

Mid West (Grampians) Region

EMERGENCY RESPONSE PLAN

Earthquake Sub-Plan





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Authorised by the Victoria State Emergency Service
168 Sturt Street, Southbank

An electronic version of the plan can be obtained at: www.ses.vic.gov.au

Version Control

Title	Version Date	Nature of amendment
Clare Mintern	V0.1 July 2019	Conversion to new template
Clare Mintern	V1.0 September 2019	Incorporated input/feedback



Grampians Mid West Region Emergency Response Plan – Earthquake Sub-plan Certification

The Grampians Mid West Region Emergency Response Plan – Earthquake Sub-plan deals with response to earthquake incidents within the Grampians Mid West area of responsibility.

The following plan is intended to provide the framework for the Grampians Mid West Region to effectively and efficiently respond to future emergencies caused by earthquakes and will remain current until rescinded by authority of the Victoria State Emergency Service Chief Officer Operations.

_____ Date: _____

Tim Wiebusch

Chief Officer Operations

This plan is produced by Victoria State Emergency Service and has been adapted from the State Emergency Response Plan – Earthquake Sub-plan. All information contained in this plan was current at time of publication.

Victoria State Emergency Service would like to acknowledge the significant contribution of key stakeholders to ensure the content contained within this plan is of a high quality to support response activities.

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State Emergency Management Priorities

The State Emergency Management Priorities are:

- Protection and preservation of life is paramount. This includes:
 - Safety of emergency response personnel
 - Safety of community members including vulnerable community members and visitors/tourists
- Issuing of community information and community warnings detailing incident information that is timely, relevant and tailored to assist community members make informed decisions about their safety
- Protection of critical infrastructure and community assets that support community resilience
- Protection of residential property as a place of primary residence
- Protection of assets supporting individual livelihoods and economic production that supports individual and community financial sustainability
- Protection of environmental and conservation assets that considers the cultural, biodiversity, and social values of the environment.

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1. Introduction

1.1 Purpose

The purpose of this plan is to provide strategic guidance for the effective emergency management of an earthquake in the Grampians Mid West Region.

1.2 Objective

The objective of the Grampians Mid West Region Emergency Response Plan – Earthquake Sub-plan is to outline the arrangements for ensuring an integrated and coordinated approach to the management of earthquake events in the Grampians Mid West Region, in order to reduce the impact and consequences of these events on the community, infrastructure and services.

1.3 Scope

This Grampians Mid West Region Emergency Response Plan – Earthquake Sub-plan includes:

- Description of potential risks and consequences of earthquakes to the social, built, economic and natural environments
- Region specific emergency management arrangements for the management of earthquakes
- Links to sources of information where the reader can obtain further detail.

1.4 Authorising Environment

The Emergency Management Act (1986 and 2013) is the empowering legislation for the management of emergencies in Victoria.

The Emergency Management Manual Victoria (EMMV) contains policy and planning documents for emergency management in Victoria and provides details about the roles different organisations play in the emergency management arrangements.

The State Emergency Response Plan (Part 3, EMMV) identifies Victoria's organisational arrangements for managing the response to emergencies.

The Grampians Mid West Region Emergency Response Plan will detail specific arrangements for the management of emergencies within the Grampians Mid West Region. This plan has been developed as a subordinate plan of the Grampians Mid West Region Emergency Response Plan and the State Emergency Response Plan – Earthquake Sub-plan. This plan has been shared with the Regional Emergency Management Planning Committee for comment and approved by the VICSES Chief Officer Operations.

Other relevant legislation includes:

- Victoria State Emergency Service Act 2005
- Essential Services Act 1958
- Planning and Environment Act 1989
- Local Government Act 1989

1.5 Activation of the Plan

The arrangements in this plan apply on a continuing basis and do not require activation.

1.6 Audience

The audience for this plan comprises the Victorian Government and agencies within the emergency management sector, including business and community groups with a significant role in the management of the emergency.

Although the wider community is not the primary audience, community members may find the contents of this plan informative.

1.7 Linkages

This plan is a sub-plan of the State Emergency Response Plan – Earthquake Sub-plan and the Grampians Mid West Region Emergency Response Plan. It reflects legislation, the arrangements in the State Emergency Response Plan, the strategic direction for emergency management in Victoria and the accepted State practice for managing emergencies.

Arrangements in this plan have not been repeated from afore mentioned plans, unless necessary to ensure context and readability. The State Emergency Response Plan – Earthquake Sub-plan can be accessed at www.ses.vic.gov.au

Arrangements for the management of secondary consequences are contained in the following:

- For health response – State Health Emergency Response Plan (SHERP)
- For rescue – the Victorian Urban Search and Rescue Response Arrangement (USAR), refer to Part 8, Appendix 3 of the Emergency Management Manual Victoria.
- Flood response resulting from dam failure (DELWP control agency) refer to the State Emergency Response Plan – Flood Sub-plan, and the Grampians Mid West Emergency Response Plan Flood Sub-plan

1.8 Exercising and Evaluation

This plan will be exercised within one year from the date of approval and once every three years thereafter as part of a phased cycle. The exercise will be evaluated and, where improvements to the emergency management arrangements in this plan are required, the plan will be amended and a revised version issued. Exercises will be conducted in accordance with the State Exercising Framework.

Any operational activity in the Grampians Mid West Region requiring the management of an earthquake event will be regarded as exercising of the plan. The event is to be evaluated and reviewed, as outlined above.

1.9 Review

This plan was current at the time of publication and remains in effect until modified, superseded or withdrawn.

This plan will be reviewed and updated every three years. Consideration will be given to an earlier revision if the plan has been applied in a major emergency or exercise or following a substantial change to the relevant legislation or arrangements.

2. The Earthquake Risk within the Grampians Mid West Region

2.1 Region Description

The Mid West (Grampians) Region of Victoria covers 48,620 square kilometres, and is the second largest region in the state, encompassing many communities that are culturally rich and diverse.

Geographically this area is diverse and includes:

- A population of more than 200,000 people from approximately 50 nationalities.
- Approximately 120,000 private dwellings.
- The Grampians National Park, attracting more than 1 million tourists per year.
- Most of the state's grain growing production.
- Borders South Australia.

The Region contains eleven local government areas, including West Wimmera, Hindmarsh, Yarriambiack, Horsham, Northern Grampians, Pyrenees, Ararat, Hepburn, Ballarat, Moorabool and Golden Plains. Refer to map below of the Grampians Region.

