

**Riverina Murray  
Regional  
Emergency  
Management Plan  
March 2019**



## Part 1 – Administration

### Authority

The Riverina Murray Regional Emergency Management Plan (EMPLAN) has been prepared by the Riverina Murray Regional Emergency Management Committee in compliance with the State Emergency & Rescue Management Act 1989. This document replaces the April 2017 Edition.

APPROVED



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**Chair**

**Riverina Murray Regional Emergency Management Committee**

Dated: 27/3/19.

ENDORSED

Endorsed by NSW SEMC at Meeting 117

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**Chair**

**State Emergency Management Committee**

Dated: 4<sup>th</sup> June 2020

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## Purpose

Details arrangements for, prevention of, preparation for, response to and recovery from emergencies within the Emergency Management Region covered by this plan.

It encompasses arrangements for:

- emergencies controlled by combat agencies;
- emergencies controlled by combat agencies and supported by the Regional Emergency Operations Controller (REOCON);
- emergency operations for which there is no combat agency; and
- circumstances where a combat agency has passed control to the REOCON.
- demobilisation and transition of control from response to recovery

## Objectives

The objectives of this plan are to:

- support Local Emergency Management Plans (EMPLANs) and augment them when required;
- identify trigger points for regional level activation, escalation and demobilisation;
- define participating organisation and Functional Area roles and responsibilities in preparation for, response to and recovery from emergencies;
- set out the control, co-ordination, support and liaison arrangements at the Regional level;
- detail activation and alerting arrangements for involved agencies at the Regional level; and
- detail arrangements for the acquisition and co-ordination of resources at the Regional level.

## Scope

The plan describes the arrangements at Regional level to prevent, prepare for, respond to and recover from emergencies and also provides policy direction for the preparation of Sub Plans and Supporting Plans. Further:

- This plan relies on effective implementation of the Governance framework for Emergency Management;
- Arrangements detailed in this plan are based on the assumption that the resources upon which the plan relies are available when required; and
- The effectiveness of arrangements detailed in this plan are dependent upon all involved agencies preparing, testing and maintaining appropriate internal instructions, and/or standing operating procedures.

## Principles

The following principles are applied in this plan:

- a) The Emergency Risk Management (ERM) process is to be used as the basis for emergency planning in New South Wales. This methodical approach to the planning process is to be applied by Emergency Management Committees at all levels.
- b) Responsibility for preparation, response and recovery rests initially at Local level. If Local agencies and available resources are not sufficient they are augmented by those at Regional level.
- c) Control of emergency response and recovery operations is conducted at the lowest effective level.
- d) Agencies may deploy their own resources from their own service from outside the affected Local area or Region if they are needed.
- e) The Regional Emergency Operations Controller (REOCON) is responsible, when requested by a combat agency, to co-ordinate the provision of resources support. EOCONs would not normally assume control from a combat agency unless the situation can no longer be contained. Where necessary, this should only be done after consultation with the State Emergency Operations Controller (SEOCON) and agreement of the combat agency and the appropriate level of control.
- f) Emergency preparation, response and recovery operations should be conducted with all agencies carrying out their normal functions wherever possible.
- g) Prevention measures remain the responsibility of authorities/agencies charged by statute with the responsibility.

## Activation, Escalation & Demobilisation

There are a number of Activation, Escalation and Demobilisation triggers that initiate and conclude this Regional EMPLAN or elevation of the emergency to a State level.

### Activation Triggers:

#### *Support*

- Designated Combat Agency has a regional level plan for emergency response;
- Whenever there is an impending or unforeseen emergency operation and Regional level support resources may be required;

#### *Control*

- Where there is no designated Combat Agency and a regional level response is required;
- Where it is necessary to coordinate two or more local level operations which are controlled by Emergency Operations Controllers;
- When the REOCON considers it necessary;
- When directed by the SEOCON to take control of an emergency response.

### Escalation Triggers:

#### *Local to Regional*

- When an emergency grows beyond the capability of a Local EOC;
- When the emergency crosses two or more local emergency management boundaries;
- When significant Political, Environmental, Social, or Technological impacts are foreseen;
- When directed by the SEOCON.

#### *Regional to State*

- When an emergency grows beyond the capability of a Regional EOC;
- When the emergency crosses two or more Regional emergency management boundaries;
- When significant Political, Environmental, Social or Technological impacts are foreseen;
- When directed by the SEOCON.

### Demobilisation Triggers:

- When it is determined that the incident has scaled back to the extent a regional level response is no longer required;
- When the response has transitioned into a longer-term recovery process and an appropriate handover to a recovery coordinator or committee occurs;
- When it is determined that no further control or support is required for the emergency.

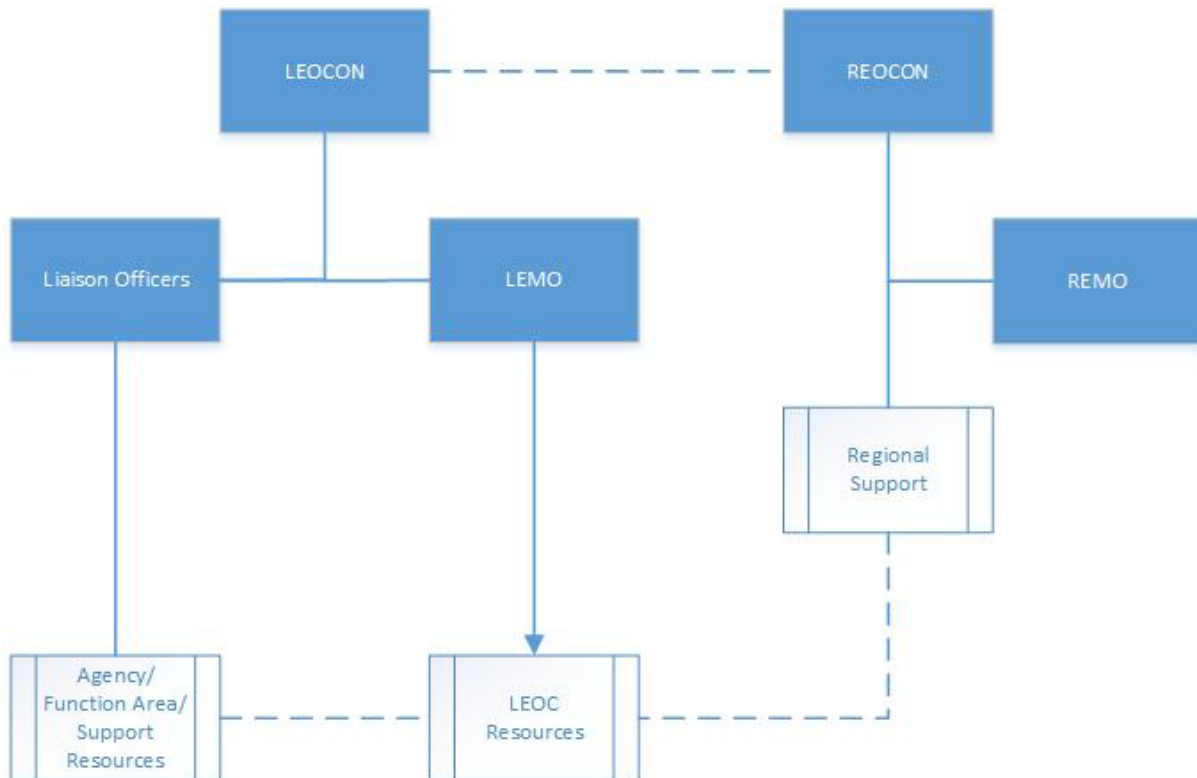
**Note:** The REMC may identify specific Regional triggers for activation, escalation and demobilisation beyond those listed above.

