegong River <b>South</b> – Railway Line. <b>East</b> – Cudgegong River. <b>West</b> – Douro Street
<b>B</b>	<b>North</b> Railway Line <b>South</b> – Town limit <b>East</b> – Industrial Ave and Burrundulla Rd <b>West</b> - Eastern Side of golf Course and Broad head Rd.
<b>C</b>	<b>North</b> – Railway Line <b>South</b> – Bruce Rd including Macquarie Estate <b>East</b> – Golf Club, along to Yarrawonga Estate <b>West</b> – Church St/ Douro Strd
<b>D</b>	<b>North</b> – Madeira Rd <b>South</b> – Water works Rd Including Redbank Dam <b>East</b> – church St <b>West</b> –Henry Baily Drive to foot of hills
<b>E</b>	<b>North</b> – railway Line <b>South</b> – Rifle Range Road <b>East</b> – Douro St <b>West</b> –Bellevue Estate
<b>F</b>	<b>North</b> – Cudgegong River <b>South</b> – Railway Line <b>East</b> – Douro St <b>West</b> –Town Limit/ Putta Bucca rd
<b>G</b>	<b>North</b> – Putta Bucca Estate across to Bumberra Estate <b>South</b> – Lawson Creek <b>East</b> – End of Robert Hoddle Grove <b>West</b> –Putta Bucca rd & Tinga lane
<b>Table F-1: Mudgee Operational Sectors</b>	

### Phase 1 – Warning

10. **Evacuation warnings.** On the receipt of flood warnings predicting peak heights; the Mudgee SES Local Controller will consult as necessary to determine the level of the threat and the need to consider evacuations. As soon as possible after the decision to evacuate is made, the Mudgee SES Local Controller will issue evacuation warnings to the ‘at risk’ residents, indicating what people should do before evacuating and when actually doing so.
11. **Content of Evacuation Warnings.** A template guide to the content of evacuation warning messages is at Annex E. These are disseminated via:
- The radio and TV stations listed in Annex D.
  - Door-knocks by emergency service personnel.



- Public address systems from emergency service vehicles.
- Telephone.
- Two-way radio.
- SES Flood Bulletins.

## Phase 2 – Withdrawal

12. **Introduction.** Withdrawal involves the actual removal of the community/individuals from dangerous or potentially dangerous areas to safer areas.
13. **Movement.** Evacuees are to be encouraged to move using their own transport where possible. The Mudgee SES Local Controller will arrange transport for those people without their own vehicles.
14. **Phasing.** Area along flood affected area will have priority over non effected area, starting with properties north of Windamere dam along the Cudgong River followed by the area affected in the township of Mudgee.

Triggers	Priority 1	Priority 2	Priority 3	Priority 4
Flood Warning	Schools and Child Care Centres, Special needs/home care patients	Elderly and infirm		
Failure of Essential Services	Hospitals Special needs/home care patients	Aged Care Facilities	Identified at risk home residents	Other residents and pets as possible.
Flooding affecting properties	Special needs/home care patients	Ground Level residents/Caravan Parks	Other residents and pets when possible	
Isolation of properties	Elderly and infirm	Single Parent families	Resupply	
Imminent Dam Failure	Identified at risk residents immediately downstream	Schools and Child Care Centres, Special needs/home care patients	Elderly and infirm	All Ground Level residents Caravan Parks

**Table F-2: Evacuation triggers and priorities**

15. **Evacuation routes.** Redbank Dam Failure - Residents from Mudgee South should proceed towards Douro St and then head in a Northerly direction to

the Mortimer St. Residents in the Eastern side of Mudgee should head along Mortimer St towards the club.

16. **Large-scale evacuations.** there should be no need for the evacuation of any towns within the Mid Western Area.
17. **Animals.** 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. Department of Primary Industries will make separate arrangements for the evacuation and care of companion animals.
18. **Doorknocking.** Field teams conducting doorknocks will record and report back the following information back to the Operations Centre:
  - Addresses and locations of houses doorknocked and/or evacuated.
  - The number of occupants.
  - 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.
19. **Refusal to evacuate.** Field teams should not waste time dealing with people who are reluctant or refuse to comply with any evacuation order. These cases should be referred to the Local Emergency Management Operations Controller who will arrange for Police to ensure their evacuation.
20. **Security.** The NSW Police Force will provide security for evacuated areas.
21. **Transport and storage.** Transport and storage of furniture from flood threatened properties will be arranged as time and resources permit.

### **Phase 3 – Shelter**

22. **Evacuation centres.** The usual purpose of evacuation centres is to meet the immediate needs of victims, not to provide them with accommodation. Evacuees will be advised to go to or be taken to the nearest accessible evacuation centre, which may initially be established at the direction of the Mudgee SES Local Controller but managed as soon as possible by the Department of Community Services. Any or all of the following sites may be used as evacuation centres:

Gulgong	Mudgee	Rylstone	Villages
<b>Preferred/Primary Evacuation centres</b>			
Gulgong RSL	Mudgee Solders Club	Rylstone Club	Wollar Public School
Gulgong High School	PCYC	Rylstone High School	Hargraves Public School
Gulgong Public School	A.R.E.C Site	Kandos High School	Lue Public School
	Parklands Resort		Ulan Public School
	Mudgee High		Goolma Public School
	Cudgegong Valley Public School		Bylong Upper Public School

**Table F-1: Evacuation Centres**

23. **Action on arrival.** On arrival, evacuees will be:
- a. registered;
  - b. medically checked, if necessary; and
  - c. provided with their immediate welfare needs.
24. **Registration.** The NSW Police Force will ensure that all evacuees are registered on arrival at the designated evacuation centres.
25. **Animal shelter compounds.**
- a. In the event of a large-scale evacuation of Mudgee, animal shelter compound facilities will be set up for domestic animals and companion animals. These facilities will operate at the Mudgee Showground and be operated by Department of Primary Industries.
  - b. In the event of a large-scale evacuation of Rylstone, animal shelter compound facilities will be set up for domestic animals and companion animals. These facilities will operate at the Rylstone pound and be operated by Department of Primary Industries.
  - c. Assistance animals are to accompany and/or remain in the care of their owners at all times. This includes transport and access into evacuation centres etc.

