State Emergency Response Plan
Flood Sub-Plan
Edition 1

Working in conjunction with communities, government, agencies and business
This plan has been endorsed by the State Crisis and Resilience Council (SCRC) as a subplan to the State Emergency Response Plan.

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This document is also available in Word and PDF format at www.emv.vic.gov.au
Contents

1 Introduction 1
  1.1 Purpose 1
  1.2 Objective 1
  1.3 Scope 1
  1.4 Authorising environment 2
  1.5 Activation of the plan 2
  1.6 Audience 2
  1.7 Linkages 2
  1.8 Exercising and evaluation 3
  1.9 Review 3

2 The emergency context 4
  2.1 The Flood Hazard 4

3 Consequences 6
  3.1 Possible Flood Consequences 6
  3.2 Recent Flood History 6

4 Community resilience 8
  4.1 Shared and Individual Responsibility for Action 8
  4.2 Flood Warning Services 9
  4.2.1 Severe Thunderstorm Warnings 9
  4.2.2 Severe Weather Warnings 9
  4.3 Flood Warning Consultative Committee 11
  4.4 Floodplain Risk Management 12
  4.5 Victorian Floodplain Management Strategy 12
  4.6 Melbourne Water Flood Management Strategy 12
  4.7 Levee Management 13
  4.8 Flood Intelligence 13
  4.9 Critical Infrastructure Resilience 13
  4.10 Regional and Municipal Flood Planning 14
  4.11 Household, Business and Farm Plans 14
  4.12 Community Safety Advice 14

5 Collaboration 15
  5.1 Escalation and notification 15
  5.2 Strategic Coordination of a Flood Event 16
  5.3 Victorian government management arrangements 17
  5.4 Emergency Management Team 17
  5.5 Consequence Management 18
  5.6 Reporting To Government 18
  5.7 Management of Spontaneous Volunteers 18
6 Capability
   6.1 Regional and Municipal Flood Emergency Planning

7 Capability
   7.1 Concept of Operations
   7.2 Strategic Response Planning
   7.3 Access to Flood Intelligence
   7.4 Access to Mapping Products
   7.5 Local Knowledge
   7.6 Community Information and Warnings
   7.7 Evacuation
   7.8 Levee Management
   7.9 Management of Flooding Downstream of Dams
   7.10 Property Protection
   7.11 Flood Rescue
   7.12 Resupply
   7.13 Energy
   7.14 Medical Response
   7.15 Restricting Access
   7.16 Initial Impact Assessment
   7.17 Debris Removal
   7.18 Emergency Relief
   7.19 Recovery

8 Appendix A - Roles and Responsibilities of Supporting

Figures and Tables

Figure 1 - Areas susceptible to 1% probability riverine flooding
Figure 2 - Areas impacted by 2010-11 floods
1 Introduction

1.1 Purpose
This State Emergency Response Plan Flood Sub Plan outlines the Victorian arrangements for managing floods in Victoria.

1.2 Objective
The objective of the State Emergency Response Plan (Flood Sub-plan) is to provide sources of information and to outline the arrangements for ensuring an integrated and coordinated approach to the State’s management of flood events, in order to reduce the impact and consequences of these events on the community, infrastructure and services.

1.3 Scope
This State Emergency Response Plan (Flood Sub-plan) includes:
- Description of potential risks and consequences of storms to the social, built, economic and natural environments;
- The policy and programs in place to mitigate these risks before, during and after a flood event;
- The positions with accountability and the agencies responsible for managing specific strategies;
- The multi-agency management arrangements at the national, state, regional and local levels; and
- Links to sources of information where the reader can obtain further detail.

This plan provides strategic information about the Victorian arrangements for managing the response to a flood event. It does not include detail about the operational activities of individual agencies.
1.4 Authorising environment


The State Emergency Response Plan (Part 3, EMMV) identifies Victoria’s organisational arrangements for managing the response to emergencies. This sub-plan is a subordinate plan of the State Emergency Response Plan and has been approved by the State Crisis and Resilience Council (SCRC).

Other relevant legislation includes:

- Victoria State Emergency Service Act 2005;
- Essential Services Act 1958;
- Planning and Environment Act 1989;
- Local Government Act 1989;
- Meteorology Act 1955 (Commonwealth);
- Water Act 1989; and
- Melbourne Water Corporation Act 1992

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.

1.7 Linkages

This plan is a sub-plan of the State 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. The arrangements in the State Emergency Response Plan have not been repeated unless necessary to ensure context and readability. The State Emergency Response Plan can be accessed at www.emv.vic.gov.au/policies/emmv

Flood Plans are developed at Regional and Municipal levels. These documents can be accessed at www.ses.vic.gov.au

It is likely that flood events will occur in conjunction with severe weather. For arrangements for the management of severe weather refer to the State
Emergency Response Plan (Storm Sub Plan) 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 Health Sub Plan;
- For rescue response: the Victorian Urban Search and Rescue Response Arrangements; and
- For coastal flooding response - State Emergency Response Plan Tsunami Sub Plan.

1.8 Exercising and evaluation

This plan will be exercised within one year from the date of approval. 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.

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 emergency context

2.1 The Flood Hazard

Flooding may be defined, as an overflowing or influx of water from its normal confines onto land not usually submerged. In the Victorian context there are four potential mechanisms which may cause flooding:

- Heavy rainfalls, which cause runoff to enter watercourses, overtopping the banks of rivers and creeks, overflowing lakes, detention basins and stormwater drains, causing local overland flooding, or resulting in releases or spills from dams.

- Many factors contribute to the extent and nature of flooding caused by heavy rainfall such as the amount and duration of rainfall, the spatial distribution of rainfall, prior weather conditions and characteristics of a catchment including its size, shape, soil types, vegetation and land use.

- The characteristics of a river also influence the extent of flooding. These characteristics include the size and nature of the river, the presence of vegetation in and around the river, flood control structures and embankments that may restrict floodwater and downstream river levels.

- Storm surges, which involve the temporary raisings of sea levels above the astronomical tide. These are caused by deep low-pressure systems located off the coast and result in sea water invading low-lying areas along the coast.

- Tsunami resulting from undersea earthquakes, landslides, meteorite impacts or volcanic activity. The arrangements for the emergency management of tsunami are contained in the State Emergency Response Plan (Tsunami Sub Plan).

- Dam failure, which is involves the failure of a dam structure. There are a number of significant dams throughout Victoria that both store and provide water to communities across the State which have the potential to cause flooding in the event of failure. However, there are dam safety risk management processes in place and the possibility of dam failure is considered low but consequences could be catastrophic in some circumstances.