## Control, Command and Coordination Structure

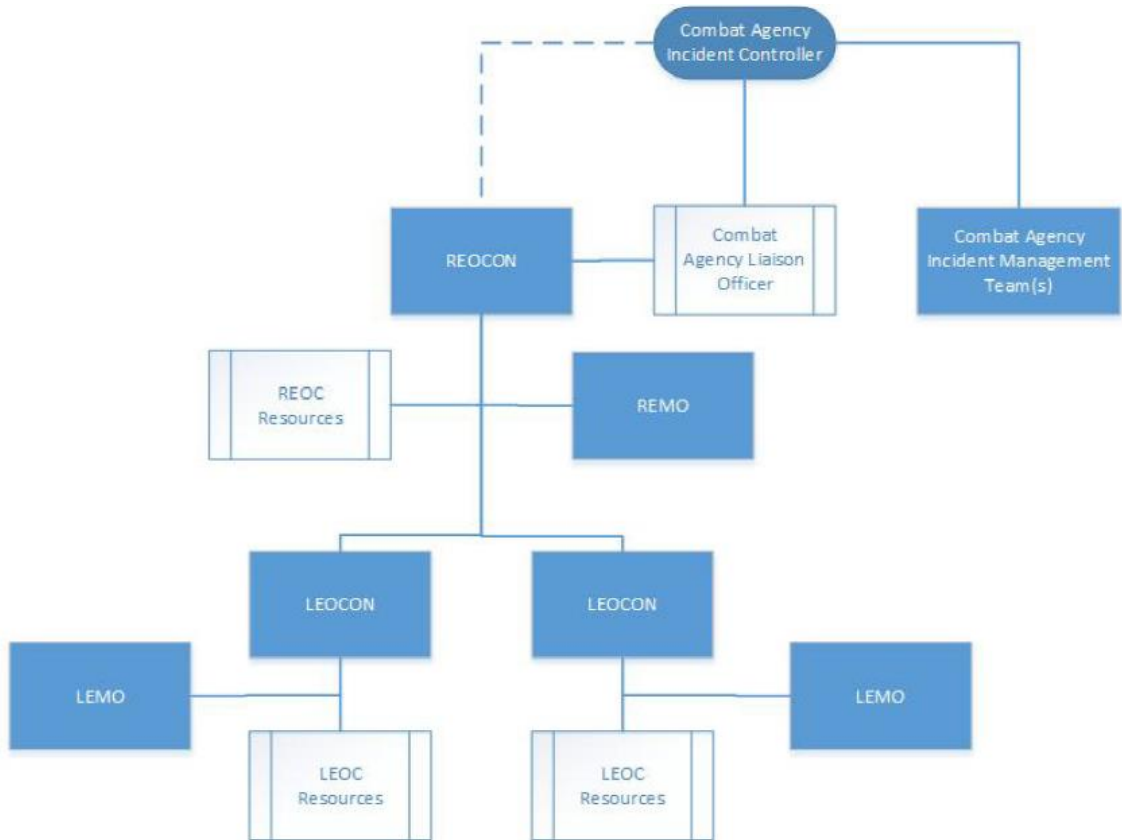
The Control, Command and Coordination (CCC) structure will vary according to the role that the Regional level response is taking. There are three standard structures that typically arise according to the role taken by the REOCON and REMC:

1. The Region acting as a support mechanism to a Local emergency;
2. The Region supporting a Combat Agency for a Regional emergency;
3. The Region controlling a Regional emergency.

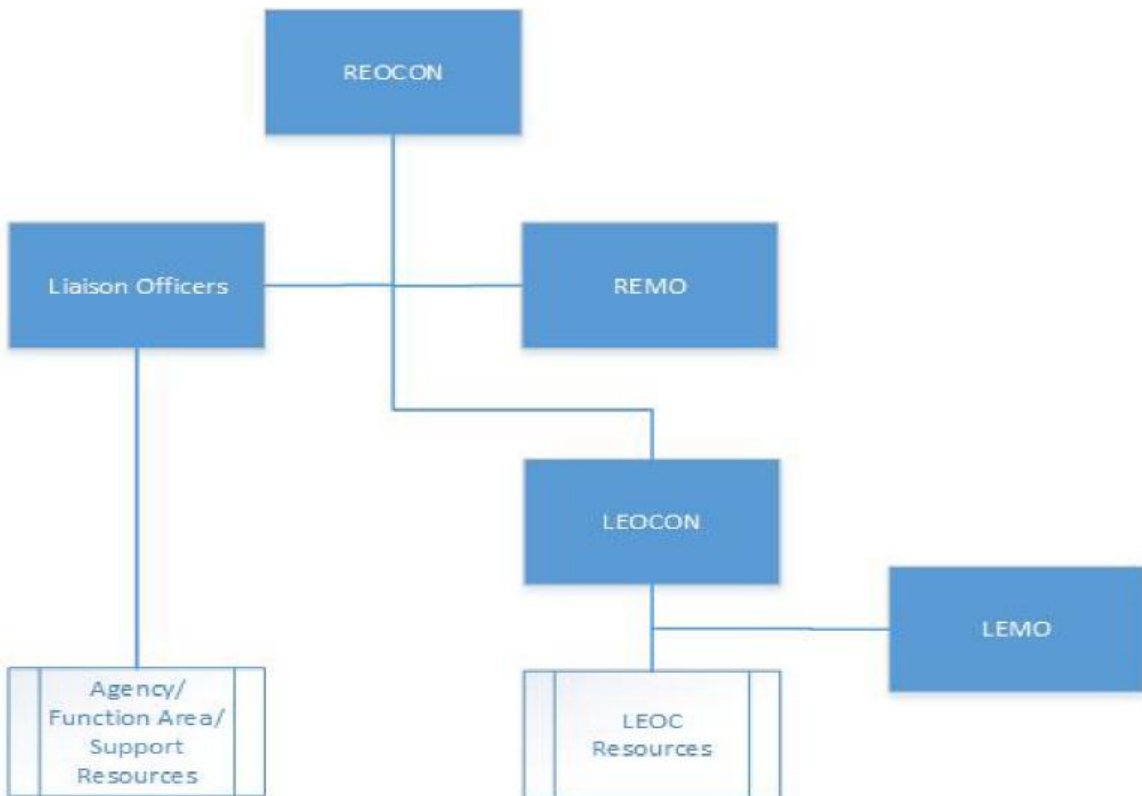
**Note:** the specific CCC structure can vary according to the type of emergency and should be confirmed on each occasion between stakeholders with the standard arrangements considered.