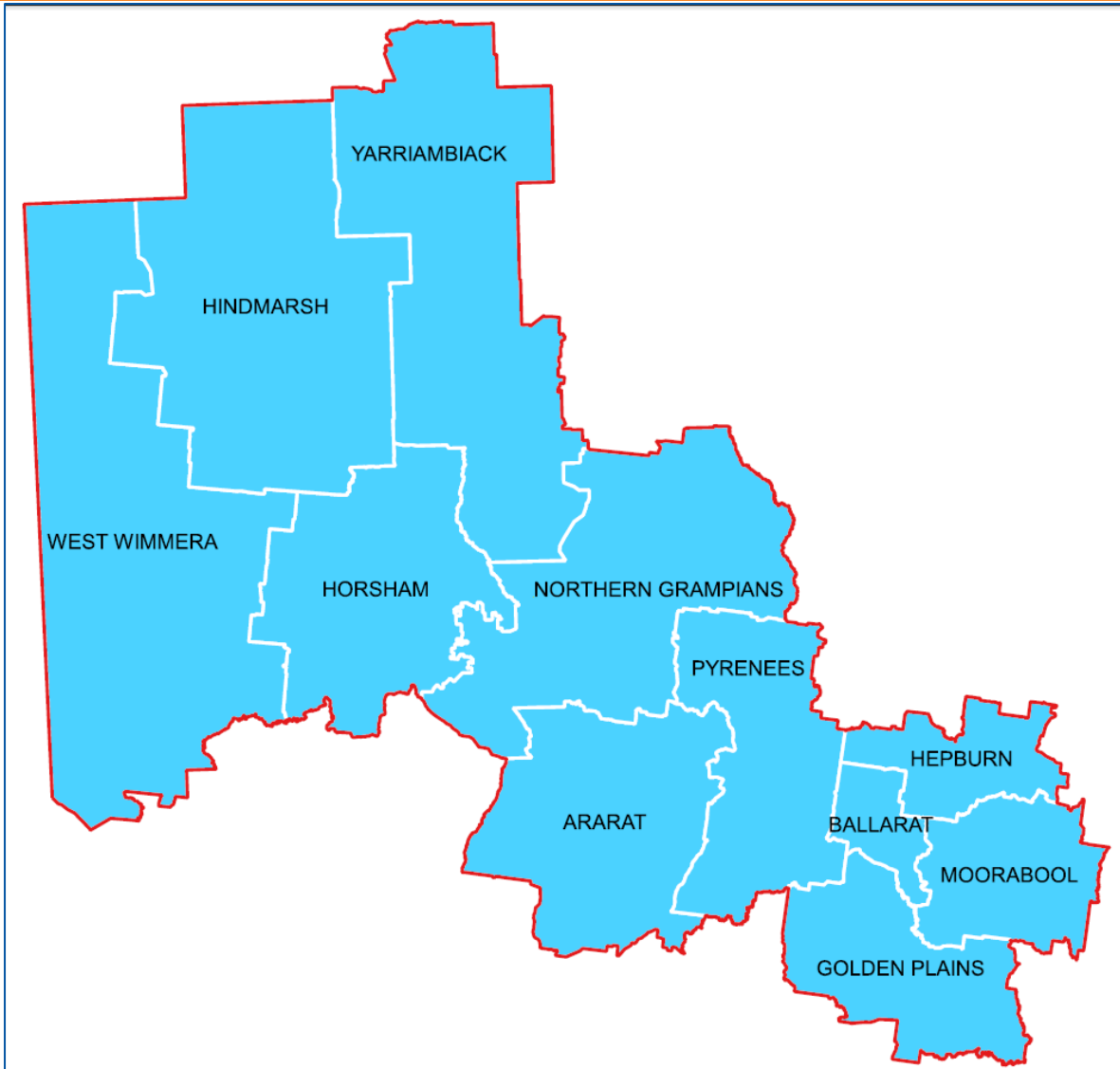


Figure 1. The Grampians Region local government areas.

2.2 The Earthquake Hazard

An earthquake is the shaking and vibration at the surface of the Earth caused by energy being released along a fault plane, at the edge of a tectonic plate or by volcanic activity. Earthquakes, unlike many other natural hazards, have the potential to cause catastrophic losses. Although Australia is popularly considered to have a low earthquake risk, a major earthquake could still occur under a heavily developed and populated area in Victoria. The impact of such an earthquake could have widespread consequences throughout the relevant township and surrounds. Whilst there is a low probability that this event will occur in the foreseeable future, it is important to recognise the potential for such catastrophic impacts.

Victoria is located away from geologically-active tectonic plate boundaries, which lay hundreds of kilometres seaward of the eastern coastline. However, Victoria regularly experiences small earthquakes that are felt and reported. Stresses and strains develop in the Indo-Australian plate (of which Australia is a part) as it drifts northward; as sediment loads continually transfer from upper catchment areas to lower basins and coastal areas due to erosion; and as fluctuating sea levels load and unload the continental shelf.

The relative size of an earthquake is referred to as its **magnitude**, with scale measured as local magnitude (ML) and commonly referred to as “Richter magnitude”. For every unit increase in magnitude, there is roughly a thirty-fold increase in the energy released. For instance, a magnitude 2.0 earthquake (ML 2.0) releases about 30 times more energy than a magnitude 1.0 earthquake (ML 1.0), while a magnitude 3.0 earthquake (ML 3.0) releases 900 times (30x30) more energy than a magnitude 1.0 (ML 1.0).

In Australia, seismologists (people who study earthquakes) prefer the use of the **moment magnitude scale**, which calculates the magnitude of an earthquake based on physical properties such as the area of movement (slip) along the fault plane.

A ML 6.0 earthquake can be anticipated for all of Australia, on average, every five years and a ML 5.0 earthquake once per year. The probable maximum earthquake magnitude for Australia is approximately ML 7.5.

Australia is not immune from damaging earthquakes causing significant human and economic loss, as shown in the list below:

- In July 1903, a ML 5.3 earthquake caused extensive minor damage in Warrnambool, Victoria.
- In 1932, a ML 4.5 event caused considerable damage on the Mornington Peninsula.
- In 1996 a ML 5.2 earthquake was centred near Mt Baw Baw, the shock was felt up to 100 km away with minor damage reported in Melbourne.
- In August 2000, a ML 5.0 earthquake in Boolarra caused minor damage and was felt throughout Gippsland.
- In 2009, Korumburra experienced two earthquakes within two weeks of each other on the 6 March and then the 18 March. Both earthquakes were recorded at ML 4.6.
- In June 2012, a ML 5.3 earthquake occurred in the La Trobe Valley, Gippsland. The earthquake caused minor damage. The earthquake epicentre was 16 kilometres southwest of Moe and was the strongest magnitude earthquake recorded since the 1982 Wonnangatta Valley earthquake and was felt across the state.