Flooding in Victoria is influenced by our variable climate, typified by periods of wet and dry conditions. For full description of climate influences and areas affected see www.bom.gov.au/climate/about/
A major factor in this variability is the El Nino - Southern Oscillation phenomena. La Niña, the positive phase, is associated with colder than average sea surface temperatures in the central and eastern tropical Pacific region. La Niña is normally associated with higher than average winter, spring and early summer rainfall over much of Australia, and this can result in more flooding.

Localised intense heavy rainfall over a short period of time can cause flash flooding to occur within minutes to hours. As there is little warning time, flash flooding is difficult to predict and manage. Flash flooding has occurred with significant consequences in regional urban areas such as the Geelong, Ballarat, Bendigo and Traralgon, as well as across Melbourne, including the Yarra River precinct. In larger catchments, floods can occur over several days to weeks, and are easier to forecast and manage.

A map of areas susceptible to 1% probability riverine flooding in Victoria is provided below:

Figure 1 - Areas susceptible to 1% probability riverine flooding
3 Consequences

3.1 Possible Flood Consequences

Victoria has many flood prone communities. The effects of flooding on the community can include:

- Inundation of properties,
- Damage to essential infrastructure, public and private assets and property,
- Inundation of farmland, damage to crops and loss of livestock and fodder,
- Short or long term displacement of people,
- Isolation of properties or communities,
- Disruption to essential services, and
- Death and injuries.

About 11.5% of Victoria’s land mass is prone to a 1% probability flood. Significant community disruption can occur as a result of damage to essential infrastructure, which may lead to cascading secondary consequences.

For example a loss of power may result in a loss of telecommunications, traffic signals and disruption to supply chains amongst other impacts. Damage and flooding of road infrastructure may result in isolation of properties and/or communities.

3.2 Recent Flood History

From September 2010 to March 2011, Victoria experienced some of the worst floods in the state’s history. The floods followed heavy rain across south eastern Australia, which began in August 2010. Over a series of flood events, the worst of which occurred in the months of September 2010, January and February 2011, approximately 70 local government areas experienced flood and storm damage.

Along with the substantial impact to residential property and townships, significant loss, damage and isolation to rural properties and farms was experienced. Damage occurred to infrastructure including roads, public buildings and essential services. As at October 2011, the estimated gross total cost of these floods was approximately 1.3 billion dollars. Figure 2 illustrates the areas affected by these floods.
Flooding occurred also again across North East Victoria in late February and early March 2012, causing record flooding in some parts of the Goulburn-Broken River System. Significant property damage occurred with 135 residences flooded in Moira Shire (93 in Numurkah), and a further 31 residences damaged in Greater Shepparton City. Significant damage occurred to local roads, irrigation infrastructure, farm properties and the Numurkah Hospital.
4 Community resilience

4.1 Shared and Individual Responsibility for Action

The National Strategy for Disaster Resilience, developed by the Council of Australian Governments, 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 flooding include:

- Individuals being aware of their flood risk, and following advice from emergency services when responding to warnings.
- Local governments and communities including flood risk within their Community Emergency Risk Assessment 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 flood risk,
  - Engaging with the community regarding flood risk,
  - Working with communities to plan the management of flood risk,
  - Providing emergency information and flood warnings,
  - Ensuring an effective, well-coordinated response during floods, and
  - Helping communities to recover and learn following a flood and build their resilience to future events.

The Victoria State Emergency Service (VICSES) has developed a Community Resilience Strategy. A key and measurable outcome of the Strategy is to increase the level of interest, and support behaviour change within our communities, so they are more aware, informed and prepared for emergencies – supporting them to understand their risk, and the relevance of taking action before, during and after emergencies. Information can be found at: www.ses.vic.gov.au
4.2 Flood Warning Services

Flood warnings and notifications are provided by the Bureau of Meteorology, Melbourne Water and Victoria State Emergency Service.

The Bureau of Meteorology have a requirement under their Act to warn the community with regard to extreme weather, and provide the following services to the Victoria State Emergency Service. The services provided by the Bureau are documented in its Service Level Specification for Flood Forecasting and Warning Services for Victoria and can be found at:


The Bureau of Meteorology act as the flood prediction agency for Victorian catchments with the exception of Melbourne Metropolitan catchments where Melbourne Water is the prediction agency.

Bureau of Meteorology formulate and issue official forecasts and warnings for:

- River basins (Flood Watches);
- Key locations on rivers and creeks (Flood Warnings); and
- Land and coastal forecast districts (Severe Weather and Severe Thunderstorm Warnings).

Melbourne Water acts as the flood prediction agency for larger Melbourne Metropolitan catchments (Yarra, Maribyrnong, Westernport, Dandenong Creek, Werribee, Diamond Creek, Merry Creek, Kororoit Creek and Plenty River).

It operates a flood-warning network on major rivers and creeks in the Port Phillip and Westernport region and provides flood forecasts to the Bureau of Meteorology who disseminates official forecasts and warnings for key locations on rivers and creeks (Flood Warnings).

Victoria State Emergency Service provides warnings and emergency information to the community through releasing Flood Bulletins.

4.2.1 Severe Thunderstorm Warnings

These warnings are issued when severe thunderstorms are likely to develop, or extend into a specified area over the next few hours. The warnings are issued for specific areas in the state but are available state wide.

In the Melbourne area a more detailed warning is issued. These warnings depict and describe individual severe thunderstorms and their forecasted paths.

4.2.2 Severe Weather Warnings

Severe Weather Warnings aim to provide advance notice of very heavy rainfall leading to flash flooding or storm surge, which is sometimes exacerbated by abnormally high tides. They are issued when severe weather is expected to affect land-based communities within the next 24 hours which is not directly the result of severe thunderstorms and are not covered by tropical cyclone or fire weather warnings.
4.2.3 Flood Watches

Flood Watches are issued for specific regions (e.g. East Gippsland or North East Victoria) and advise that a flood is possible in those regions. They are issued 24 to 36 hours in advance of any likely flooding and updated as required.

If at any time during this period there is an imminent threat of a flood occurring, Flood Warnings are issued.

4.2.4 Flood Warnings

Flood Warnings are firm predictions of flooding based on:

- Actual rainfall measurements,
- Stream level measurements in real time,
- Stream flow based models of catchment behaviour, and
- Likely future rainfall.