*Region acting as a support mechanism to a Local emergency*



*Region supporting Combat Agency for a Regional emergency*



*Region controlling a Regional emergency*



## Test and Review Process

The Riverina Murray Regional Emergency Management Committee (REMC) will review this Plan every three (3) years, or following any:

- Significant Regional Change such as boundary changes, Agency/Functional Area/Supporting organisation changes, facilities etc;
- activation of the Plan in response to an emergency;
- legislative changes affecting the Plan; and
- reviews, inquiries and lessons learned that are relevant to the purpose of the plan;
- exercises conducted to test all or part of the Plan.

## Part 2 – Community Context

### Annexure A – Community Profile

#### General

The area covered by this Emergency Management Plan is referred to as the Riverina Murray Emergency Management Region and includes the 19 Local Government Areas as shown in Map 1.

The region stretches from the western foothills of the Snowy Mountains in the east and out across the Murrumbidgee flood plain to the west and is bounded by Murray River in the south. The Region Emergency Management areas within NSW adjoining the Riverina Murray Region Emergency Management area are South Eastern, Central West and Far West. The Riverina Murray Region (19 local government Areas) covers an area of approximately 123,849 square kilometres. It is bordered to the South by the State of Victoria along the Murray River.

#### Boundaries



Map 1.

## Landform and Topography

The region spans a diverse range of ecological communities and environments, from the eastern slopes of the Australian Alps through to the arid landscapes to the west. Predominantly however, it is composed of the floodplains of the Murray, Murrumbidgee and Darling rivers. Many of the ecosystems in the region rely on flooding, with the Riverina-Murray region accounting for a quarter of NSW’s internationally significant Ramsar wetlands. (The Ramsar Convention is an international treaty for the conservation and sustainable use of wetlands. It is also known as the Convention on Wetlands. It is named after the city of Ramsar in Iran, where the Convention was signed in 1971.) The region also includes segments of the World Heritage listed Willandra Lakes region and River Red Gum National Parklands

## River Catchments, Water Storages/Lakes

The main River catchment areas are shown in the table below. Further information related to flood threat can be found in the relevant Local Flood Plans.

Note: Water storage facilities within and upstream of the region are managed as irrigation management infrastructure however they do have some limited ability to provide flood mitigation.

Major River Catchment		Major Water Storages/Lakes/Pondages
LGA	River Name	
Albury Federation, Greater Hume Berrigan, Murray River	Murray	Lake Hume (Operator: State Water NSW) Lake Mulwala (Operator: Goulburn Murray Water Vic) Torrumbarry Weir (Operator: Goulburn Murray Water Vic) Note: Khancoban Pondage and Dartmouth Dam (Victoria) inflow into Lake Hume near Albury, both dams are located upstream of the Emergency Management Region.
June, Wagga Wagga Coolamon, Narrandera, Leeton, Murrumbidgee Carrathool, Hay	Murrumbidgee	Note: Burrinjuck and Blowing Dams are located upstream of the Emergency Management Region, during dam spilling events/major releases can have significant impact on Murrumbidgee River flood conditions.






TABLE 1 – Major River Systems and Water Storages

## Climate

The climate of the Riverina Murray region has a strong seasonal cycle, with cool to cold winters and warm to hot summers. It is considered likely to be one of the regions of New South Wales most severely impacted by climate change because of increasing temperatures, changes in the volume and distribution of rainfall, reduced snowfalls, and decreases in river flows. Rainfall throughout the region is winter–spring dominated, with average annual falls ranging from a low of about 240 mm in the north-west to a high of about 1050 mm on the western edge of the Snowy Mountains. The highest runoff originates from the Snowy Mountains and is winter–spring dominated, with the spring runoff high relative to rainfall because of melting snow. Runoff patterns in the more arid western parts of the region have a more uniform pattern.

The *Impacts of Climate Change on Natural Hazards Profile-State Overview* 2010 report identifies that: Daily maximum temperatures are projected to rise across all seasons by an average of 1.5–3°C, with the greatest increase in winter and spring (2–3°C). Nights are also projected to be warmer by an average 0.5–2°C, with the greatest increase in spring (1–2°C). Rainfall is projected to shift from winter to summer dominance with overall total falls declining, especially in the winter growing season. This decline is projected to be 20–50%, with the greatest reduction in southern parts of the region. Spring and autumn are projected to be similar to winter with rainfall decreasing by up to 50%, and the largest decreases occurring in the south and west. Evaporation is projected to increase in these seasons, exacerbating the dry conditions. Projected increases in the severity of short, medium and longer term droughts are likely to lead to a decrease of up to 15% in total runoff. El Niño years experienced in the region are likely to continue to result in an increased probability of lower than average rainfall and become hotter. La Niña years experienced in the region are likely to continue to result in an increased probability of higher than average rainfall and become warmer, with storms producing heavy downpours likely to become more frequent. Projections indicate that despite water stress overall becoming more intense, there is a risk that flood-producing rainfall events are likely to become more frequent and more intense with increased summer rainfall in La Niña years in the Riverina Murray region which includes extensive floodplains and wetlands.