2.3 Earthquake History

The Grampians Region has only experienced a few small earthquakes in recent decades (refer to Figure 2 and the table below), with the largest, a magnitude 4.9 earthquake recorded 20km north of Nhill in 1987 and felt 80km away in Bordertown, South Australia. Ten aftershocks were recorded, all within five days of the mainshock and resulted in minimal damage to properties.

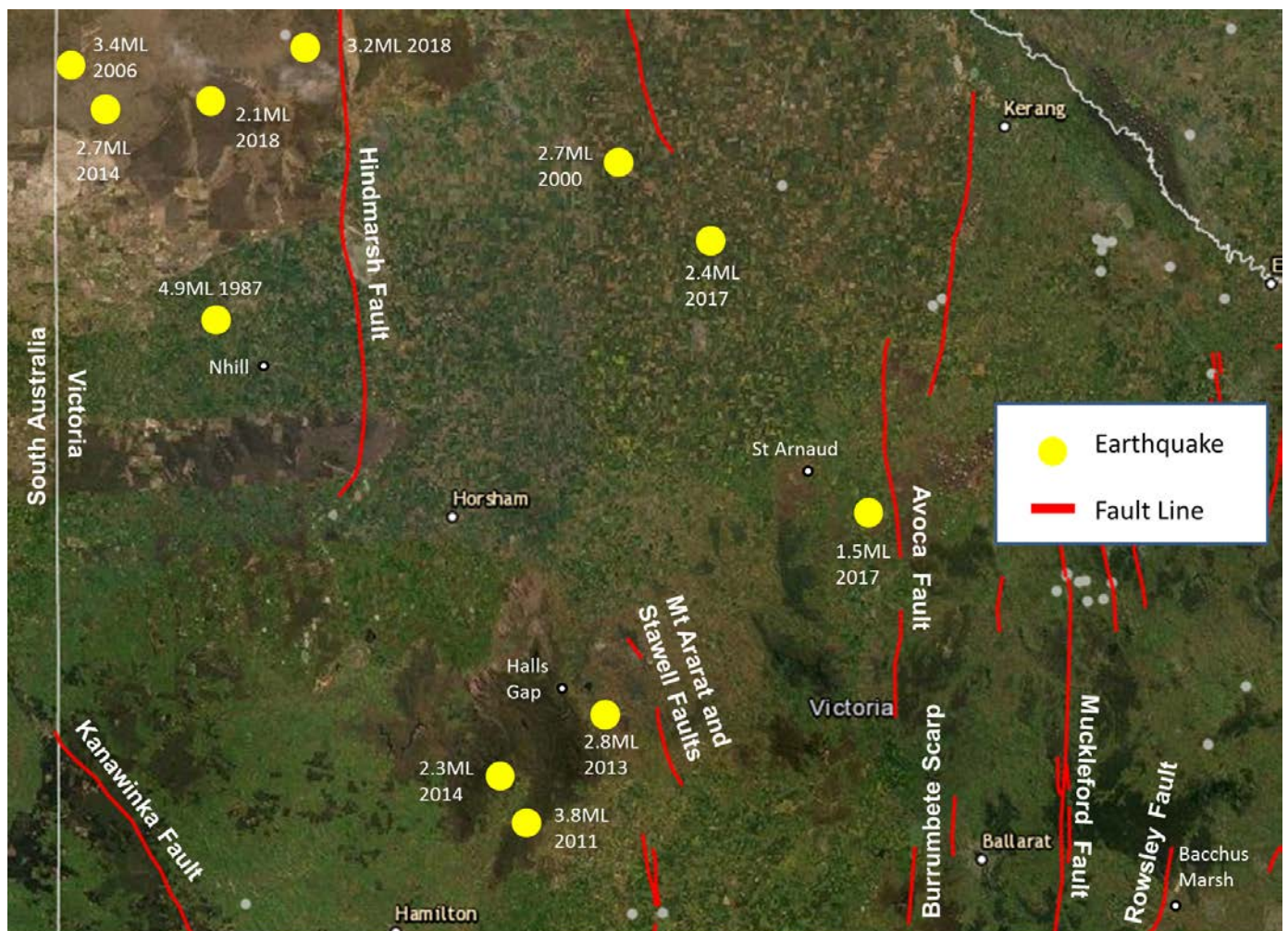


Figure 2. The Grampians Region fault lines and recent earthquakes (source: Geoscience Australia).

The table below provides information about historical occurrence of earthquake within the Grampians Mid West Region.

Year	Locality impacted	Description
22 December 1987	20 km north of Nhill	4.9 ML earthquake was felt 80km away in Bordertown, South Australia. Only ten aftershocks were recorded, all occurred within five days of the mainshock. Minimal damage to properties was reported.
01 June 2011	35 km south of Halls Gap	3.8 ML earthquake
1 October 2006	100 km north west of Nhill, in the Big Desert	3.4 ML earthquake
6 January 2018	100 km north east of Nhill, in the Big Desert	3.2 ML earthquake
30 March 2013	5 km east of Halls Gap	2.8 ML earthquake
27 September 2000	20 km north east of Beulah	2.7 ML earthquake
13 March 2014	90 km north west of Nhill, in the Big Desert	2.7 ML earthquake
23 December 2017	60 km east of Brim	2.4 ML earthquake
16 September 2014	35 km south west of Halls Gap	2.3 ML earthquake
14 January 2018	Big Desert Wilderness Park, 90 km north of Nhill	2.1 ML earthquake
23 June 2017	30 km south east of St Arnaud	1.5 ML earthquake

2.4 Major Dams with Credible Earthquake Risk

A list and description of major dams located within the Region that have a known credible risk to earthquakes is provided in the table below.

Dam Name	Location	Capacity (Megalitres)	Dam Safety Emergency Plan Available
The Gong (City of Ballarat)	Buninyong	1,902	Yes
Lake Burrumbeet	Burrumbeet	38,000	Yes
Merrimu Reservoir (Southern Rural Water)	North of Bacchus Marsh	32,516	Yes
Pykes Creek (Southern Rural Water)	East of Ballan	22,119	Yes
Bungal (Central Highlands Water)	Lal Lal	59,549	Yes
White Swan Reservoir (Central Highlands Water)	White Swan Road	14,107	Yes
Lake Bellfield (GWMWater)	South of Halls Gap	78,560	Yes
Wartook (GWMWater)	East of Zumsteins, Grampians National Park	29,300	Yes
Lake Lonsdale (GWMWater)	West of Stawell	53,300	Yes
Toolondo Reservoir (GWMWater)	South of Horsham	92,430	Yes
Mt Cole (GWMWater)	North/West of Beaufort	810	Yes
Lake Fyans (GWMWater)	Lake Fyans	18,460	Yes
Taylor's Lake (GWMWater)	East of Horsham on the Western Highway	35,770	Yes

2.5 Regional Resources

Regional Resources remain under the command of the Regional Agency Commander until they arrive at the incident, and are managed in line with internal readiness arrangements.