They are issued for specific rivers when flooding is imminent or is already occurring. Flood Warnings provide predictions of flood severity (minor, moderate and major) and the estimations of rise, fall or peak at forecast locations (river gauges).

Flood warnings and predictions are upgraded and downgraded as a flood rises, peaks and falls. Any series of Flood Warnings are finalised when floods reach levels below the minor flood classification.

4.2.5 Victoria State Emergency Service Flood Bulletins

Flood Watches and Warnings do not provide detailed descriptions of potential flood consequences. They provide only generic public safety advice. Victoria State Emergency Service value adds to Flood Warnings and Watches, and in circumstances where a flood warning service is not currently in place, through Victoria State Emergency Service Flood Bulletins by providing a description of possible flood consequences and specific localised public safety advice actions.

Flood Bulletins are distributed to the community through the media and the VicEmergency website. Flood Bulletins are also distributed to other Emergency Services Organisations.
4.3 Flood Warning Consultative Committee

The Victorian Flood Warning Consultative Committee (VFWCC) coordinates the development and operation of flood forecasting and warning services in Victoria and is convened by the Bureau of Meteorology.

The Victorian Flood Warning Consultative Committee’s role is to:

- identify requirements and review requests for new and upgraded flood forecasting and warning services;
- establish priorities for the requirements that have been identified using risk based analyses of the Total Flood Warning System;
- review and provide feedback on the Service Level Specification for the Bureau of Meteorology’s Flood Forecasting and Warning services on an annual basis;
- coordinate the implementation of flood warning systems in accordance with appropriate standards;
- promote effective means of communication of flood warning information to the affected communities;
- monitor and review the performance of flood forecasting and warning services; and
- build awareness and promote the Total Flood Warning System concept.

The membership includes representatives from:

- Department of Environment, Land, Water and Planning,
- Bureau of Meteorology (Chair/Secretariat),
- Victorian Rural Water Authorities,
- Victoria State Emergency Service,
- Local Government,
- Melbourne Water,
- Catchment Management Authorities,
- Institute of Public Works Engineering Australasia (Victoria Division), and
- Other State Government agencies (as required).
4.4 Floodplain Risk Management

Floodplain risk management is a subset of the community emergency risk management process focused on identifying and analysing flood risks: and evaluating and recommending appropriate flood risk treatment options.

Prevention activities cover both structural and non-structural measures. Structural measures have traditionally included flood mitigation works, such as levees, retarding basins, channel modifications and the flood proofing of dwellings. Non-structural measures include land use zoning and building restrictions.

The Department of Environment, Land, Water and Planning is responsible for policy and oversight of floodplain risk management arrangements. Implementation is carried out at the regional level through regional floodplain management strategies developed in consultation with local stakeholders and communities.

The floodplain management function is carried out by Catchment Management Authorities (CMAs) in regional Victoria and Melbourne Water in the Port Phillip and Westernport catchments. Local government has a significant role to play in the administration of land use planning arrangements and accountability for flood mitigation at the local level.

4.5 Victorian Floodplain Management Strategy

The Department of Environment, Land, Water and Planning maintains the Victorian Floodplain Management Strategy. This strategy sets the policy framework for flood management and outlines the need to develop regional flood management strategies. The strategy is available at www.delwp.vic.gov.au

4.6 Melbourne Water Flood Management Strategy

Melbourne Water’s Flood Management Strategy – Port Phillip and Westernport outlines how flood management agencies will work together to manage flood risks and increase community preparedness. It is aligned with the Victorian Floodplain Management Strategy, emergency management arrangements and planning policy. The strategy is available at www.melbournewater.com.au/yourfloodstrategy.
4.7 Levee Management

About 98% of Victoria’s 4,000 km of levees protect rural land and are not being formally maintained. It is unlikely that they will be formally maintained by an authority into the future. Historically they have provided some protection against minor and moderate floods.

There are a number of smaller levees which protect urban communities. Many have been constructed by local councils to a high standard as Water Management Schemes, and the councils are expected to maintain them. There are however, many urban levees for which management arrangements are uncertain. In the long term, if they are expected to protect urban communities, the management arrangements will need to be formalised.

Irrespective of whether a levee is maintained or not, all levees can fail unpredictably. Therefore close monitoring is required during floods to ensure that people can be safely evacuated. Information on levees has been collated and is available through the Catchment Management Authorities and the Department of Environment, Land, Water and Planning. The information is being incorporated in the Flood Zoom flood intelligence platform.

4.8 Flood Intelligence

Flood intelligence supports decision making and planning for flooding by providing reliable and accurate information relating to:

- The level, depth and velocity of floodwater and its consequences; and
- Determination of actions to be undertaken in response to the identified consequences.

The Victoria State Emergency Service works closely with Catchment Management Authorities, Department of Environment, Land, Water and Planning, other agencies and trusted local sources, as appropriate, to ensure available sources of flood information are utilised.

The Department of Environment, Land, Water and Planning maintains the ‘Flood Zoom’ flood intelligence platform. Flood Zoom is a web based platform which assists the Victoria State Emergency Service and other emergency services identify the possible local consequences of flooding, and supports the Catchment Management Authority in land use planning and flood risk assessments.

4.9 Critical Infrastructure Resilience

Infrastructure is essential to the delivery of essential services to communities. Part 7A of the Emergency Management Act 2013 outlines the legislative arrangements for building critical infrastructure resilience. This is supported by the Victorian Critical Infrastructure Resilience Strategy available at: www.emv.vic.gov.au/our-work/critical-infrastructure-resilience
4.10 Regional and Municipal Flood Planning

Flood emergency planning occurs at the State, Regional and Municipal level under the auspices of key forums and committees, formed under the Victorian emergency management arrangements. Plans recognise the responsibilities that emergency management agencies, floodplain managers and water authorities have to their customers and to the broader community. Preparedness activities should include the regular conduct of exercises to test emergency plans. Best practice guidance on flood emergency planning can be found in the Australian Emergency Management Manuals, Flood Series.

Flood Plans are to be sub-plans to the existing Emergency Management Plans at Municipal and Regional levels (i.e. Regional Emergency Response Plan and Municipal Emergency Management Plans). Flood Plans should not duplicate existing arrangements but add value to these in the context of flooding.

All Flood Plans should be reviewed at least every three years or under the following circumstances:

- New flood risk information derived from the Floodplain Risk Management Process becomes available;
- Implementation of new structural flood mitigation works;
- Implementation of new or upgrade of the existing flood warning services;
  or
- After major floods and exercises.