Projected Changes: Adapt NSW Climate Change Snapshot Murray Murrumbidgee

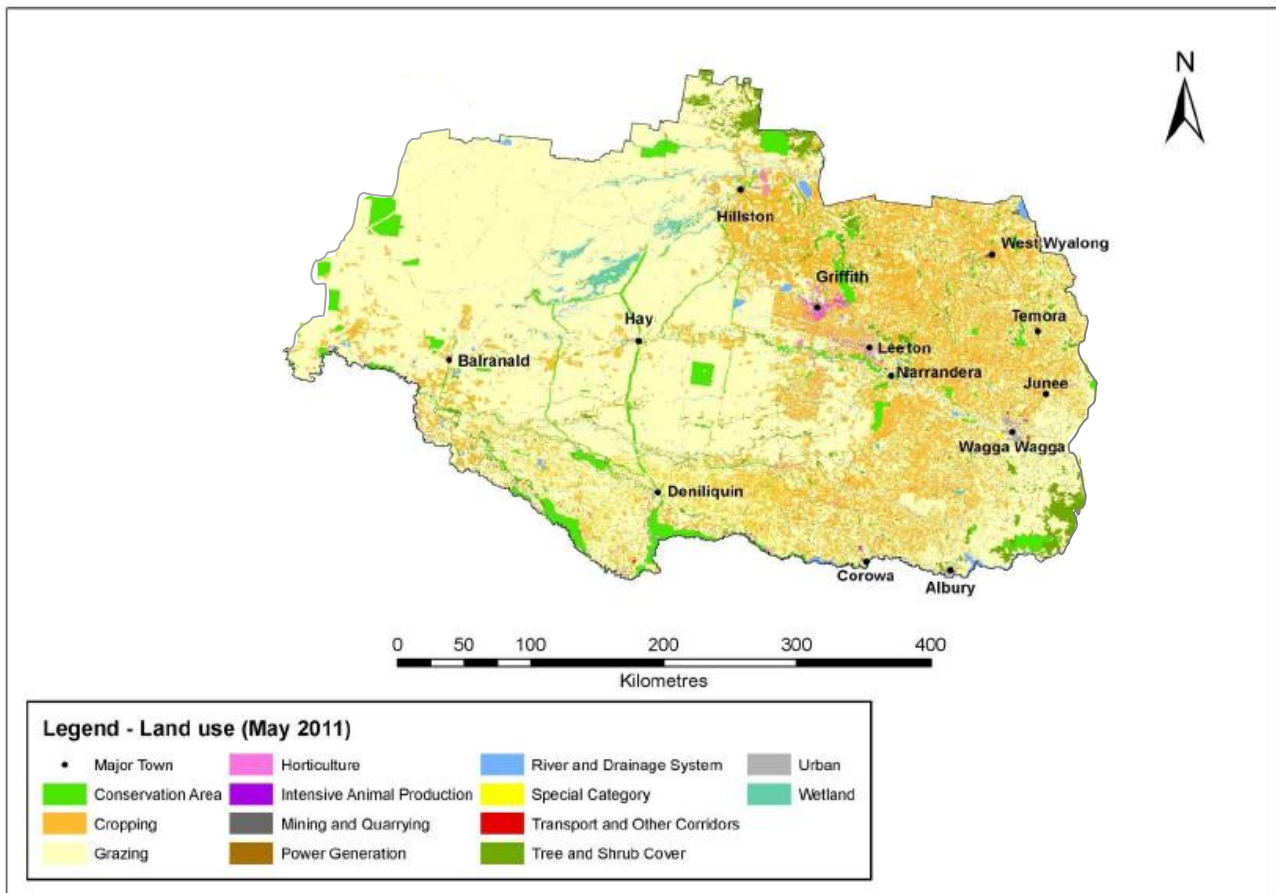
Projected temperature changes	
 Maximum temperatures are projected to <b>increase</b> in the near future by 0.4 – 1.0°C	Maximum temperatures are projected to <b>increase</b> in the far future by 1.6 – 2.5°C
 Minimum temperatures are projected to <b>increase</b> in the near future by 0.4 – 0.8°C	Minimum temperatures are projected to <b>increase</b> in the far future by 1.3 – 2.4°C
 The number of hot days will <b>increase</b>	The number of cold nights will <b>decrease</b>
Projected rainfall changes	
 Rainfall is projected to <b>decrease</b> in spring	Rainfall is projected to <b>increase</b> in summer and autumn
Projected Forest Fire Danger Index (FFDI) changes	
 Average fire weather is projected to <b>increase</b> in summer and spring	Severe fire weather days is projected to <b>increase</b> in summer and spring

## Land Use

In broad terms the most common land use by area is grazing, which occupies approximately 66% of productive agricultural land with around 35% of this improved pastures and 65% unimproved or native pastures. Broadacre cropping and horticulture occupy the remaining 34% of productive agricultural land.

The trend towards larger grain farms is reflected in Riverina Murray where there has been an increase in the average farm size, both in terms of physical size (hectares) and business size as measured by Estimated Value of Agricultural Operations (EVAO)

Irrigated agriculture is a vital component of the agricultural industry in Riverina Murray providing opportunities for production of high value commodities such as fruit, vegetables, rice and cotton and continuity of production in low rainfall seasons. There has been substantial restructure in irrigated agriculture driven by changes to government water policy and the experiences of the millennium drought. This restructure has been accompanied by significant investment in water efficiency improvements on farm and in water delivery infrastructure.



## Population and People

Albury, Griffith and Wagga Wagga LGAs are classified as cities within the context of population regional demographic analysis. These cities together with Deniliquin located in Edward River council Area are seen as regional centres in their own right. The greater proportion of the population is based within the eastern end of the emergency management region, to the west local government areas tend to be large in area with a relatively small population base, see table below.

Riverina Murray Emergency Management Region Statistics - ABS Census Data accessed Jan 2018		
LGA	Population	Area in Hectares
Albury (City)	51,777	30,593
Berrigan	8,416	206,592
Bland	5,959	855,770
Carrathool	2,733	1,893,250
Coolamon	4,342	243,092
Edwards River	8,962	888,112
Federation	12,629	568,525
Greater Hume	10,378	574,928
Griffith (City)	25,986	163,994
Hay	2,999	1,132,601
Junee	6,230	202,999
Leeton	11,645	116,694
Lockhart	3,025	289,585
Murray River	11,586	1,186,492
Murrumbidgee	4,084	687,973
Narrandera	5,920	411,623
Temora	6,071	280,201
Wagga Wagga (City)	63,428	482,587
EM Region Totals	246,170	10,215,611 ha (102,156 sq km)

TABLE 2 – Local Government Area, Population and Area

Note: For details of each local government area demographics refer to the respective Local EM Plans.