#### **Phase 4 – Return**

26. Once it is considered safe to do so, the Mudgee SES Local Controller will authorise the return of evacuees to their normal or alternative place of residence. This decision will be made in consultation with appropriate officers in regard to matters such as the electrical safety of buildings.
27. The return will be controlled by the Mudgee SES Local Controller and may be conducted, at his/her request, by DoCS.

## **ANNEX G - ARRANGEMENTS FOR THE EVACUATION OF CARAVAN PARKS AND THE RELOCATION OF CARAVANS**

### **General**

1. The following caravan parks are flood liable:
  - a. Riverside Caravan Park at 22 Short Street
  - b. the low-lying area of the Mudgee Tourist Caravan Park in Bell Street

### **Advising Procedures**

2. Caravan Park proprietors are encouraged to ensure that the owners and occupiers of caravans are:
  - a. Made aware that the caravan park is flood liable by:
    - Handing a printed notice to occupiers taking up residence. The notice will indicate that the caravan park is liable to flooding and outline the evacuation and van relocation arrangements as detailed in this Annex.
    - Displaying this notice prominently in each van.
  - b. Made aware that if they are expecting to be absent from their vans for extended periods, they must:
    - Provide the manager with a key; in a sealed envelope; to the van.
    - Provide a contact address and telephone number.
    - Inform the manager if a vehicle will be required to relocate the van during flood time.
    - Leave any mobile van in a condition allowing it to be towed in an emergency (i.e.: tyres inflated, jacks wound up, personal effects secured and annexes and lines for water, sewer, electricity and gas readily detachable).
  - c. Informed when a flood is rising. At this time, occupiers will 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 and van relocation.

3. The Mudgee SES Local Controller will ensure that the managers of caravan parks are advised of flood warnings and the details of any evacuation order.

### **Evacuation of Occupants and Relocation of Vans**

4. Caravan park proprietors will install flood depth indicators and road alignment markers within their caravan parks.
5. When an evacuation order is given:
  - a. Occupiers of non-movable vans should:
    - Secure their vans by tying them down to prevent flotation.
    - Isolate power to their vans.
    - Collect personal papers, medicines, a change of clothing, toiletries and bedclothes.
    - Lift the other contents of their vans as high as possible within the van.
    - Move to a designated evacuation centre in Mudgee Showgrounds at the corner of Douro/Nicholson streets if they have their own transport, or move to the caravan office to await transport.
  - b. Where possible, vans that can be moved will be relocated by their owners. Park managers will arrange for the relocation of mobile vans whose owners do not have a vehicle. Council and SES personnel will assist if required and may be able to provide additional vehicles. Vans are to be moved to the following locations:
    - Mudgee Showgrounds at the corner of Douro/Nicholson streets
6. Caravan park managers are encouraged to:
  - a. Ensure that their caravan park is capable of being evacuated within six hours.
  - b. Advise the Mudgee SES Local Controller of:
    - The number of people requiring transport.
    - Details of any medical evacuations required.
    - Whether additional assistance is required to effect the evacuation.
  - c. Check that no people remain in non-removable vans that are likely to be inundated.
  - d. Inform the Mudgee SES Local Controller when the evacuation of the caravan park has been completed.

e. Provide the Mudgee SES Local Controller with a register of people that have been evacuated.

	<b>Assembly/Evacuation Point</b>	<b>Access route</b>	<b>When Inundation Begins</b>	<b>Time to Evacuate park</b>
<b>Mudgee Tourist Park</b>	Front of Reception	Bell Rd	Unknown	35 mins
<b>Riverside caravan Park</b>	Front of Reception	Short St	Unknown	25 mins

**Table G-1: Evacuation of Caravan Parks**

### **Return of Occupants and Vans**

7. The Mudgee SES Local Controller, using council resources as necessary, will advise when it is safe for the caravan parks to be re-occupied.
8. Vans will be towed back to the caravan park(s) by van owners or by vehicles and drivers arranged by the park managers. Again, Council and SES personnel will assist if available.

# **ANNEX H - DETAILS OF THE DAM-FAILURE WARNING AND EVACUATION SYSTEM FOR REDBANK CREEK DAM**

## **Purpose of System**

1. The Dam-Failure Warning System for Redbank Creek Dam has been devised to protect residents at threat by facilitating their evacuation should failure become possible. The dam, located two kilometres south of Mudgee, has been assessed as being incapable of withstanding a very severe flood on Redbank Creek or a very strong earthquake.
2. Some 80 houses located between the dam, the Sydney Rd and Mogola Way would be flooded if failure occurred, and it is possible that some additional houses located downstream of the bridge would also be affected.
3. Under normal conditions, the dam is unmanned and has no operational equipment. The principle storage level indicator is a water level transducer telemetered to Mid-Western Regional Council.
4. The Dam-Failure Warning System consists of a gauge at the dam, alarm-generating mechanisms to alert Mid-Western Regional Council and SES, and a set of arrangements to ensure that warnings are passed to the occupants of the houses which could be threatened.