4.11 Household, Business and Farm Plans

The Victorian Emergency Management Sector encourages every household, business and farm to have the written emergency plan. Information on the development of these plans can be found at www.ses.vic.gov.au

4.12 Community Safety Advice

The Victoria State Emergency Service has developed awareness packages and key safety messages for the community regarding floods; they are available via the website: www.ses.vic.gov.au/get-ready/stormsafe
5 Collaboration

5.1 Escalation and notification

The Bureau of Meteorology publishes all Flood Watches, Flood Warnings, Severe Weather and Severe Thunderstorm Warnings on the Bureau of Meteorology website and provides them to pre-identified agencies, organisations, and media outlets.

The Bureau of Meteorology will email warning messages to Victoria State Emergency Service at State and Regional Level. Upon the receipt of a warning, Victoria State Emergency Service as the Control Agency for response to floods in Victoria has the responsibility to disseminate notifications and advice to the emergency services, affected communities and key support organisations at State, Regional and Local levels.

If the warning specifically describes a serious and imminent threat, based on the advice from the Bureau of Meteorology, the Victoria State Emergency Service State Duty Officer will notify all Emergency Service Organisations, including the Emergency Services Telecommunications Authority (ESTA), via the State Emergency Management Team (SEMT) and relevant agency State Duty Officers. Regional Duty Officers will notify all Regional Emergency Service Organisations via their Emergency Management Team and relevant agency Regional Duty Officer.

The Victoria State Emergency Service Chief Officer is responsible for notifying the Emergency Management Commissioner (in accordance with Joint Standard Operating Procedure 3.16 Significant Event Notification). The Emergency Management Commissioner can assist through the State Control Centre to notify State Coordination Team and the State Emergency Management Team.

Following the issuing of any warning product, Victoria State Emergency Service will maintain regular contact with the Bureau of Meteorology and/ or Melbourne Water until the flood risk has passed. Where local information indicates the need for river height predictions to be adjusted Victoria State Emergency Service shall advise the Bureau of Meteorology / Melbourne Water without delay so adjustments may be issued if appropriate.

The Victoria State Emergency Service has developed a detailed notification process for severe weather events which is documented in the Victoria State Emergency Service Standard Operating Procedures.
Provide details of the triggers for escalating the management of the emergency from the day-to-day operations of individual agencies to the arrangements for managing a major emergency (refer to the definition of ‘major emergency’ in the EM Act 2013).

The Victoria State Emergency Service understands the need to be proactive in early warnings to the community regarding the potential for severe weather and its associated impacts. The Victoria State Emergency Service and the Bureau of Meteorology will work in close partnership to ensure the timely notification of severe weather events in Victoria.

5.2 Strategic Coordination of a Flood Event
5.2.1 Emergency Management Commissioner

Under the Emergency Management Act 2013, the Emergency Management Commissioner has legislated management responsibilities across major emergencies, with the exception of terrorism-related emergencies. These include response coordination, ensuring effective control arrangements are established, consequence management and recovery coordination.

5.2.2 The Role of the Victoria State Emergency Service

The Victoria State Emergency Service is the Control Agency for flood as defined in Part 7 of the Emergency Management Manual Victoria. In this role the Victoria State Emergency Service is responsible for:

- Interpret available flood intelligence;
- Control the warning of at-risk communities;
- Support rescue operations where training and equipment are suitable;
- Control property protection including the protection of essential infrastructure and heritage assets where possible;
- Control reconnaissance of areas likely to be affected by flooding;
- Activate and support the Initial Impact Assessment process;
- Support emergency relief agencies with the resupply of isolated properties and/or communities;
- Assist levee managers to organise temporary repairs or improvements to existing levees;
- Support Victoria Police with evacuations; and
- Provide Situation Reports incorporating the activities of supporting agencies.
5.2.3 Supporting Agency roles and responsibilities

A flood event requires a coordinated response from multiple supporting agencies. Roles and responsibilities of supporting agencies are listed in Appendix A. This should be read in conjunction with Section 7 of the Emergency Management Manual Victoria.

5.3 Victorian government management arrangements

This section describes the management arrangements for a whole of Victorian government approach to managing a major flood emergency.

The Emergency Management Commissioner manages the State response to major emergencies through the following five key teams:

- State Coordination Team (SCOT);
- State Control Team (SCT);
- State Emergency Management Team (SEMT);
- Emergency Management Joint Public Information Committee (EMJPIC); and
- The Executive.

During a large-scale emergency, the Victorian Government’s Security and Emergency Management Committee of Cabinet (SEMC) provides whole of government ministerial oversight. The State Crisis and Resilience Council (SCRC) provides SEMC with assurance that the broad social, economic, built and natural environmental consequences of the emergency are being addressed at a whole of government level. The State Crisis and Resilience Council also has responsibility for the oversight of the development of a whole of government communications strategy for the approval of Security and Emergency Management Committee.

Neither the Security and Emergency Management Committee nor the State Crisis and Resilience Council have an operational response role.

5.4 Emergency Management Team

Emergency Management Teams are formed at each activated tier of emergency response management as follows:

- State Emergency Management Team (SEMT);
- Regional Emergency Management Team (REMT); and
- Incident Emergency Management Team (IEMT).

Emergency Management Teams are collaborative forums where agencies with a diverse range of responsibilities during emergencies meet to discuss the risks and likely consequences of a flood and assist the Emergency Management Commissioner and controllers establish priorities and plan a ‘whole of government’ approach to the management of these risks and consequences.
An Emergency Management Team ensures the response and recovery agencies, other agencies, local government and service providers are coordinated in their approach.

Because the response to a flood event may involve a range of disparate emergencies (e.g. health emergencies, power and transport emergencies, urban fire etc), the Emergency Management Commissioner, Regional Emergency Response Coordinators and Municipal Emergency Response Coordinators chair their respective Emergency Management Team.

Once formed, an Emergency Management Team operates throughout a continuum for the response to and recovery from the flood event.

Not all agencies have the capability to provide a representative for Emergency Management Team at each tier. For example, a person may represent their agency at both the Regional Emergency Management Team and Incident Emergency Management Team.

Further detail can be found in the State Emergency Response Plan.

5.5 Consequence Management

In anticipation of a damaging flood, the Emergency Management Commissioner appoints a Consequence Manager, responsible for assessing the likely consequences of the flood and working with the State Emergency Management Team and Regional Emergency Management Team to ensure a whole-of-government approach to the management of these consequences.