## Transport Routes and Facilities

The Riverina Murray is a key transport hub for distribution of goods across south-eastern Australia, with rail freight, roads and airport links within reach of major markets. It is situated to the south-west of the ACT and borders Victoria so has extensive commercial links to these regions, as well as Sydney and Adelaide. Recently, the regional economy has seen the rise of the services industry and tourism.

## Roads

The State Road transport routes within the Region are:

NAME	ROUTE	DIRECTION	LINKING
Hume Freeway	M31	North/South	Major transport route between Sydney and Melbourne
Sturt Highway	A20	East West	Major transport route between Sydney and Adelaide
Newell Highway	A39	North/South	Major transport route between Victoria and Queensland
Olympic Highway	A41	North South	Regional route between Albury, Wagga Wagga and Cowra
Riverina Highway	B58	East West	Regional route between Albury - Deniliquin
Mid Western Highway	B64	East West	Alternate route between Hay to Sydney via West Wyalong
Cobb Highway	B75	North South	Regional route between Moama, Deniliquin, Hay and Nth NSW
Goldfields Way	B85	North South	Regional route between Junee, Temora and West Wyalong
Kidman Way	B87	North South	Regional route between Coleambally, Griffith, Hillston and Northern NSW
Burley Griffin Way	B94	East West	Regional route between Hume Hwy west of Yass to Harden, Temora, Ardlethan and Griffith

TABLE 3 – Major Transport Routes



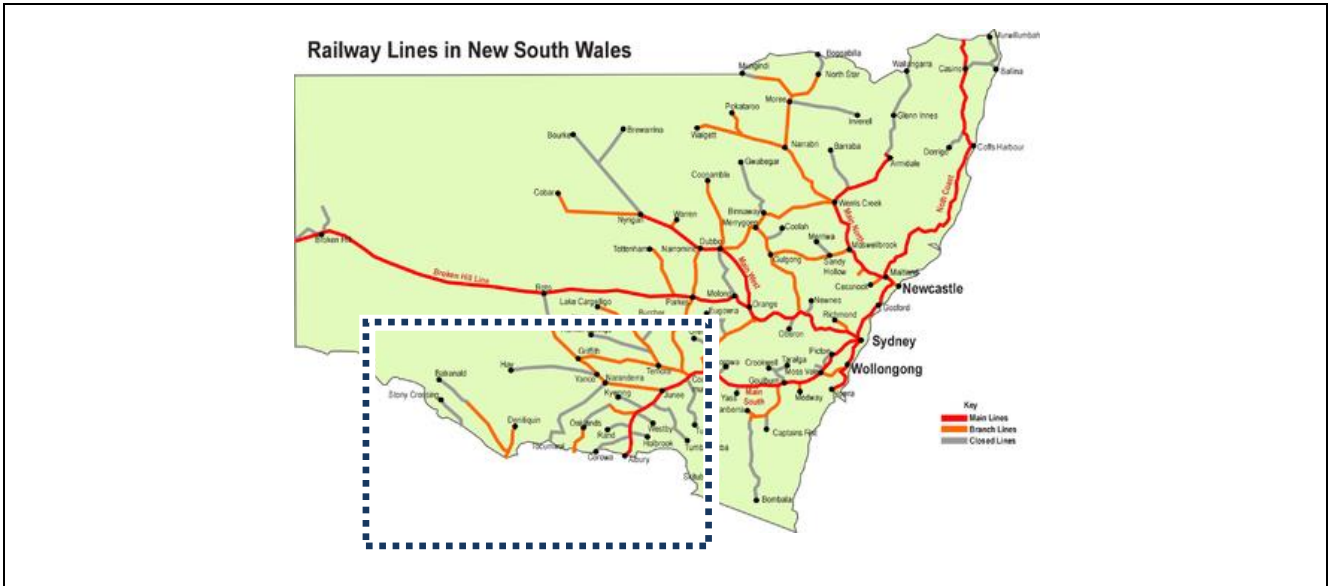
Map 2 – Major Transport Routes - Road

**Note: NSW RMS INCIDENT RESPONSE PLANS**

The Roads and Maritime Services have developed **Incident Response Plans (IRPs)** in anticipation of a full and unplanned closure of major transport routes within the Riverina Murray Region. The IRP defines the diversion route(s) and roles and responsibilities of agencies involved. These IRPs are to be referred to when an unplanned incident closes the roadway and requires a road closure and the diversion of traffic. IRPs have been completed for the Hume FWY/HWY, the Newell Highway, the Olympic Highway and the Murray River Crossings (Road Bridges & Ferries). Note: work progresses on the development of IRPs for the Sturt Highway, the Burley Griffin Way, the Riverina Highway, the Kidman Way and the Cobb Highway.

## Rail

The main North South Rail Corridor linking Sydney and Melbourne runs through the eastern LGAs of the EM Region and is operated by Australian Rail Track Corp. A branch line network managed by John Holland extends across most of northern part of the region; limited branch line coverage exists in the southern part of the region.



Map 3 – Major Transport Routes - Rail

## Aviation

Airports located within the Riverina Murray Region emergency management area are detailed at Table 4. The airports cater for a range of aircraft. Regular Passenger Transport services (RPT) operate from Albury, Griffith, Narrandera and Wagga. The Australian Defence Force (RAAF Base Wagga) operates as a joint user facility at Wagga Wagga Airport.

Major Airports				
Name	Coordinates		Locality	Owner LGA
Wagga Airport/RAAF Base WW	35.09.55 S	147.27.59 E	Eastern Riverina	Wagga City
Albury Airport	36.04.04 S	146.57.29 E	Mid Murray	Albury City
Griffith Airport	34.15.03 S	146.04.02 E	Western Riverina	Griffith City
Narrandera Leeton Airport	34.42.08 S	146.30.44 E	Central Riverina	Narrandera Shire
Other Significant Aerodromes				
Corowa	35.59.41 S	146.21.24 E	Mid Murray	Federation Shire
Deniliquin	35.33.34 S	144.56.47 E	Mid Murray	Deniliquin Shire
Hay	34.31.53 S	144.49.47 E	Western Riverina	Hay Shire
Hillston	33.27.36 S	145.31.24 E	North Western Riverina	Carrathool Shire
Holbrook	35.41.00 S	147.19.00 E	Mid Murray	Greater Hume Sh.
Jerilderie	35.22.12 S	145.43.30 E	Mid Murray	Jerilderie Shire
Temora	34.25.17 S	147.30.42 E	Central Riverina	Temora Shire
West Wyalong	33.56.14 S	147.11.29 E	North Eastern Riverina	Bland Shire