Key regional resources that are used for earthquake response include:

- Attachment 2 – Regional Resource List
- Attachment 3 – Regional Control Centre Boundary and VICSES Unit Map
- Attachment 4 – VICSES General Response Boundaries Map
- Attachment 5 – Divisional Command Location Map

Additional expert multi-agency resources may be accessed during operations through the Australasian Inter-Service Incident Management System (AIIMS) structure. These resources are requested via the State Resource Request System.

A map of VICSES Unit boundaries General Response Boundaries are provided in Attachment 3 – VICSES Regional Control Centre Footprint and VICSES Unit Map and Attachment 4 – VICSES General Response Boundaries Map or accessible via Emergency Management – Common Operating Picture (EM-COP) for registered users.

3. Consequences

3.1 Possible Earthquake Consequences

The effects of an earthquake depend on many factors, such as the magnitude of the earthquake, its depth and the distance from the epicentre. The below summarises the possible types of damage and disruption that may result in a major earthquake. Detailed information about the effect of earthquakes is contained in the State Emergency Response Plan – Earthquake Sub-plan.

Built infrastructure damage (e.g. buildings) – Information on building critical infrastructure resilience can be found in the Victorian Critical Infrastructure Resilience Strategy available at www.emv.vic.gov.au/our-work/critical-infrastructure-resilience

Casualties – Casualties and injuries are likely to result from large damaging earthquakes. People may also become trapped requiring rescue. Secondary public health impacts may occur if essential services are not readily available after the impact of an earthquake.

Displacement and isolation – As a consequence of damage, people can become displaced requiring temporary accommodation. Areas can become isolated requiring resupply of essential items.

Transport Access – Roads may be blocked as a consequence of debris from fallen buildings.

Trams and trains – Some rail and light rail bridges may be extensively damaged.

Electricity – The complete failure of large power components, such as transformers or substations, may occur in the proximity of the epicentre.

Water supply – Major water facilities such as pumping stations and reservoirs may experience damage. Damage may occur across the network. In case of liquefaction, breakage of pipes is likely to be widespread and concerns over contamination may render the water not suitable to drinking.

Waste water – Extensive damage may occur to waste water systems can occur even without the occurrence of liquefaction.

Communications – Communications infrastructure may suffer damage and be overloaded. Loss of communication can be due to a variety of reasons such as the crashing of telecommunication services, website crashes, and loss of power meaning mobile phones cannot be charged or cordless home phones will not work.

Chemical and high risk industrial plants – It is expected that high risk facilities will be designed for increased resilience to earthquake damage, thus the probability of an accident induced by an earthquake is classified as low.

Hazardous material release – Hazardous materials are not exclusive to heavy industry and may be released as a consequence of building collapse. These may include carcinogenic or corrosive gases, poisonous liquids that contaminate the water table. Asbestos may be exposed as a result of earthquake building damage.

Fire following earthquake – Fire following earthquake will likely be localised to high risk sites such as industry.

Long series of aftershocks – A series of aftershocks are possible after an earthquake event and may result in increased damage levels as well as seriously disrupting recovery activities.

Other impacts – Consideration should also be given to: Land or mud slide, Floods from dam and levee failure and subsidence.

4. Community Resilience

4.1 Shared and Individual Responsibility for Action

The National Strategy for Disaster Resilience, developed by the Council of Australian Governments (COAG), provides high-level guidance on disaster management to agencies with a role in emergency management.

Foremost in the Strategy is the principle of all of society taking responsibility for preparing for disasters. Examples in the context of earthquake include:

- Individuals being aware of their earthquake risk, and following advice from emergency services when responding to warnings
- Local governments and communities including earthquake risk within their Community Emergency Risk Assessment (CERA) activities, including consideration within emergency management planning and land use planning
- Industry and businesses planning for the risk of disruption, and ensuring arrangements are in place to maintain critical services and assist communities where possible.

Government agencies undertaking:

- Risk assessments to gain an appreciation of earthquake risk
- Engaging with the community regarding earthquake risk
- Working with communities to plan the management of earthquake risk
- Providing emergency information and earthquake warnings
- Ensuring an effective, well-coordinated response to an earthquake event
- Helping communities to recover and learn following an earthquake and build their resilience to future events.

The Victoria State Emergency Service has developed a Community Resilience Strategy and delivers programs to at-risk communities to provide information on what to do before, during and after earthquakes. Information can be found at www.ses.vic.gov.au/get-ready

4.2 Earthquake Notifications

Earthquake notifications are provided by Geoscience Australia, who analyse and report on earthquakes within Australia and internationally. This is done on a 24/7 basis by Duty Seismologists for the purposes of earthquake warnings and to alert governments, emergency services and the general public of earthquakes in Australia and overseas.

There is no accepted method to predict earthquakes; however, some regions are more prone to earthquakes than others due to their location in proximity to earthquake faults. When an earthquake occurs, Geoscience Australia and the Victoria State Emergency Service will work together to notify the community.

Geoscience Australia monitors seismic data from the Australian National Seismic Network and stations worldwide. This is done in near real-time, 24 hours a day. Seismic data is also freely provided by overseas Governments who have national seismic networks. Geoscience Australia uses data provided by the Governments of New Zealand, Indonesia, Malaysia, Singapore and China. Data from global seismic networks are also provided by USA, Japan, Germany and France.

The seismic data is collected and analysed automatically and then immediately reviewed by Geoscience Australia's Duty Seismologist. For earthquakes that have the potential to generate a tsunami, preliminary earthquake details are computed within 15 minutes. All other earthquakes are generally computed within 30 minutes.

Earthquakes that can be located in Australia are catalogued and published on the Geoscience Australia website. The analysis includes the origin time and date of the earthquake, its location (latitude, longitude and depth) and its magnitude. Earthquakes outside Australia, but within our region, are published only for earthquakes with a magnitude of 5 or greater. Earthquakes occurring anywhere internationally with a magnitude of 6 or greater are also catalogued and published on the Geoscience Australia website at www.ga.gov.au/earthquakes/

4.3 Building Codes

Australia's building codes set out data and procedures for determining earthquake loads on structures and their components, whilst detailing minimum requirements for structures. Local Government is responsible for the application of building code provisions.

4.4 Municipal Earthquake Emergency Planning

Where earthquake is identified through the Community Emergency Risk Assessment (CERA) process as a priority risk to a community, the Victoria State Emergency Service will provide advice and support to the Municipal Emergency Management Planning Committee (MEMPC) to ensure the Municipal Emergency Management Plan (MEMP) contains, at a minimum, arrangements for the response to an earthquake event based on all-hazards and all-agency response.