5.6 Reporting To Government

During a flood response, the Emergency Management Commissioner may request agencies to report on the impact and consequences of the event on their area of responsibility, identifying any emerging issues and actions to resolve these.

This information forms the basis of the State Emergency Management Team Situation Report, which the Emergency Management Commissioner uses to brief the Minister for Emergency Services and the State Crisis and Resilience Committee, and for the State Emergency Management Team members to brief their departmental executive and respective Minister.

5.7 Management of Spontaneous Volunteers

It is likely in the aftermath of a damaging flood that self-organised volunteer community groups may emerge to assist in response and recovery efforts. Where identified, Local Government will assist to coordinate support and community liaison officers may be deployed to assist groups with logistics and risk management.
6 Capability

6.1 Regional and Municipal Flood Emergency Planning

6.1.1 Regional Planning

Each Victoria State Emergency Service Region will have a Flood Plan that includes the identification of suitable Regional Control Centre locations. The Regional Control Centre shall have appropriate facilities to accommodate a multi-agency Emergency Management Team (EMT). The location of the Regional Control Centre should allow for contingencies and provide flexibility to deal with access limitations during major floods.

Regional Flood Emergency Plans will focus on strategic resource coordination within catchment areas and across the relevant Regional boundary. Regional Flood Emergency Plans should ensure that consideration is given to, but not limited to:

- Regional risk assessment;
- Resource requirements;
- Locations of significant flood mitigation works of regional importance and their management;
- Locations of significant essential infrastructure of regional importance;
- Locations of Division Command, and Incident and Regional Control Centres;
- Location of key strategic resources such as incident management personnel, flood boats, aircraft and sandbags;
- Local knowledge;
- Consequence management;
- Traffic management plans for major arterial roads;
- Arrangements for regional resource coordination and support;
- Identification of significant evacuation scenarios;
- Operation and role of Regional Emergency Management Teams;
- Areas where other agencies may provide first response flood capability;
- Communication;
- Cross boundary arrangements (intra and interstate); and
- Warnings and community information.
6.1.2 Municipal Planning

Each Municipality with a significant flood risk as identified in the Community Emergency Risk Assessment (CERA) process should have a Municipal Flood Emergency Plan. Victoria State Emergency Service has developed a Municipal Flood Emergency Plan template to assist the development of Plans and is available from www.ses.vic.gov.au

Plans should be developed within Municipal boundaries and outline preparedness, response, emergency relief and recovery arrangements for communities at-risk of flooding. A sub-committee of the Municipal Emergency Management Planning Committee (MEMPC) consisting of key stakeholders such as Victoria State Emergency Service, Local Council, Catchment Management Authorities, Water Authorities, Victoria Police and community groups may be established to develop the plan. Collaboration and cross boundary planning should be undertaken where appropriate.

Victoria State Emergency Service will take a leadership role in the development of these plans in collaboration with Municipal Emergency Management Planning Committees. Municipal Flood Emergency Planning activities should consider the following:

- Flood risk assessments, for all types of possible flood events (available flood intelligence);
- Flood monitoring data (data collection);
- Existing flood mitigation measures and their management;
- Disruption to essential services and community infrastructure;
- Reference to relevant dam safety emergency plans;
- Property protection arrangements;
- Community education and engagement;
- Flood warning and emergency information;
- Media Communication;
- Traffic management;
- Local knowledge;
- Municipal and community resources;
- Cross boundary arrangements;
- Identification of Sectors and Divisions;
- Location of Incident Control Centres, Divisional Command facilities and key venues to support management of the incident;
- Role of Emergency Management Teams;
- Evacuation arrangements including those for dam failure scenarios;
- Planned Relief Centres and Staging Areas;
- Initial impact assessments;
- Resupply arrangements;
- Areas where other agencies may provide first response flood capability;
- Rescue arrangements; and
- Relief and recovery transition and coordination (including cleanup).
7 Capability

7.1 Concept of Operations
At the State tier, the Victoria State Emergency Service will act as the Control Agency for the response to a flood event. Other agencies will support operations as detailed in this Plan. The Emergency Management Commissioner may vary this arrangement in consultation with Victoria State Emergency Service and the State Response Controller.

Control and coordination of a flood event should be carried out at the lowest effective level. The State Response Controller shall consult with the Regional Controller and the State Control Team to determine the most appropriate structure to manage the event.

There may be multiple consequential emergencies resulting from a flood (e.g. fire, building collapse, hazmat). Incident Controllers shall therefore be appointed from appropriate support agencies to lead incident control at the incident site based on the dominant consequential emergency (e.g. a building collapse).

Controllers at all times will ensure the occupational health safety of emergency service personnel; this includes ensuring that adequate risk treatments are implemented in the event of secondary flood effects.

As the Control Agency for flood, Victoria State Emergency Service has the responsibility to issue warnings to the potentially affected community and to other agencies.

7.2 Strategic Response Planning
On receipt of advice from the Bureau of Meteorology of the potential for significant flooding the Emergency Management Commissioner, Victoria State Emergency Service and all agencies with responsibilities in the management of flooding will collectively plan for the integrated management of the impact and consequences at the State and Regional tiers through the State, Regional and Incident Emergency Management Teams. Actions may include:

- Establishing the control structure for managing the event;
- Providing consistent emergency warnings and information to the community;
- Implementation of evacuation and emergency relief plans;
• Confirming agencies at all tiers are activated and appropriate response arrangements are in place;
• Identifying the likely consequences of the flood event 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 assistance;
• Ensuring that flood mitigation structures have been checked and any issues identified;
• 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 from key support agencies to the State Control Centre and Regional Control Centres, where appropriate;
• Arranging for regular meetings of the State, Regional and Incident Emergency Management Teams; and
• Providing whole-of-government situation reports to relevant Government Ministers.

7.3 Access to Flood Intelligence

Intelligence Unit/s will be established comprising members of the Department of Environment, Land, Water and Planning; Catchment Management Authorities; Victoria State Emergency Service and private technical specialists. The Intelligence Unit shall use available sources of flood information, including relevant studies and mapping and established networks such as Local Government, Flood Wardens and local observers to provide information on possible predicted flood consequences to inform public information and response actions.

The Victoria State Emergency Service has developed agreements with a number of engineering consulting firms to deliver technical services to support the intelligence units. The Victoria State Emergency Service SOP 61 outlines the procedure for accessing technical services during operations.