TABLE 4 – Airports



## Economy and Industry

The region's major centres of Wagga Wagga, Albury and Griffith account for just under 60% of the region's output (27%, 21% and 10% respectively). Agriculture is a major economic driver in the region, generating 34% of the gross value of all the crops in NSW, 20% of the gross value of livestock slaughtering and 27% of the gross value of livestock products. The region's strength in primary production is leveraged through downstream supply chains in food processing and distribution. With agribusiness identified as a sector with major growth potential, driven by strong demand from Asia ('the dining boom'), the region is well placed to capitalise on recent trade agreements with Japan and Korea, which includes lower tariffs for beef exports. Quality infrastructure in the region supports the agricultural sector. The Blowering Dam in Tumut and the Burrinjuck Dam in nearby Yass Valley (South East and Tablelands) provide a water storage capacity of over 2.6 million megalitres (more than five times Sydney Harbour). This water storage supplies water to irrigation areas such as the Murrumbidgee and Coleambally (covering 128,000 ha). In response to water scarcity and climate change, the region is adapting through the use of more efficient irrigation technologies.

The Riverina-Murray is well serviced by transport infrastructure, with extensive road and rail links and airports at Wagga Wagga, Albury, Griffith and Narrandera. The airport at nearby Mildura (in Victoria) helps service the west of the region. These facilities provide easy access to major consumer markets and provide a variety of channels for export/ import. The Murray Darling Basin Economic Diversification Fund will continue to promote economic diversity in the region by providing new infrastructure, facilitating increased production capacity, improving access to markets and building regional resilience.

Over 27,000 businesses are based in the Riverina-Murray region. These businesses operate across a diverse range of activities including traditional broad acre agriculture and specialised horticultural crop cultivation, as well as manufacturing, retail trade, education and health care services. In 2013, GRP per capita was \$51,010 (up from \$41,337 in 2006). This is relatively high compared with the Regional NSW average (\$46,957). Primary industries are a significant contributor to the region's economy. In 2011, the Agriculture, Forestry and Fisheries sector provided around 11% of all employment. In 2013, it generated over \$1.4 billion (or 10%) of regional output.

The region's large tracts of fertile land and a sophisticated irrigation system – capable of sustaining a large and diverse range of agricultural activity – helped drive this output. The agriculture industry is of particular significance to rural areas, employing up to 36% of residents (in communities of up to 5,000 people). However, between 2006 and 2013 the sector experienced only modest compound annual growth of 2.5%. The sector was affected by drought, poor commodity prices and pressure from the high Australian dollar. The region has significant timber resources, supporting a wood products industry worth over \$2 billion. Most of the rice grown in Australia is from the region's valleys. It is also one of Australia's largest wine producers and exporters, with over 50% of local product sold overseas. Manufacturing is equally important to the region, with an output of over \$1.3 billion (representing about 10% of employment).

Defence manufacturing, timber product manufacturing and food processing are important sub-sectors. Health Care and Social Assistance, and Education and Training are significant anchors of employment in the region, with increased demand linked to population growth. Combined with Retail Trade, these sectors comprise around a third of total employment and contribute about 18% of regional output (about \$2.5 billion). In 2011, service-related sectors made up about 65% of regional employment (up from 63% in 2006). The region's unemployment rate declined between 2006 and 2011 and was lower than state and regional averages. However, this positive trend may be partly due to a shrinking workforce and ageing population, posing challenges to the ongoing supply of regional labour

Taken from: ECONOMIC PROFILE RIVERINA-MURRAY - Strategy for Regional NSW February 2015

## Annexure B: Riverina Murray REMC ERM Review – March 2020

Hazard	Risk Description	Likelihood/ Consequence & Initial Risk Level	Risk Controls Applied	Residual Risk	Combat /Responsible Agency
01. Widespread Major Riverine/Overland Flooding	There is a risk that widespread overland and riverine flooding across multiple river and creek systems will require activation of regional emergency management arrangements to coordinate multi agency support to the combat agency (NSW SES) and impacted communities, this may include planning and implementing community evacuations	<p><b>Likelihood: Unlikely</b> (10 to &lt; 100 years)</p> <p>Some history of regional EM activation for this hazard.</p> <p><b>Consequence: Major</b> (Greatest impact considered to be to the Social/Built and Economic elements)</p> <p><b>Level of Risk: High</b></p>	<p>Designated Combat Agency BOM Flood Watches and Warnings &amp; SES advices. Local Flood Plans, Flood Action Cards Community Reference Groups, Community engagement Exercising of local plans and subplans. Links on NSW SES website to "What to do during a flood" <a href="https://www.ses.nsw.gov.au/floodsafe/prepare-your-home/during-a-flood/">https://www.ses.nsw.gov.au/floodsafe/prepare-your-home/during-a-flood/</a> Floodplain Risk Management Committees, Established SES Units across the Region' Considered to be a local level managed event. Local EOC established as required. Refer respective Local EMPLAN arrangements and CMG as considered by LEMCs. REOCON to monitor &amp; coordinate any necessary Functional Area support as identified in CMG if not available locally. In consultation with Combat Agency/LEOCONS where multiple EOCs involved consider establishment of REOC/ coordinate resources/ impact assessments LEOCONS/EOCS/LEMCS. Activation of Agency business continuity plans. Consider requirement for Regional Recovery via REMC</p>	<p>Confirmed by REMC Mar 2020</p> <p>Moderate</p>	NSW SES
02. Section 44 Major Incident/Campaign Bushfire  (May be linked to Infrastructure Failure & Heatwave)	There is a risk that very large or multiple Section 44 level fires may overwhelm local EM capacity and may require activation of regional level emergency management arrangements to coordinate multi agency support to the combat agency (NSW RFS) and impacted communities, this may also include planning and implementing community evacuations.	<p><b>Likely</b> (1 to &lt;10 years)</p> <p>Some history of regional EM activation for this hazard</p> <p><b>Major</b> (Impact considered to be across the spread of People, Social/Built, Economic and Environmental elements)</p> <p><b>Risk Level: Extreme</b></p>	<p>Designated Combat Agency and identified firefighting coordination structure for emergency events. Firefighting efforts generally managed at Zone/Area/District levels with Regional Support Coordination moving to the RFS State Operations Centre during periods of significant operational activity. (Section 44 Declarations) Section 52 Operations Plans &amp; Section 52 Bush Fire Risk Management Plans as approved by Bushfire Coordinating Committee. RFS Concept of operations for Catastrophic Fire Weather. Fire Permits. Total Fire Bans, Neighborhood safer places Prevention /Hazard Reduction activities by land managers &amp; RFS as described in "Planning for Bush Fire Protection 2006" Considered that the coordination of non-fire fighting support would normally be able to be managed locally with Functional Area support. Local EMPLAN - CMG as determined by LEMC REOCON to monitor impact of significant fires over multiple LGAS on forecast Catastrophic fire weather days. Where multiple LEOCs involved in consultation with Combat Agency/LEOCONS consider establishment of REOC/ coordinate resources/ impact assessments LEOCONS/EOCS/LEMCS Consider requirement for Regional Recovery via REMC.</p>	<p>Confirmed by REMC March 2020</p> <p>High</p>	NSW RFS