## **Operation and Procedures**

5. The system operates as follows:
  - a. The dam and the level of the water behind it are monitored regularly by Mid-Western Regional Council.
  - b. Key council personnel are alerted who advise SES.
  - c. Physical surveillance of the dam and downstream areas is initiated by Council.
  - d. Procedures are set in train to warn the occupants of the threatened houses and to advise them of appropriate actions, including evacuation if necessary
6. Notification, surveillance, warning and evacuation arrangements are detailed in the table H-2. Note that:
  - a. Actions indicated as occurring at particular Alert Levels may be brought forward if the development of a flood event warrants.
  - b. The 'Elapsed Times' are estimates of the worst possible case based upon PMF (Probable Maximum Flood) hydrographs. In real events which



threaten to cause the dam to fail it is likely that much more time would elapse between the White and Red Alert levels than is indicated in the table. Assessments of the speed of onset of developing events would be made at the time and advice given to residents would reflect these assessments

7. If a significant earthquake is felt by the occupants of the threatened houses, they have been asked to leave immediately on foot or by car, moving away from Redbank Creek and not returning to their homes for a period of 30 minutes. Council staff will immediately inspect the dam and advise the occupants on any further action which is necessary

### **Prior Advice to People Potentially at Threat**

8. Residents of the dwellings which could be inundated have been issued with laminated 'advice sheets' intended to be placed in a prominent location in the house and summarising:
  - a. The circumstances under which dam failure could occur.
  - b. Arrangements governing the issue of warnings.
  - c. What to do when advised to prepare to evacuate or actually to do so.
  - d. What to do if an earthquake is felt.
9. The written summaries, headed 'Notice to Occupants of this Dwelling' are appended to this annex.
10. The Table H-1 lists the streets at risk of inundation following a failure of Redbank Creek Dam:

<b>Mudgee South</b>	<b>Mudgee East</b>	<b>Mudgee North</b>
Mountain View Road	Sydney Rd	Short St
Waterworks Road	Mulgoa Way	Court St
Robertson Road	Clarendon Pl	Pitts Lane
Trefusis Ave		
Spring Rd		
Redbank Rd		
Darren Rd		
Scenic Close		
Abernethy Close		

**Table H-1: Dambreak affected roads**

Table H-2 Notification Procedures and Actions In Relation To Water Levels At Redbank Creek Dam

CONDITION	ALERT LEVEL	ELAPSED TIME IN WORST CASE	FLOOD EFFECTS	ACTIONS		
				MID-WESTERN REGIONAL COUNCIL	MUDGEES	PEOPLE IN HOUSES AT RISK
Water level 5.5m below spillway.	<b>GREEN</b>		None: this is the normal water level at the dam.	<ul style="list-style-type: none"> <li>Inspects dam after significant rain.</li> <li>Advises Mudgee SES if rise occurs above this level.</li> </ul>	<ul style="list-style-type: none"> <li>Notes rise when advised.</li> </ul>	<ul style="list-style-type: none"> <li>No action required.</li> </ul>
Water level 1.0m below spillway.	<b>WHITE</b>		No flooding from dam.	<ul style="list-style-type: none"> <li>On-call operator alerted by auto dialler, advises:</li> <li>Manager Water Supply and Sewerage.</li> <li>SES After Hours Duty Officer.</li> <li>Local Emergency Operations Controller.</li> <li>Opens outlet valve.</li> <li>Establishes regular contact with Mudgee SES LHQ.</li> </ul>	<ul style="list-style-type: none"> <li>Activates Local Flood Plan.</li> <li>Ensures that Evacuation Centre (Mudgee Soldiers Club) is made ready.</li> <li>Advises agencies assisting with dissemination of warnings to make doorknockers ready.</li> <li>Advises houses immediately downstream of dam to “prepare to evacuate” or to actually do so.</li> </ul>	<ul style="list-style-type: none"> <li>No action required; no short-term threat to dam.</li> </ul>
Significant earthquake felt by people in at-risk houses.	<b>ORANGE</b>	NA	None unless failure occurs; failure would produce significant flooding in creek.	<ul style="list-style-type: none"> <li>Inspects dam</li> <li>SES After Hours Duty Officer</li> <li>Advises people in at-risk houses on results of inspection and on further actions.</li> </ul>	<ul style="list-style-type: none"> <li>Await further notice form council Engineer</li> </ul>	<ul style="list-style-type: none"> <li>Evacuate immediately, by car or on foot, away from Redbank Creek.</li> <li>Stay away for 30 minutes before returning.</li> </ul>
Water level 0.2m above spillway.	<b>RED</b>	<b>1 hour from WHITE ALERT</b>	Flooding occurring in creek.	<ul style="list-style-type: none"> <li>Continues surveillance of dam and downstream area.</li> <li>Seals roads off with barriers.</li> <li>Maintains regular contact with</li> </ul>	<ul style="list-style-type: none"> <li>Advises residents by telephone and doorknock to prepare to evacuate or to actually do so.</li> <li>Advises Radio Station 2MG/RealFM Mudgee and</li> </ul>	<ul style="list-style-type: none"> <li>Act on advice, evacuating if required by pre-determined route to evacuation centre.</li> </ul>

ACTIONS						
CONDITION	ALERT LEVEL	ELAPSED TIME IN WORST CASE	FLOOD EFFECTS	MID-WESTERN REGIONAL COUNCIL	MUDGEE SES	PEOPLE IN HOUSES AT RISK
				Mudgee SES LHQ.	requests urgent message to be broadcast	
Water level 1.0m above spillway	<b>ASSUMED DAM FAILURE</b>	<b>1.5 hours from WHITE ALERT</b>	Extreme flooding in creek; houses flooded.			
Danger assessed as being over (Note that this condition could be reached at any time after WHITE ALERT level is reached).	<b>ALL CLEAR</b>	NA	NA	<ul style="list-style-type: none"> <li>Advises Mudgee SES and residents of intended further actions.</li> </ul>	<ul style="list-style-type: none"> <li>ALL CLEAR issued by phone, doorknock and/or at evacuation centre and over Radio Station 2MG/RealFM Mudgee.</li> </ul>	<ul style="list-style-type: none"> <li>Stay at home, return home or await further advice.</li> </ul>

## NOTICE TO OCCUPANTS OF THIS DWELLING

The purpose of this notice is to help you know what to do and where to go if Redbank Dam is threatened with failure. The **chance of failure is extremely remote** - but if it should occur this property could be severely flooded with dangerously fast-flowing and deep water. To ensure your safety it is vital that you read this card carefully, keep it in a visible indoors location and refer to it periodically.