For high impact weather events the Bureau of Meteorology shall provide a meteorologist at the State Control Centre to provide weather briefings including ongoing liaison and state teleconferences as required. When staffed, the State Control Centre meteorologist shall be the primary contact for weather information from the Bureau of Meteorology.

The Department of Environment, Land, Water and Planning and Catchment Management Authorities in partnership with Municipalities shall coordinate the collection, collation, analysis, interpretation and dissemination of post-flood extent and survey levels, and ensure that relevant information is available through the initial impact assessment process.
7.4 Access to Mapping Products

Victoria State Emergency Service mapping products are available at each Incident Control Centre, the EM Knowledge Portal and the State Control Centre Portal. Mapping includes flood inundation mapping and flood travel time schematics.

7.5 Local Knowledge

The community and other organisations can provide valuable local knowledge about incidents and how they may evolve. This information is commonly referred to as local knowledge.

It is essential that communications pathways are created and maintained to ensure appropriate local knowledge can be captured before, during and after incidents.

As an incident escalates from local control to a larger incident management structure it is essential that local knowledge capability is retained within the overall structure.

Consideration will be given to incorporating people with relevant local knowledge into relevant roles within an Incident Management Team.

The Victoria State Emergency Service has developed a Local Knowledge Policy which outlines key strategies for incorporating local knowledge into the management of flooding, and can accessed at: www.ses.vic.gov.au/em-sector/em-planning/local-knowledge

7.6 Community Information and Warnings

The Victoria State Emergency Service acknowledges that community information and warnings are a key operational priority to ensure timely community preparedness can occur.

Victoria State Emergency Service shall provide the community with information regarding:

- the Bureau of Meteorology flood predictions,
- current flood situation,
- likely future flood consequences,
- actions required to protect life and property,
- how to access further information about flooding, and
- how to obtain emergency assistance.

Where possible local input will be sought to inform messages to the community.

VicRoads will coordinate information regarding the closure of roads and will communicate this to Victoria State Emergency Service and the community.

Department of Health and Human Services will coordinate information regarding public health and safety precautions.
Dependent upon imminent threat and/or potential consequences, the Victoria State Emergency Service will consider use of the Flood and Storm Information Line (1300 842 737), hosted by the Department of Environment, Land, Water and Planning Customer Service Centre for provision of public information. Multiple methods will be used to disseminate flood update information to the community and community emergency warnings may be disseminated through broadcast media including ABC radio, Sky, commercial media and community media outlets in accordance with the formal agreements.

Flood Warning and Bulletins will be made available through on the Bureau of Meteorology’s website www.bom.gov.au and VicEmergency website www.emergency.vic.gov.au and social media including Facebook and twitter.

7.7 Evacuation

Evacuation is a risk management strategy, which may be used as a means of mitigating the effects of an emergency on a community. It involves the movement of people to a safer location. However, to be effective it must be correctly planned and executed.

In Victoria, evacuation is largely voluntary. The Incident Controller makes a recommendation to evacuate and it is the choice of individuals as to how they respond to this recommendation. However, in particular circumstances legislation provides some emergency service personnel with authority to remove people from areas or prohibit their entry e.g. Coroners Act 2008 (sections 37(2), 37(3) & 38(1)).


Some special evacuation considerations exist in specific environments which are detailed below.

7.7.1 Levee Environments

Levees are flood mitigation structures which aim to reduce flood frequency by creating a barrier between floodwaters and elements at-risk. Levees have been used across Victoria in an attempt to reduce flood damages and enhance public safety.

Levee owners / operators are responsible for the maintenance and operation of levees. Monitoring of a levee is the responsibility of levee owners / operators. Best practice guidelines for levee management are available at www.delwp.vic.gov.au/water/floods-and-floodplains/floodplain-management

All levees, however, unless designed for Probable Maximum Flood events, will ultimately be over-topped by events larger than their design events, or possibly fail through lack of maintenance, inadequate construction or unforeseen circumstances.
Since the performance of a levee that is formally maintained cannot be assured after its design height or design specifications are exceeded, the design height or design specifications should be used as the trigger for evacuation when a levee is in danger of over-topping. For levees that are not formally maintained there are no guarantees that a levee will hold when tested by a flood.

Augmentation of levees through temporary means (e.g. sandbagging) cannot be considered as alternatives to evacuation. Such works should be considered only as attempts to protect property and consideration must still be given to evacuating at-risk residents. Such works should also be undertaken only after technical advice is sought regarding their potential consequences on flooding and authority to undertake the proposed works.

Levees may be in danger of failure due to breaching and therefore must be carefully monitored to ensure any signs of piping or seepage are identified. Where such observations are made or there are concerns about the structural integrity of a levee, evacuation of the protected community should be considered. Specialist geo-technical advice may be sought regarding the stabilisation of a deteriorating levee. However, evacuation should occur and continue until a levees integrity can be assessed as safe.

Incident Controllers should always consider that no levee is flood-proof and that levees are primarily a mechanism for the protection of property, not life. Where there is potential for levee over-topping or a levee breach, evacuation must be considered.

### 7.7.2 Isolated Properties and Communities

The isolation of people is not without risk. Where it is viewed that people are unsuitable to remain in a property that may become isolated based upon predicted flood heights, they should be encouraged to evacuate. Such people may include:

- Unprepared property owners,
- People dependent upon medical care,
- Families with young children,
- People who are immobile,
- People who suffer from physical disabilities,
- People who suffer from health conditions that are likely to be exacerbated through either direct exposure or stress caused as a consequence of flooding, and
- People who are frail.
7.8 Levee Management

Levee owners / operators are responsible for the maintenance and operation of levees. Monitoring of a levee is the responsibility of levee owners / operators.

Levee owners / operators must keep the Incident Controller informed of the levees status and be prepared to provide expert advice to the Incident Controller about the design and construction of their levee.

In accordance with the State Emergency Management Control Priorities, the Incident Controller may assist levee owners to coordinate resources, both technical and physical, to provide advice and affect temporary repairs or augmentation to levees.

7.9 Management of Flooding Downstream of Dams

The Victoria State Emergency Service and the Department of Environment, Land, Water and Planning have developed arrangements for the management of flooding downstream of dams. These can be found in the State Emergency Plans section of the Emergency Management Victoria and Victoria State Emergency Service websites.

7.10 Property Protection

The Victoria State Emergency Service is the responsible agency for the control of operations to protect property from floods. Property may be protected by:

- Sandbagging to minimise entry of water into buildings;
- Encouraging businesses and households to lift or move contents; or
- Construction of temporary levees in consultation with the Catchment Management Authority, Local Government Authority and Victoria Police and within appropriate approval frameworks.