Hazard	Risk Description	Likelihood/ Consequence & Initial Risk Level	Risk Controls Applied	Residual Risk	Combat /Responsible Agency
<p>03.</p> <p>Heatwave causing widespread disruption at Regional level</p> <p>(May be linked to Infrastructure Failure &amp; Bushfire)</p>	<p>There is risk that a Heatwave may cause significant impact to the broader region, there is also a risk that this hazard may impact the region in conjunction with power infrastructure failure magnifying the impact particularly on the vulnerable segments of the regional community. May also be an impact during periods of significant bushfire activity. Climate change impacts may be increasing risk factors regarding this hazard.</p>	<p><b>Likelihood: Likely</b> (1 to &lt; 10 years)</p> <p>No history of regional EM activation for this hazard.</p> <p><b>Consequence: Major</b> (Impact considered to be across the spread of People, Social/Built, Economic and Environmental elements)</p> <p><b>Risk Level: Extreme</b></p>	<p>BOM heatwave Warnings State Heatwave Sub Plan NSW Health Warnings Health advice regarding staying safe – drink water, airconditioned environments, monitoring the elderly. Monitoring Emergency Department presentations Considered to be a State driven operation. As directed by SEOCON, REOCON activate Region and Local EMPLAN arrangements, activate Region EOC as required and relevant. LEOCONS/Local EOCS, determine &amp; report impact, coordinate support as required as part of State Response and Recovery. Activation of agency business continuity plans Refer utilities failure and bushfire risk controls as relevant.</p>	<p>Confirmed by REMC March 2020</p> <p>High</p>	<p>SEOCON REOCON LEOCON</p>
<p>04.</p> <p>Regional/Prolonged Infrastructure Failure</p> <p>(May be linked to Heatwave &amp; Bushfire)</p>	<p>There is risk that a large-scale widespread infrastructure failure may cause significant impact to the broader region, there is also a risk that this hazard may impact the region in conjunction with Heatwave magnifying the impact particularly on the vulnerable segments of the regional community. Climate change impacts may be increasing risk factors regarding this hazard.</p>	<p><b>Likelihood: Likely</b> (1 to &lt; 10 years)</p> <p>No history of regional EM activation for this hazard.</p> <p><b>Consequences: Major</b> (Impact considered to be across the spread of People, Social/Built, Economic and Environmental elements)</p> <p><b>Risk Level: Extreme</b></p>	<p>Utility provider responsible for restoration. Considered to be a locally managed event regards community impacts. Refer local CMG as considered appropriate by LEMCs. Local EOC/s established as required REOCON to monitor coordinate functional area support and key information available from EUSFAC. Agency business continuity plans. Supply Generator/ Regional provider responsible for restoration. State level managed operation in conjunction with relevant Commonwealth Agencies refer NSW State Energy &amp; Utility Services Functional Area Supporting Plan (EUSPLAN). REOCON respond to SEOCON directions &amp; EUSFAC coordinating advice and activate Region EOC and LEOCONS Local EOCS as required, coordinate Functional Area support and to and from the local level and to State, coordinate and report Region impact as part of State Response and Recovery. Maintenance of communication and coordination links with Trans Grid/ Essential Energy or APA Group operations management.</p>	<p>Confirmed by REMC March 2020</p> <p>High</p>	<p>SEOCON REOCON LEOCON</p>

Hazard	Risk Description	Likelihood/ Consequence & Initial Risk Level	Risk Controls Applied	Residual Risk	Combat /Responsible Agency
<p>05. Human Communicable Disease</p>	<p>There is a risk that human communicable disease could cause global impacts that would flow down to State, regional and local levels causing significant numbers of fatalities. An event of this level of magnitude will require significant State support and would almost certainly stress or overwhelm local and regional resources.</p>	<p><b>Likelihood: Unlikely</b> (10 to &lt; 100 years) No history of regional EM activation for this hazard.</p> <p><b>Consequence: Catastrophic</b> (Impact considered to be across the spread of People, and Economic elements)</p> <p><b>Risk Level: Extreme</b></p>	<p>Designated Combat Agency. State level managed event. State Human Influenza Pandemic Sub Plan. Local, State and Federal plans have been developed Promotion of Influenza vaccination regimes as relevant. Health promotion of hand hygiene, and respiratory etiquette Relevant Local CMGs. REOCON may activate Region EOC and LEOCONS/ Local EOCS, respond to SEOCON or Combat Agency directions, coordinate support as required as part of State Response and Recovery, consideration of Teleconferencing/virtual EOC for EOC activations, this may also be a consideration for the provision of EM support for emergency operations related to any/all other hazards during the communicable disease outbreak. Activation of agency business continuity plans: Consideration of REMC/LEMC meetings to be conducted as video/teleconferences.</p>	<p>Confirmed by REMC March 2020</p> <p>High</p>	<p>NSW Health</p>
<p>06. Biosecurity Animal/Plant Communicable Disease</p>	<p>There is a risk that an agricultural animal or plant disease will cause widespread disruption and loss to the rural sector within the region with possible flow on effects to the broader community.</p>	<p><b>Likelihood: Unlikely</b> (10 to &lt; 100 years) No history of regional EM activation for this hazard.</p> <p><b>Consequence: Major</b> (Impact considered to be across the spread of People, Social/Built, Economic and Environmental elements)</p> <p><b>Risk Level: High</b></p>	<p>Designated Combat Agency.</p> <p>Considered to be a state level managed event. Activation of State Biosecurity (Animal and Plant) Emergency sub plan and related arrangements in Region CMG and relevant Local CMGs.</p> <p>REOCON to activate Region EOC and LEOCONS Local EOCS, coordinate support as required as part of State Response and Recovery.</p> <p>Combat Agency coordinated surveillance, advice on-farm practices, reporting, eradication, public education, containment, restrictions on movement, quarantine, treatment, vaccination, disposal.</p>	<p>Confirmed by REMC March 2020</p> <p>Moderate</p>	<p>NSW DPI</p>