4.5 Community Engagement

Community engagement programs to build community resilience for all hazards are conducted in accordance with the VICSES Community Resilience Strategy, as outlined in section 4.1 of this plan on Shared and Individual Responsibility for Action.

Programs to build resilience in Grampians Mid West Region include supporting local engagement activities and initiatives, attending local community events, school fetes, local and regional shows, as well as Unit identified activities.

4.6 Household and Business Plans

The Emergency Management Commissioner advises that every household and business should have a written emergency plan. Information on the development of these plans can be found at www.ses.vic.gov.au

The Grampians Mid West Region also supports local Caravan owners prepare for emergencies by supporting use of the online planning tool which can be found at www.ses.vic.gov.au/get-ready/caravan-park-information

4.7 Community Safety Advice

Victoria State Emergency Service provides advice to community in the form of key safety messages for earthquake including advice for safe evacuation. A full list of community safety advice messages can be viewed online via EM-COP, located in the IMT Toolbox.

5. Managing an Earthquake Event

5.1 Roles and Responsibilities

Roles and responsibilities of agencies involved in responding to earthquakes are detailed in the State Emergency Response Plan – Earthquake Sub-plan.

5.2 Concept of Operations

The concept of operations is detailed in the State Emergency Response Plan – Earthquake Sub-plan.

5.3 Escalation and Notification

Geoscience Australia publishes any earthquake activity, as detailed in section 4.2 Earthquake Notifications, on their public website www.ga.gov.au/earthquakes/ and notifies pre-identified agencies, organisation and media outlets, including pager and email notification message to Victoria State Emergency Service State Duty Officer (SDO).

The Victoria State Emergency Service SDO will acknowledge any Earthquake Notification, confirm details with Geoscience Australia and notify relevant internal personnel, including Regional Duty Officers (RDOs).

Upon receipt of an Earthquake Notification, RDOs will acknowledge the pager message and notify the Regional Agency Commander (RAC) to notify the Regional Controller and/or Regional Emergency Management Team members for earthquake response, and any relevant Units.

5.4 Strategic Response Planning

The actions listed below are the responsibility of Victoria State Emergency Service at the regional and State tiers. Responsibility for these actions may transition to the Regional Controller to support multi-agency response when significant impacts caused by an earthquake event occur.

On receipt of an Earthquake Notification the RAC will undertake strategic level planning. Key considerations will include:

- Establishing the control structure for managing the event
- Supporting consistent emergency warnings and provision of information to the community
- Implementation of evacuation and emergency relief plans and identification of evacuation points
- Confirming agencies at all tiers are activated and appropriate arrangements are in place
- Identifying the likely consequences of the earthquake and any interdependencies that may affect planning
- Confirming agencies have adequate resources in place to fulfil their responsibilities and are planning for sustainment and surge capacity, including identification of need for inter-state or international assistance
- Identifying mass gatherings and large public events that maybe at risk, and arrangements to ensure the safety of individuals attending
- Confirming agencies with call-taking responsibilities have resources in place and back up arrangements to cope with the expected call load
- Positioning of Emergency Management Liaison Officers (EMLOs) from key support agencies to Regional Control Centres (RCCs), where appropriate

- Arranging for regular meetings of the Regional Emergency Management Teams (REMTs) and Incident Emergency Management Teams (IEMTs)
- Providing situation reports to the State Control Team (SCT).

5.5 Cross Border Arrangements

Part 8 of the EMMV explains the procedure for requesting emergency support from other states.

During significant earthquake events, it is common for additional Units to be deployed to the Grampians Region, with reciprocal arrangements for Units deployed to support neighbouring regions.

The Bannockburn Unit (Golden Plains Shire Council) sits in the Grampians Region but is managed by the Barwon Region due to its proximity to Geelong and part of the Golden Plains Shire is located in the Geelong ICC footprint.

5.6 Regional Control Centre

The following pre-determined facilitates are suitable for the establishment of a RCC for the management of storm events.

- Grampians Mid West Regional Control Centre
Ballarat, 19 Learmonth Road, Wendouree
Facility owner CFA, contact Stephen Walls, Regional Commander, CFA, 0417 342 851.

A map of the RCC footprint can be viewed at Attachment 3 – Regional Control Centre Footprint and VICSES Unit Map.

5.7 Incident Control Centres

Incident Control Centre (ICCs) locations have been pre-determined for earthquake response (Attachment 4), with requirement to establish an Incident Control Team and level of resourcing outlined in JSOP 2.03 Incident Management Team Readiness Arrangements.

ICCs capable of running Level 3 Incidents within the Grampians (Mid West) Region identified within the Grampians Regional Operations and Delivery Plan may be used by VICSES in the event of significant incidents. These may also act as redundancies for other ICCs should they become impacted.

Location	Local Government Area within footprint
Horsham ICC, (DELWP Wimmera District Office) 110 Natimuk Road, Horsham	West Wimmera, Hindmarsh, Horsham, Yarriambiack.
Ballarat ICC, (DELWP Midlands District Office) 25 Vickers St, Sebastopol	Pyrenees, Ballarat, Moorabool, Golden Plains, Hepburn, Northern Grampians, Ararat.
Ararat ICC, (CFA District 16 Office) 35 Baird Street, Ararat	Ararat

5.8 Divisional Command Points

Facilities suitable for use as Divisional Command Points (DCPs) are listed in the table below.

Location	VICSES Units within footprint	Local Government Areas within footprint
Horsham Regional Office	Nhill / Dimboola	Hindmarsh Shire
	Kaniva / Goroke / Edenhope	West Wimmera Shire
	Warracknabeal / Dunmunkle	Yarriambiack Shire
	Horsham	Rural City of Horsham
Ballarat Regional Office	Ballarat	City of Ballarat
	Bacchus Marsh	Moorabool Shire
	Hepburn	Hepburn Shire
	Stawell / St Arnaud	Northern Grampians Shire
	Ararat	Ararat Rural City

A map of DCPs can be viewed in Attachment 6 – Division Command Location Map.

5.9 Regional Resource Requirements

Likely resource requirements for responding to an earthquake event within ICC footprints are detailed in:

Attachment 2 – Regional Resource List

Attachment 6 – Agency Contact Details



Attachments

Attachment 1 – Region Earthquake Scenario

A Region Earthquake Scenario has been developed to support periodic training requirements (outlined in section 1.8), to provide an opportunity to document anecdotal and/or known earthquake impacts based on historic events, and provide an indication of the resource requirements and associated gaps for operational response.

The below scenario is based on a possible earthquake scenario in the Grampians Mid West Region.