The Incident Controller shall determine the priorities related to the use of sandbags, which shall be consistent with the strategic priorities and the Victoria State Emergency Service Sandbag Policy.

If sandbags are becoming limited in supply, then priority will be given to protection of essential and key community infrastructure and heritage assets.

7.11 Flood Rescue

Under Victoria’s emergency management arrangements, rescue is considered separately to the relocation of people who are stranded or isolated by flood water. Where the waters are either fast or swift flowing and/or the people being assisted are facing actual or threatened danger of physical harm the response escalates from relocation to rescue.
Victoria Police, as the designated control agency for water rescue, coordinates rescues undertaken during flood events.

To activate water rescue services the Emergency Management Commissioner, on advice from the State Response Controller, will identify areas at risk of requiring rescue and notify the Officer in Charge of the Water Police Search and Rescue Squad to request pre-deployment of rescue resources to these areas.

In conducting rescues Victoria Police will often require assistance of appropriately trained and equipped personnel from support agencies (including Victoria State Emergency Service, Volunteer Marine Search and Rescue Organisations, the Country Fire Authority and Life Saving Victoria) to undertake flood rescue. Victoria Police coordinate with these agencies to ensure operational readiness for activation.

In significant flood events, Victoria Police will appoint a Flood Rescue Manager, who may be an officer from Victoria Police or one of the support agencies. The primary responsibilities of the Flood Rescue Manager are to:

- Coordinate all rescue activities;
- Identify and source required resources; and
- Deploy required police and support agency resources.

7.12 Resupply

Resupply is the supply of essential goods or services to a community, neighbourhood or households isolated by an emergency for the purpose of ensuring the welfare of residents in a manner that attempts to maintain existing economic networks and functions.

Communities, neighbourhoods or households can become isolated during floods as a consequence of road closures or damage to roads, bridges and causeways. Under such circumstances, the need may arise to resupply isolated communities/properties with essential items.

When predictions/intelligence indicates that communities, neighbourhoods or households may become isolated, Victoria State Emergency Service will advise businesses to ensure the continuity of supply of essential services to retailers. Households in areas of high risk should stock up on essential items well before an emergency occurs and advice may be sought at www.pantrylist.com.au

Resupply operations to emergency relief centres and individuals will be aligned to the emergency relief operation managed by emergency relief agencies (Municipalities and the Department of Health and Human Services). Supporting agencies may be requested to assist with performing logistics functions through Emergency Management Team arrangements.

Victoria State Emergency Service can support isolated communities through assisting with the transport of essential items to isolated communities.
7.13 Energy

The Department of Environment, Land, Water and Planning will work with the Victoria State Emergency Service to identify key energy assets (power, gas and liquid fuels) on floodplains.

When predictions/intelligence indicates that communities, neighbourhoods or households may have their energy supply disrupted, the providers of essential services will lead the communications on service outages both individually and through established industry protocols. In events of State significance, the Victorian Government may choose to lead communications. The Victoria State Emergency Service will be informed from electricity and gas industry updates during major flood events and support these messages through its own communication processes.

7.14 Medical Response

During a flood event, the Department of Health and Human Services has a support function and coordinates the health response from their State Emergency Management Centre (SEMC).


The State Health and Medical Commander is responsible for directing health and medical resources, and the Health Commander is responsible for directing the pre-hospital response in an emergency and represent several agencies in the State Emergency Management Team. These agencies may include:

- Department of Health and Human Services,
- Ambulance Victoria,
- first aid providers,
- medical providers (including general practitioners),
- health services (public and private hospitals), and
- residential and aged care services.

In response to mass fatalities, Victoria Police will manage the disaster victim identification process and will administer the handling and investigation of deceased persons and their subsequent removal on behalf of the State Coroner.

7.15 Restricting Access

To ensure public safety, it may be necessary to restrict access to affected areas. Victoria Police will coordinate the restriction of access to these areas as directed by the Incident Controller. Traffic management will be conducted in accordance with the Joint Standard Operating Procedure for Traffic Management (Joint Standard Operating Procedure 3.10).
7.16 Initial Impact Assessment

Immediate reconnaissance of affected areas will be managed by the Incident Controller responsible for that area. Rapid reconnaissance is required to establish the extent of damage and a likely estimate of the casualty numbers so a response can be planned.

Impact assessment should include data on people (casualties, injuries, displacement), property (residences, businesses) and essential community infrastructure (roads, bridges, water, sewerage, telecommunications).

The State Response Controller will ensure that arrangements are in place for Initial Impact Assessment data to be incorporated into the operational response. Information collected may be derived from several sources, for instance multiple agency Incident Management Systems may be used for smaller type events whilst large events may require the use of dedicated Initial Impact Assessment Coordinator teams (located within ICC’s and the SCC to collate collected data).

Intelligence gathered will be used to inform situational awareness, incident action planning and recovery planning.

The Incident Controller will:

- Ensure that Initial Impact Assessment data is collected, collated and passed on to the appropriate agencies in timely manner; and
- Ensure systems are put in place to manage the collection and collation of Initial Impact Assessment data and that they are determined by the level of operation and severity of the incident.

7.17 Debris Removal

Local Government, relevant statutory authorities and individual landowners/householders will arrange for the removal of debris from sites affected by storm damage. Victoria State Emergency Service is not responsible for removing debris.

7.18 Emergency Relief

The State Emergency Relief and Recovery Plan provides the overall arrangements for management of emergency relief. Incident Controllers are responsible for ensuring that relief arrangements have been considered and implemented where required under the State Emergency Response Plan however the decision to recommend the opening of an emergency relief centre rests with Local Government in consultation with the Incident Controller.

If the Regional Emergency Response Coordinator becomes satisfied that the event exceeds the capacity of the council to perform this function, a request to the Department of Health and Human Services to coordinate emergency relief at the regional level will be made. To ensure a smooth transition of responsibility, a Council should notify the
7.19 Recovery

Recovery activities will be undertaken in accordance with the State Emergency Relief and Recovery Plan (see www.emv.vic.gov.au/policies/emmv/), and will commence during the response phase. As such, there needs to be high levels of understanding and cooperation between response and recovery organisations at each operational level (State, regional, municipal). The response function will continue at least until the following conditions are met:

- All rescues have been accomplished;
- All injured have been attended to; and
- Displaced people have been provided with shelter, and essential services.