**If you feel an earthquake** which causes windows or dishes to break, books to fall off shelves or pictures to fall from walls, you should leave immediately, by car or on foot, moving **away from Redbank Creek**. You should not return for a period of 30 minutes. Council staff will inspect the dam and advise you as soon as possible on the condition of the dam and on any further action which you should take. Listen to 2MG or Real FM.

If there is very heavy rain and you are advised by emergency services personnel to **prepare to evacuate**, you should gather together your medicines, personal valuables and papers, photograph albums and family mementoes and be ready to take them with you.

If you are advised to **evacuate**, you should:

- a. Collect your medicines, personal valuables and papers, money, photograph albums and family mementoes and other belongings that can be fitted within your vehicle or in a suitcase.
- b. Move to the house of a friend or relative well above the level of your own house, or go to the Evacuation Centre at the **Mudgee Soldiers Club**.
- c. If you need help to evacuate, please call the State Emergency Service on **132 500** or tell the person who has advised you to leave the house.

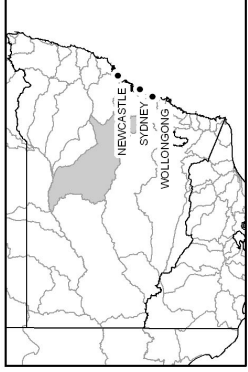
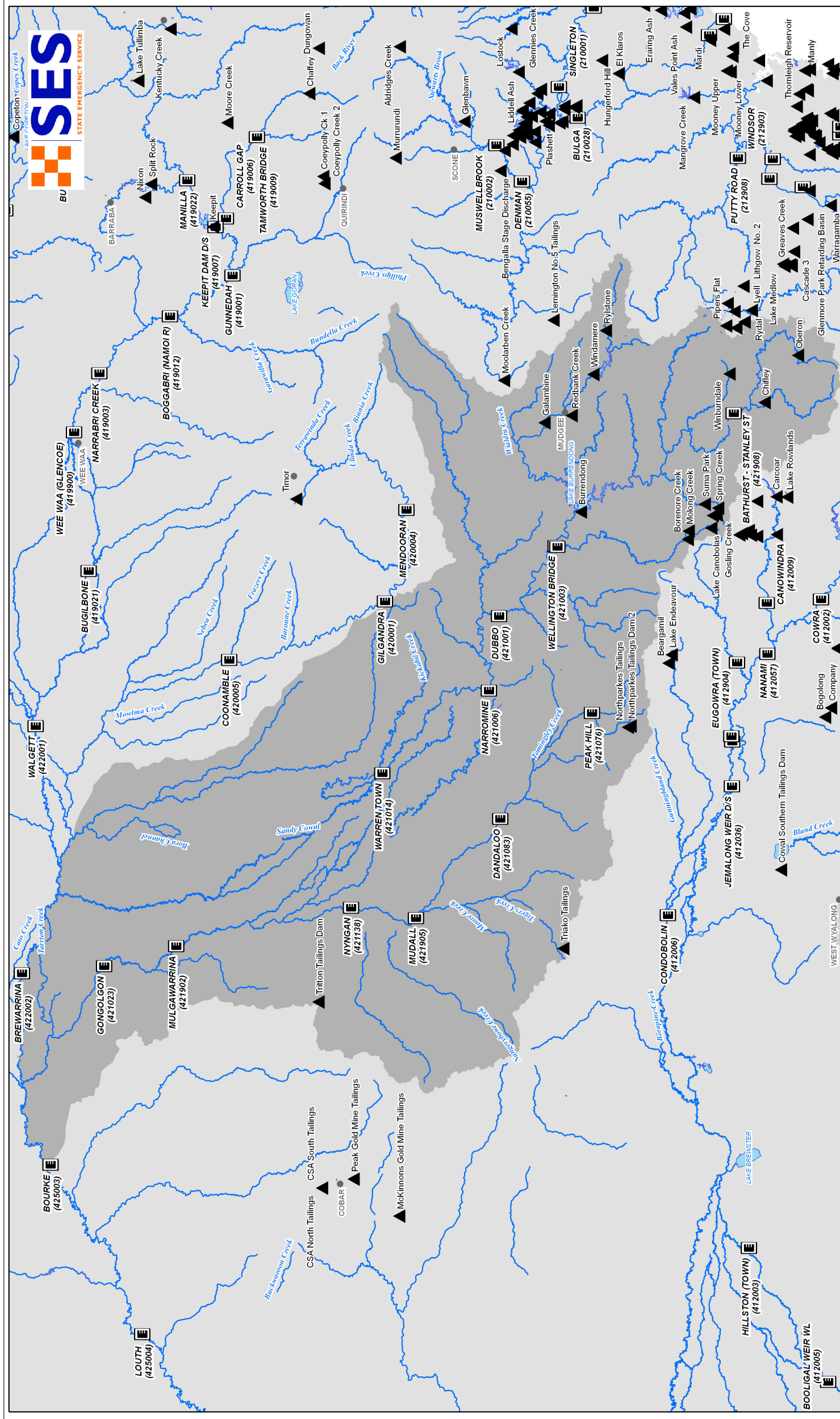
Assistance will be provided, should you need it, to help you evacuate and temporary accommodation will be available. The Police will provide security for your property while you are away and any pets will be cared for by the Mid-Western Regional Council.

**It is important that you evacuate when advised to do so. If you do not, flood water may make it extremely difficult or dangerous to leave.**

When the danger has passed, you will be advised as soon as possible, you will be visited by an employee of the Council or a member of the State Emergency Service to ensure that you are safe and to explain what has happened and what is likely in the future.