Scenario 1 – Earthquake cutting Grampians Road, south of Halls Gap.

Category:	4.8ML
Location:	Gully line on eastern side of Mount Difficult Range, along Grampians Road, south of Halls Gap
Triggers:	None
Description of potential physical impacts:	<ul style="list-style-type: none"> Land movement during the initial earthquake and aftershocks. Road access is cut along Grampians Road. Risk to life for bushwalkers, cyclists, and drivers.
Consequences:	<p>Wellbeing:</p> <ul style="list-style-type: none"> Possible damage to vehicles and/or injury. Restricted access to Halls Gap and the Grampians National Park due to damage to main access road. Increased level of community anxiety due to possible road restrictions and possible disruption to services, Possible reduction in number of tourists due to anxiety of future landslides occurring. Possible delays transporting health related patients via road. <p>Liveability:</p> <ul style="list-style-type: none"> Potential to have an impact on the local community due to loss of services including power, water and sewerage. Transport routes and roads may be closed for some time. Alternate routes would be available, although at a reduced speed affecting travel times of tourists and local traffic. Public transport delays. <p>Sustainability:</p> <ul style="list-style-type: none"> Economic impacts due to transportation disruption. Tourism impacts due to restrictions on road and public transport. Localised business and social impacts caused by disruption to services. <p>Viability:</p> <ul style="list-style-type: none"> Minor disruption to freighting of goods, due to delays with the main access road.

	<p>Community Connectedness:</p> <ul style="list-style-type: none"> Some restricted and/or altered access to communities due to disruption of road.
Transfer of control:	<p>Normally this level of incident would remain under local control.</p> <p>There are circumstances where an incident should be managed by an Incident Controller based in an ICC and supported by an IMT with specialist skills and equipment, rather than by a field-based Incident Controller.</p> <p>Refer to Joint SOP J03.15 for full details.</p>

*Note; the structures and resources set out for managing this event highlight the key personnel / equipment that should be considered and are a guide only. The actual structure and resources used will depend on the State and Regional Controllers priorities (e.g. such events may be accompanied by other cascading emergencies).

RCC Structure

The Grampians RCC will be operational in this instance. Staffing as per rostered arrangements. Full REMT should be notified with key agencies in place at the RCC by request of the Region Controller.

IMT Structure

(as per JSOP 2.03) the IEMT should include representatives from municipalities (or a single representative from a municipality with connections to other municipalities in the ICC footprint), Vic Roads, Victoria Police (Traffic Manager and EMLO) and Ambulance Victoria. EMLOs from other emergency services, in particular DELWP and CFA, may also be involved.

DIV COM Structure

Division command points (set out in attachment 5) should operate as ICPs in the first instance with transition to Division Command Points when the emergency activity within the division exceeds the capacity of the ICPs management structure, or at the direction of the Regional or Incident Controller (at the nominated readiness ICCs). ICPs should include an Incident Controller and cover the Operations Planning (including OIMS operators) and Logistics functions. Representatives from Shires and the CFA/DELWP may assist with ensuring appropriate resource use at the Division level).

Resource Requirements

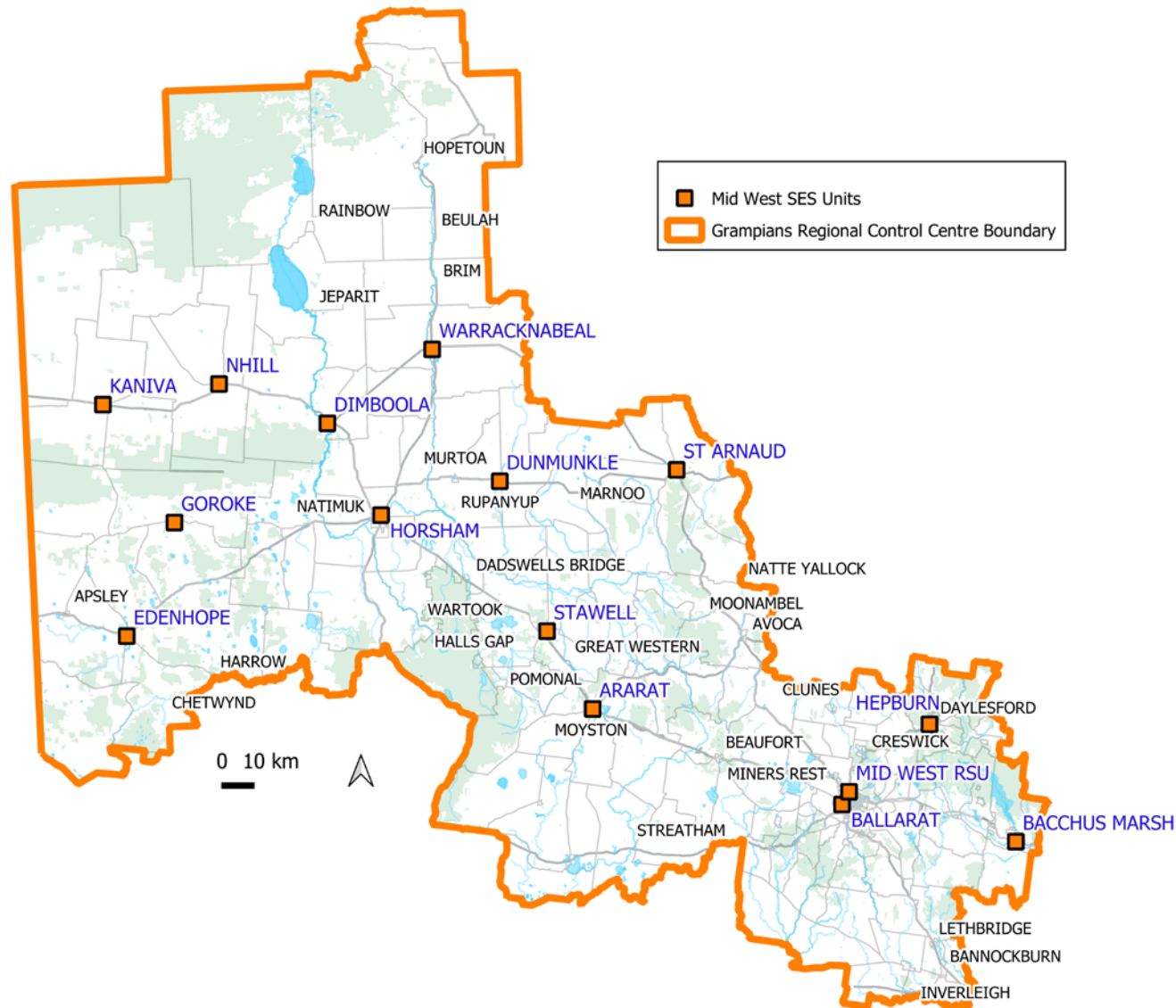
Resources listed are those that would be required at the peak of an event and would represent the resources of all agencies with responsibilities under the State Emergency Response Plan – Earthquake Sub-plan. VICSES Resources required are listed in attachment 2.