Hazard	Risk Description	Likelihood/ Consequence & Initial Risk Level	Risk Controls Applied	Residual Risk	Combat /Responsible Agency
07. Dam Failure of a major storage dams within or located above the EM Region	There is a risk that the failure of one or more of the major storage dams within or upstream of the Riverina Murray EM region will cause major devastation to communities located on the impacted waterway/s. An event of this level of magnitude will require significant State and cross border support and would almost certainly overwhelm local and regional resources.	<p><b>Likelihood: Extremely Rare</b> (10,000 years or more) e.g. Hume Dam Failure considered to be a once in 36,000-year risk.</p> <p><b>Consequences: Catastrophic</b> (Impact considered to be across the spread of People, Social/Built, Economic and Environmental elements)</p> <p><b>Risk Level: Extreme</b></p>	<p>Considered to be a State and Regional level managed event. Activation of respective Dam Safety Emergency Plans by dam owners &amp; via local SES Flood Plans. Refer respective Local EMPLAN arrangements and CMGs as considered relevant by LEMCs. SEOCN to monitor &amp; coordinate any necessary Functional Area support as identified in CMG if not available Regionally via REOCON. State Major Structural Collapse Sub Plan. Refer to Utilities failure regards potential loss of Water Supply</p>	<p>Confirmed by REMC March 2020</p> <p>High</p>	<p>NSW SES Dam Owner Operator</p>
08. Large scale Transport Accident Air, Road or Rail	There is a risk that a transport accident involving high volume passenger travel may include significant fatality and serious injury numbers and may overwhelm local resources requiring regional level operational emergency management coordination. Note: there is no nominated combat agency for this hazard so operation control will be the responsibility of the EOCON. Worst case scenario events will see significant input from state and federal agencies.	<p><b>Likelihood: Unlikely</b> (10 to &lt; 100 years) No history of regional EM activation for this hazard.</p> <p><b>Consequence: Catastrophic</b> (Impact considered to be across the spread of People, and Economic elements)</p> <p><b>Risk Level: Extreme</b></p>	<p>State Aviation Emergency Sub Plan and or Airport Emergency Procedures/Plans The crash of a large jet aircraft is considered of considerable political interest at the State level and Commonwealth level, REOCON to consider Region EOC or closely oversight operations and coordinate functional area support and specialist resources as required with LEOCONS managing forward activities from EOC or site control as required. Airport Emergency Plan/procedures as relevant and Local CMG as considered appropriate by LEMCs. State Hazardous Materials/Chemical, Biological, Radiological and Nuclear Sub Plan. Any very large scale/catastrophic transport accident will include the high probability of ATSB investigative processes that may prolong response &amp; recovery operations. Activation of ARTC/Rail Network owner emergency plans via Police VKG Oak Flats to Train Transit Manager ARTC. REOCON to monitor &amp; coordinate any necessary functional Area support as identified in CMG if not available locally.</p>	<p>Confirmed By REMC March 2020</p> <p>High</p>	<p>SEOCON REOCON LEOCON</p>

## Part 3 – Inventory of Local EM Plans

### Annexure C – Riverina Murray Local Emergency Plans

Local Emergency Management Plan	Approved Locally	Regional Endorsed
Albury LEMC Area	October 2017	November 2017
Berrigan LEMC Area	September 2017	November 2017
Bland LEMC Area	November 2017	November 2017
Carrathool LEMC Area	October 2015	November 2017
Coolamon & Junee Area	November 2017	November 2017
Edward River LEMC Area	November 2017	November 2017
Federation LEMC Area	Still in work	Not Yet Available
Greater Hume LEMC Area	November 2017	November 2017
Griffith LEMC Area	October 2015	November 2017
Hay LEMC Area	February 2017	November 2017
Leeton LENC Area	November 2017	November 2017
Lockhart LEMC Area	June 2017	November 2017
Murray River LEMC Area	October 2017	November 2017
Murrumbidgee LEMC Area	February 2017	November 2017
Narrandera LEMC Area	February 2016	November 2017
Temora LEMC Area	August 2017	November 2017
Wagga Wagga LEMC Area	August 2017	November 2017

Note: Balranald Shire ceased being part of the Riverina Murray Emergency Region in December 2018, Balranald Shire has been gazetted as part of the Far West Emergency Management Region.

## Part 4 – Riverina Murray Regional Sub & Supporting Plans

Sub Plans and Supporting Plans Responsibility for the preparation and maintenance of appropriate sub and supporting plans rests with the relevant Combat Agency Controller or the relevant Functional Area Coordinator. They form a critical element that outlines the arrangements that are in place to deliver support or control at a Regional and Local level as emergencies arise. There are some specific REMC sub and supporting plans that have also been developed to assist with delivering the outcomes of this EMPLAN. The sub/supporting plans are developed in consultation with the Riverina Murray REMC and the community. The plans listed in Annexure D, are supplementary to this EMPLAN. The sub/supporting plans have been endorsed by the REMC and are determined as compliant and complimentary to the arrangements listed in this EMPLAN. These plans are retained by the REMO on behalf of the REMC and public release versions are available on the NSW Emergency Website.

Matrices Description

- Combat Agency/Functional Area – The entity that is responsible for sub plan or supporting plan.
- Sub-Supporting Plan – The name/title of the plan.
- Triggers – Events or occurrences will result in the activation of the plan.
- Area(s) – Geographic area that the supporting plan covers.
- Access – who from the agency or area will be the contact for activating and maintaining the plan.

### Annexure D – Riverina Murray EM Region Sub & Supporting Plans

Agency	Name /Trigger	Coverage	Access
NSW Health	MLHD Pandemic Sub Plan for Human Pandemic	Covers the entire EM Region and other areas covered by the Murrumbidgee Local Health District	Via Region HSFAC
NSW RFS	Concept of Operations for Catastrophic Fire Danger Conditions	NSW state wide adapted for EM Region use.	Active automatically for BoM specified conditions
NSW Public Works	Riverina Murray Engineering Services Supporting Plan	Covers the entire EM Region	Via Region ENGFAC
NSW Health	MLHD Health Services Supporting Plan	Covers the entire EM Region and other areas covered by the Murrumbidgee Local Health District	Via Region HSFAC