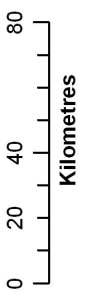


# MAP 1 - MACQUARIE-BOGAN RIVER BASIN



### Legend

- Dams
- Warning Gauges
- Major River
- Waterbodies
- Macquarie - Bogan River Basin (412)



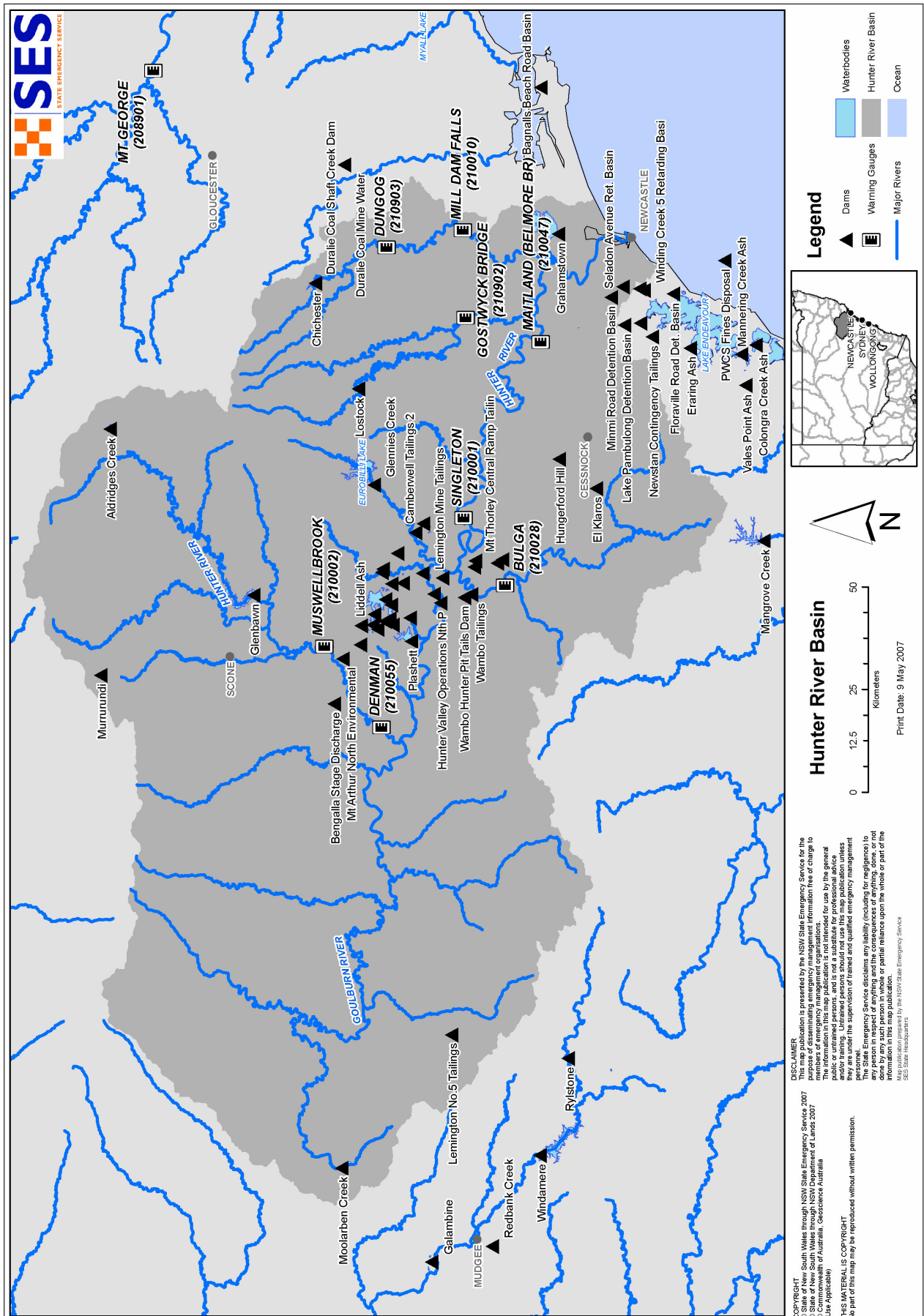
Print Date: 30 April 2007

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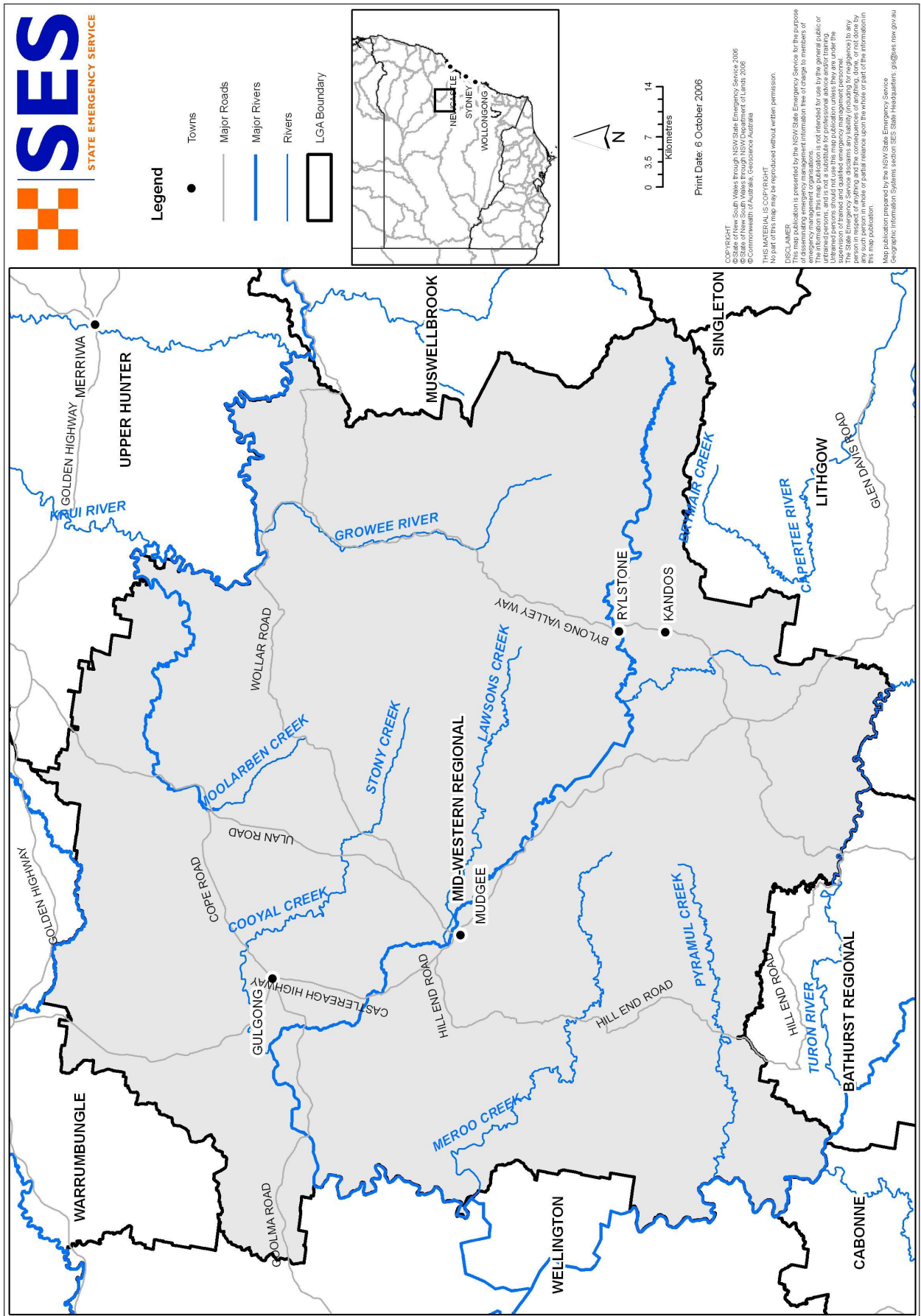
## Macquarie - Bogan River Basins