External Agency	Resources
CFA	Chain Saw Operators – Trim and Cross Cut
	Sand Bag Crews
	Ground Observers – (Initial impact Assessment)
	IMT Roles
	Ladder Platform – Specialist Access
DELWP (see FFMV Grampians Region Readiness and Response Plan)	Chain Saw Operators / Tree fallers
	Sand Bag Crews
	IMT Roles
DHHS	Recovery
Local Government	Chain Saw Operators / Arborists
	Plant
	Relief and Recovery
	Traffic Management
VicPol	Traffic Management
	Evacuation Management
VicRoads	Chain Saw Operators / Arborists
	Traffic Management
Powercor	EMLO
V/Line	Network Support Centre
Water Authorities	Grampians Wimmera Mallee Water Southern Rural Water Central Highlands Water

Attachment 2 – Grampians Mid West Region Resource List

No	Unit	Unit No	Equipment																											
			Heavy Rescue	Medium Rescue	Light Rescue	Transport 4WD	Storm trailer	Community Education Trailer	Welfare Trailer (Kitchen)	ATV (All Terrain Vehicle)	Sandbag Filling Machine (hopper)	Rescue Boat	Land Based Swift Water	High Angle Rescue	Lighting Trailer	Litter Mules	Motorbikes	EPA Air Monitoring	Logistic Truck	USAR Trailer	Mobile Control Vehicle	Fork Lift	Handheld Radio's	Staging Area Cache	Mass Casualty Cache	Portable Radios in VRN Cache	Satellite Phone	EMLO Laptop Kit		
1	Ararat	770	1		2	2						1	Y	1																
2	Bacchus Marsh	771	1		1	2	1					1	Y			1		4												
3	Ballarat	772		1		3	2		1	1		2	Y			1	1	2	1											
4	Ballarat RSU	773																	1								3			
5	Dimboola	774	1			1	1									1														
6	Dunmunkle	780		1		1	1																							
7	Edenhope	775	1			1	1									1														
8	Goroke	776				2	1																							
9	Hepburn	786		1		2	1					1				1														
10	Horsham	777	1			2	1					1			1			1												
11	Kaniva	778	1			2																								
12	Nhill	779	1			1	1																							
13	St Arnaud	781	1			1	1																							
14	Stawell	782	1			3	1	1			1	1	Y		1	1	1		1							1				
14	Warracknabeal	783	1			1	1																							
15	Mid West Ballarat	784	1			1		1		1		1							1	1	2	1	1	6	1					
16	Mid West Horsham	787				1		1													2				1	1				
		TOTAL	11	3	3	26	13	3	1	2	1	8	4	1	2	7	2	6	3	1	0	1	1	4	1	1	6	3	4	

Attachment 3 – Grampians Regional Control Centre Boundary and VICSES Unit Map



Attachment 4 – Mid West Unit General Response Boundaries and Structure

Mid West SES Response Structure

Horsham ICC (Blue)

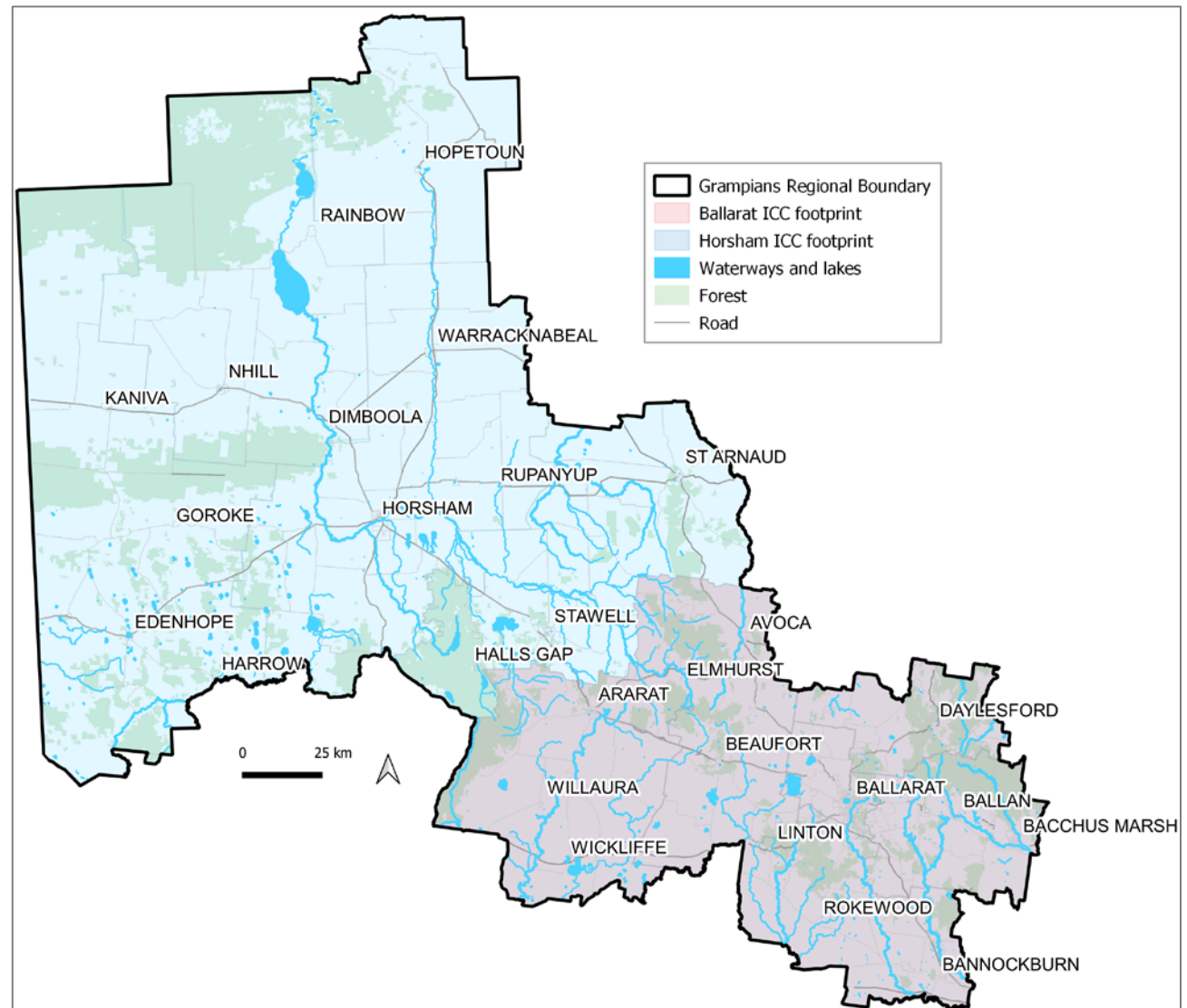
Horsham Division

Nhill
Dimboola
Kaniva
Goroke
Edenhope
Horsham
Warracknabeal
Dunmunkle
Stawell
St Arnaud

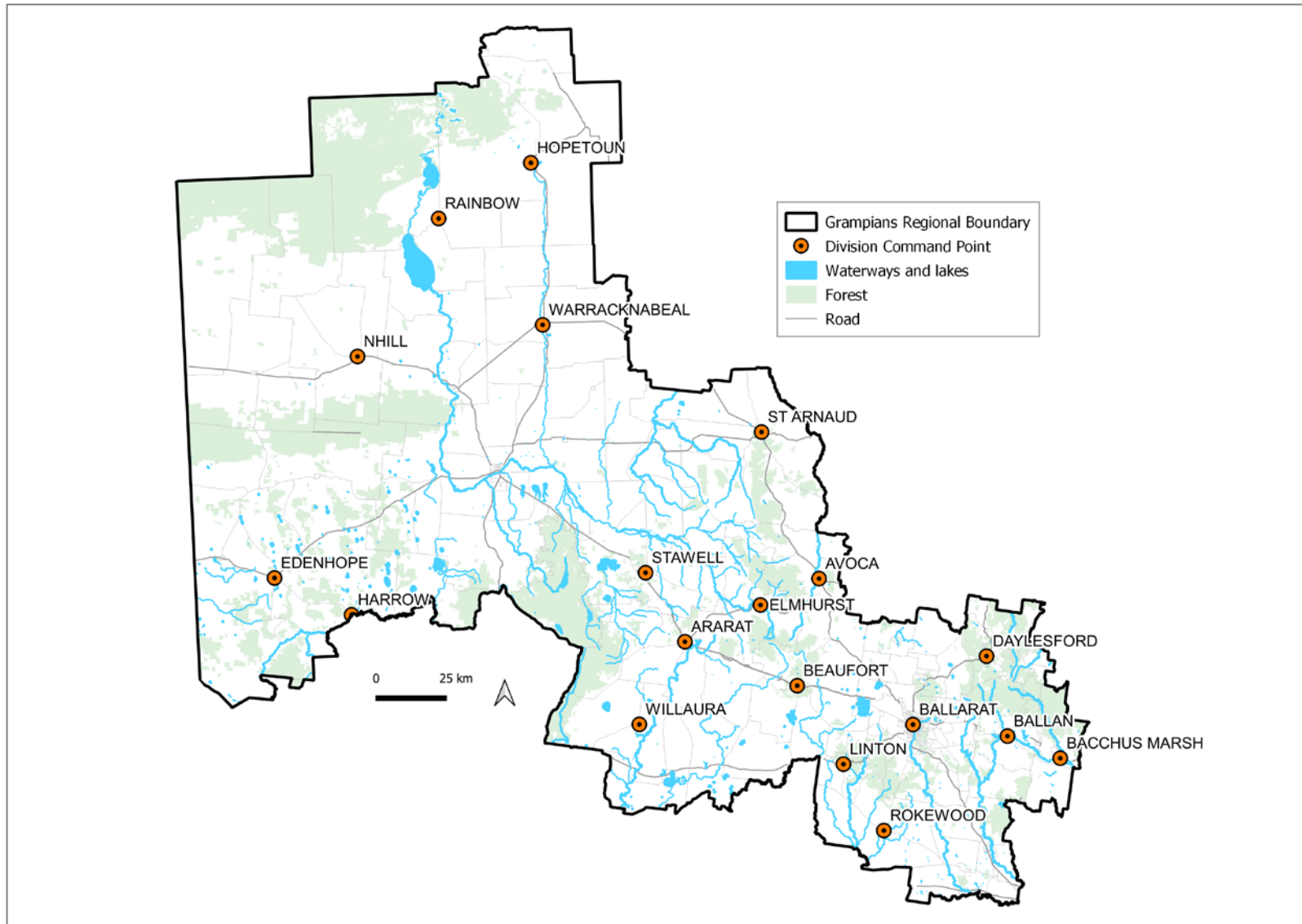
Ballarat ICC (Red)

Ballarat Division

Ballarat
Hepburn
Bacchus Marsh
Mid West RSU
Ararat



Attachment 5 – Mid West Division Command Location Map



Attachment 6 – Agency Contact Details

Emergency Management Contacts

Refer to Grampians Emergency Management Contact Directory updated by CFA (refer to EM-DRIVE/60-Reference/Documentation/Grampians/RCC-Grampians)

VICSES Contacts

Refer to the Grampians Mid West Unit Profiles

Other Useful Contacts			
ABC	Emergency Hotline (Radio Master Control)	1300 737 102	
Ambulance	Medical Emergency	000	
Control	Train Control	03 9619 4350	1800 023 668
DJPR	Animal Disease Hotline	1800 675 888	
DJPR	Plant Pest and Disease Hotline	1800 084 881	
DET	Emergency Duty Officer	1300 333 232	1300 DEECD 2
DELWP	Customer Service Centre	136 186	
Energysafe Victoria	Electrical Emergencies	1800 000 922	
Energysafe Victoria	Gas Emergencies	132 771	
EPA	Pollution Hotline	1800 444 004	
ESTA	Ballarat	03 5337 3520	1300 705 911
Fire	CFA or MFB	000	
Help for Wildlife	Wildlife Rescue	0417 308 687	
Livestock	24hr National Assist Hotline Livestock Truck Roll over and Emergency Vet	136 186	
NOCC	Network Operations Control Centre – SMR Radio	03 9632 5595	1800 678 121
Parks Victoria	Call Centre	13 19 63	
Police	Emergency	000	
PowerCor	Power Outages	m.powercor.com.au	
Public Transport Victoria	Crisis and Emergency Response	03 9027 4241	03 9027 4011 (facsimile)
SES	Flood or Storm	132 500	
SES	Life Threatening	000	
SES	Rescue	132 500	
Transport Safety Victoria	Incident Reporting	1800 301 151	
VicEmergency	VicEmergency Hotline	1800 240 667	
VicFish	Fisheries Offences	13 FISH	13 3474
VicRoads	Emergencies and Road Closures	131 170	
VLine / VicRail	24/7 Duty Officer	03 9619 1077	
Worksafe	Incident Notification	13 23 60	