# MAP 2 - HUNTER RIVER BASIN





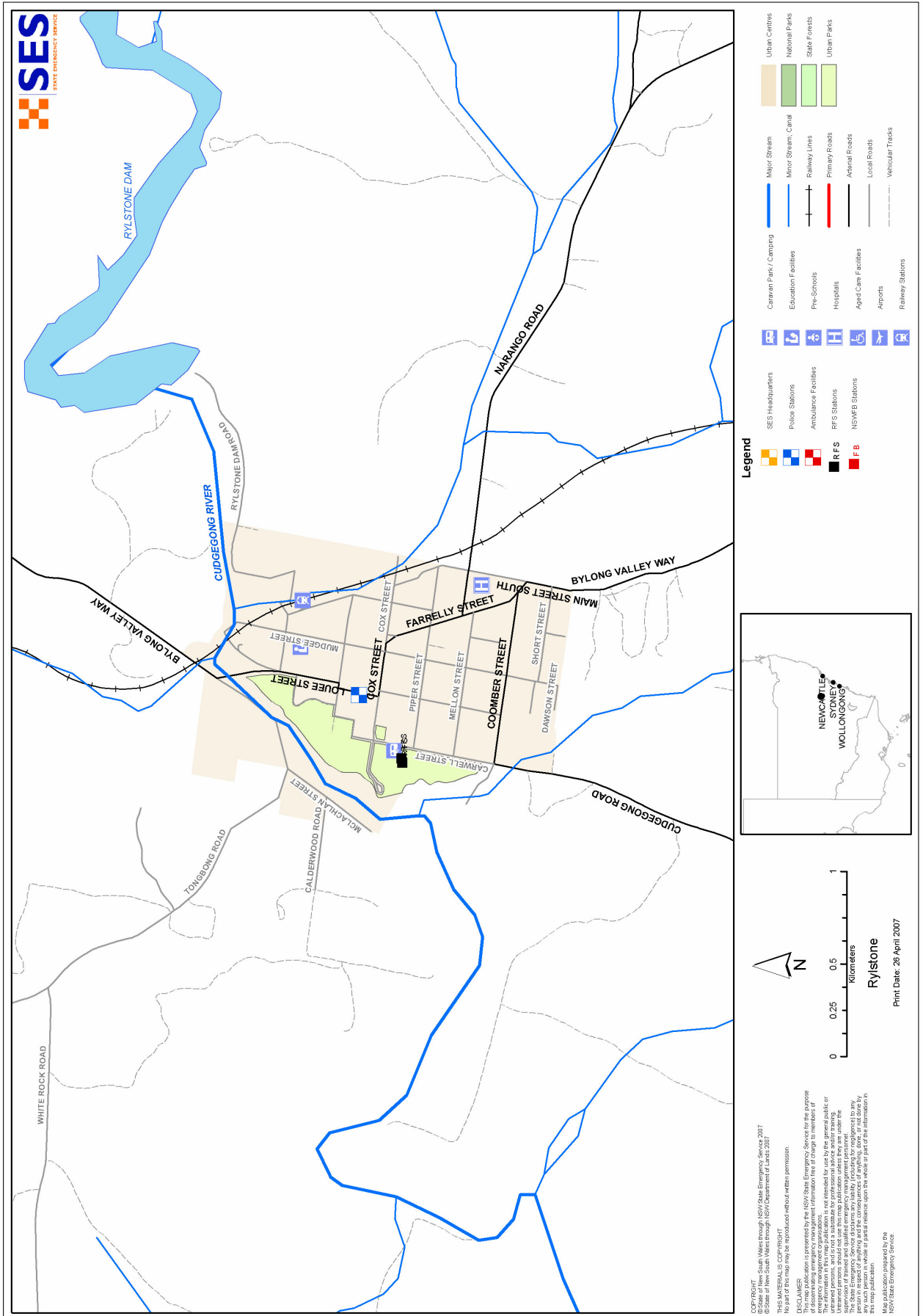
# MAP 3 - MID-WESTERN REGIONAL COUNCIL AREA



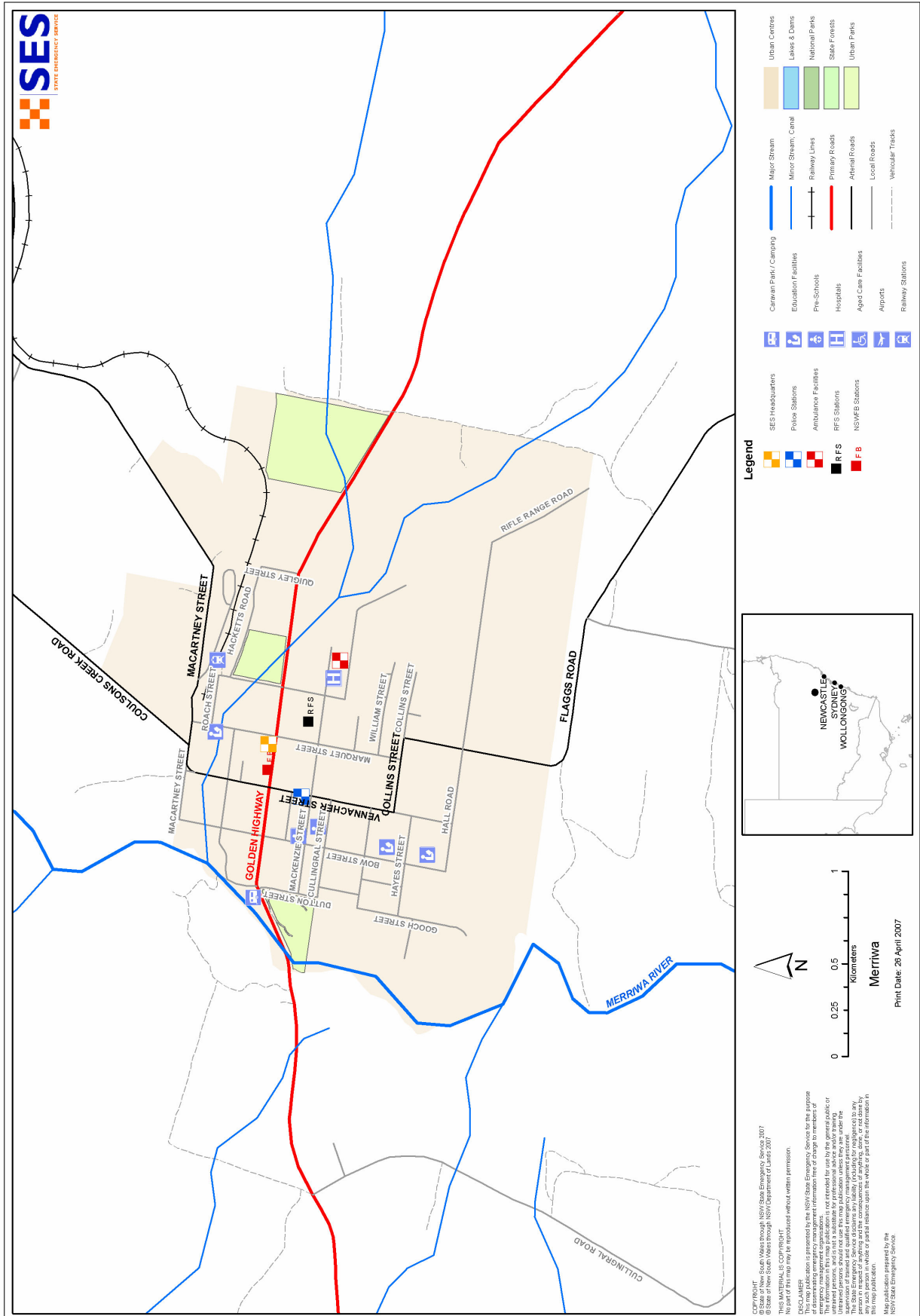




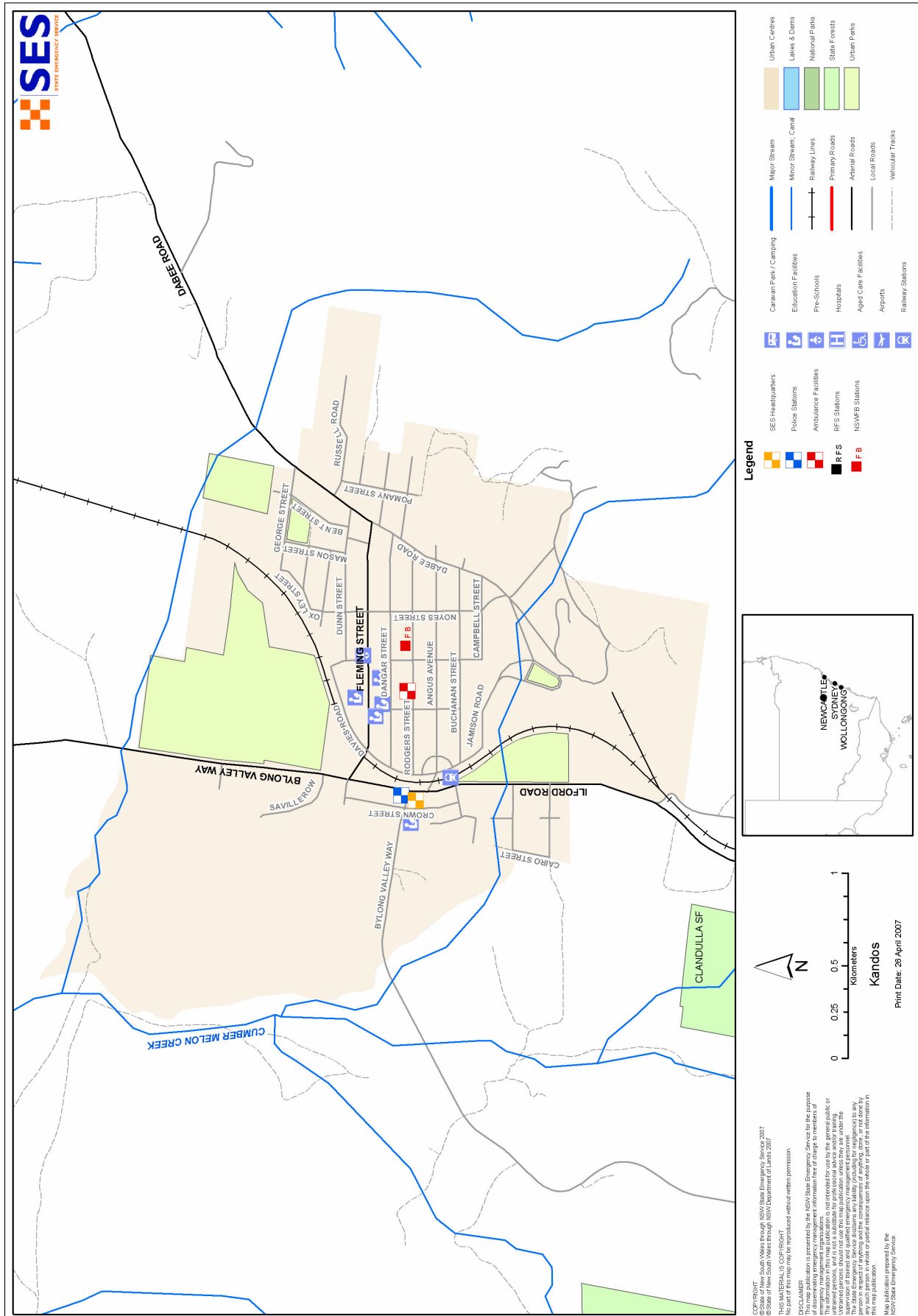
# MAP 5 - RYLSTONE



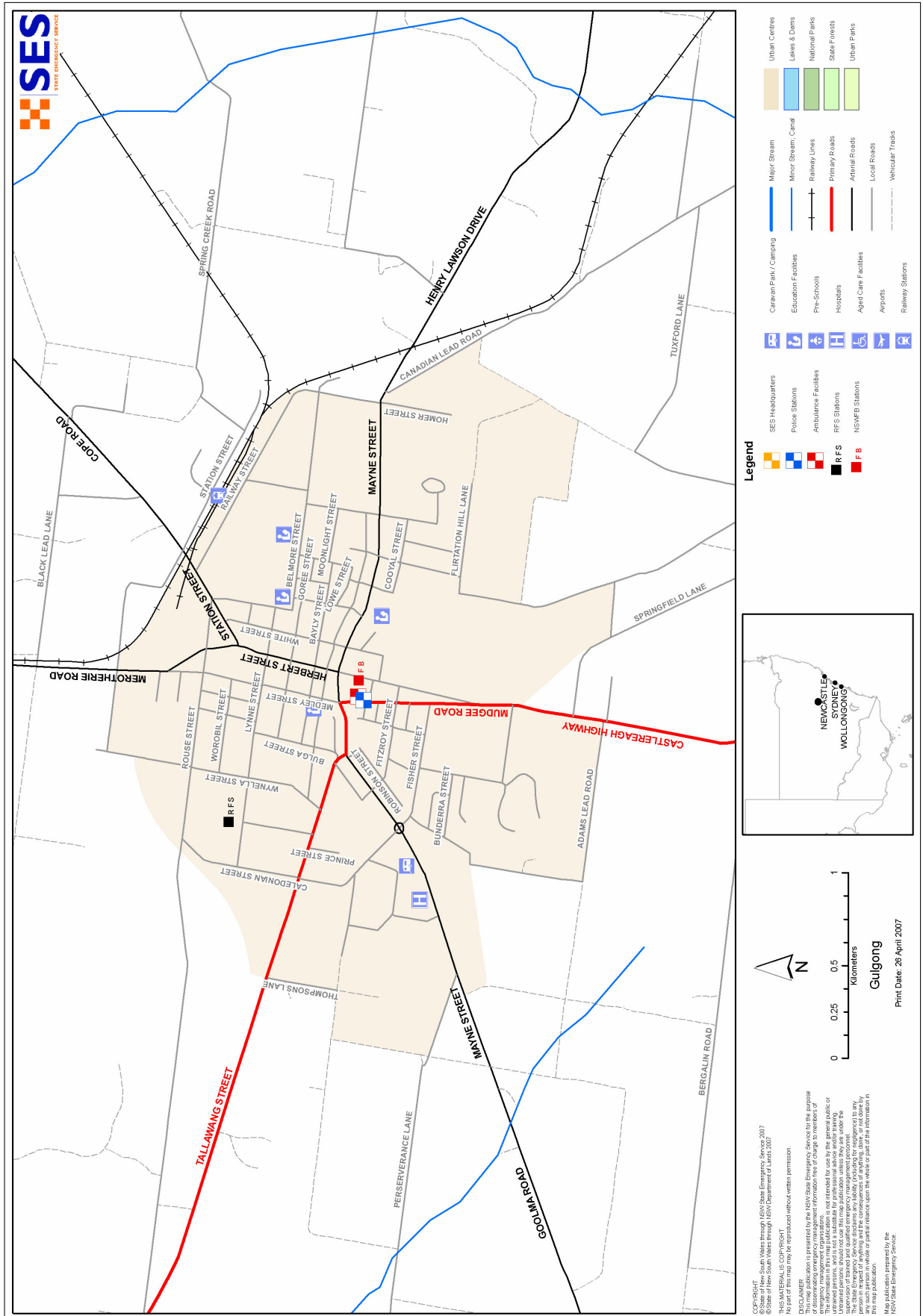
# MAP 6 - MERRIWA



# MAP 7 - KANDOS



# MAP 8 - GULGONG





# MAP 9 - MUDGEE TOWN SECTORS