Emergency Management Victoria supported by the Australian Red Cross is responsible for relief and recovery at the State level, and the Department of Health and Human Service supported by the Australian Red Cross is responsible for coordinating relief and recovery at the regional level. At the local level Municipal Councils are responsible for coordinating relief and recovery.
### Appendix A – Roles and Responsibilities of Supporting Agencies

<table>
<thead>
<tr>
<th>Agency</th>
<th>Responsibilities</th>
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</table>
| **Ambulance Victoria**  | • Provide Health Commander(s) to the Emergency Management Team/Incident Management Team under the State Health Emergency Response Plan.  
                           | • Continue response to emergency medical ‘000’ calls in altered environment  
                           | • Support relocation/evacuation of health and aged care facilities  
                           | • Treat sick and injured people, including the provision of pre-hospital care and transport                                               |
| **Australian Red Cross**| • Support Victoria Police with the registration of evacuees  
                           | • Support relief and recovery operations                                                                                                         |
| **Bureau of Meteorology (BOM)** | **Preparedness**  
                           | • Support Victoria State Emergency Service in the exercising of Flood Plans  
                           | • Oversee the development of flood warning systems in conjunction with Victoria State Emergency Service, DELWP, CMA’s, Water Authorities, Municipalities and other agencies.  
                           | • Assist with flood education programs  
                           | **Response**  
                           | • Act as the flood prediction agency for Victorian catchments with the exception of Melbourne Metropolitan catchments (Yarra, Maribyrnong, Westernport, Dandenong Creek, Werribee, Diamond Creek, Merry Creek, Kororoit Creek and Plenty River) where Melbourne Water is the prediction agency.  
                           | • Formulate and issue official forecasts and warnings for:  
                           | • River basins (Flood Watches)  
                           | • Key locations on rivers and creeks (Flood Warnings)  
                           | • Weather forecast districts (Severe Weather and Severe Thunderstorm Warnings)  
                           | • Coastal areas forecasts districts (Severe Weather Warnings)  
                           | • Display near real time rainfall and river level data via the internet |
Country Fire Authority (CFA)

- Support incident management
- Provide access to ICC facilities
- Support property protection
- Support gathering of on ground real time intelligence
- Support the Initial Impact Assessment process
- Support emergency relief agencies with the resupply of isolated properties and/or communities
- Support the warning of the at-risk communities
- Support Victoria Police with evacuations
- Provide resources for pumping floodwater out of buildings and from low-lying areas
- Assist with clean up operations, including the hosing out of flood affected properties
- Coordinate the deployment of fire resources to communities if access is expected to be lost
- Assist with mapping
- Respond to incidents involving orphan waste (such as chemical drums floating downstream)
- Support flood rescue operations where training and equipment are suitable
- Provide personnel to manage aircraft including airbase management and provision of air observers
- Contribute to flood emergency planning

Catchment Management Authorities (CMA)

- Preparedness
- Develop and periodically review regional floodplain management strategies in partnership with local government authorities, Victoria State Emergency Service and local communities
- Provide technical support to local government authorities when they undertake flood studies
- Collect and collate flood data
- Provide input to local governments planning schemes
- Advise local government and other authorities on planning permits referrals, building issues and infrastructure management
- Provide flood advice to Victoria State Emergency Service, local government and the community in general
- Declare flood levels under section 203 of the Water Act where appropriate
- Assist with flood emergency planning
- Assist with exercising of flood emergency plans
- Response
- Monitor significant flood events and coordinate the collection of flood data in conjunction with Department of Environment, Land, Water and Planning
- Provide flood intelligence advice to Victoria State Emergency Service through participation in the intelligence unit
- Recovery
- Assist the development of regional plans for flood recovery of waterway assets
- Prioritise, develop plans and deliver works in accordance with principles defined in Victorian Waterway Management Strategy, to restore waterways damaged by floods if they create an immediate danger to Catchment Management Authority works and public assets
<table>
<thead>
<tr>
<th><strong>Department of Education and Training (DET)</strong></th>
<th><strong>Response</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Provision of on-site assistance and support for management of local issues involving students</td>
<td>• Through the State Health Emergency Response Plan coordinate deployment of medical personnel under the direction of the State Health and Medical Commander</td>
</tr>
<tr>
<td>• Management of closure and evacuation of schools and early childhood services</td>
<td>• Provide advice on public health consequences via the Chief Health Officer to Incident Controller</td>
</tr>
<tr>
<td>• Support the Initial Impact Assessment process</td>
<td>• Support the Initial Impact Assessment process</td>
</tr>
<tr>
<td>• Provision of support for school communities through allied health and welfare staff.</td>
<td>• Coordinate emergency relief and recovery at Regional level</td>
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<thead>
<tr>
<th><strong>Department of Health and Human Services (DHHS)</strong></th>
<th><strong>Response</strong></th>
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<tbody>
<tr>
<td>• Through the State Health Emergency Response Plan coordinate deployment of medical personnel under the direction of the State Health and Medical Commander</td>
<td>• Control agency for incidents involving retail food contamination, food/drinking water contamination, human illnesses/epidemics, radiological substances and biological materials</td>
</tr>
<tr>
<td>• Provide advice on public health consequences via the Chief Health Officer to Incident Controller</td>
<td>• Support service delivery to affected individuals, groups and/or communities</td>
</tr>
<tr>
<td>• Support the Initial Impact Assessment process</td>
<td>• Provision of advice in relation to potable water quality in a flood emergency</td>
</tr>
<tr>
<td>• Coordinate emergency relief and recovery at Regional level</td>
<td><strong>Recovery</strong></td>
</tr>
<tr>
<td>• Control agency for incidents involving retail food contamination, food/drinking water contamination, human illnesses/epidemics, radiological substances and biological materials</td>
<td>• Coordinate recovery planning and management at Regional levels</td>
</tr>
<tr>
<td>• Support service delivery to affected individuals, groups and/or communities</td>
<td>• Coordinate provision of personal support (psychological first aid) at incident sites and across the community</td>
</tr>
<tr>
<td>• Provision of advice in relation to potable water quality in a flood emergency</td>
<td>• Provide community information and facilitate community redevelopment programs</td>
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<tr>
<th><strong>Recovery</strong></th>
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<tbody>
<tr>
<td>• Coordinate recovery planning and management at Regional levels</td>
<td>• Support councils and community recovery committees in recovery planning and managing recovery activities</td>
</tr>
<tr>
<td>• Coordinate provision of personal support (psychological first aid) at incident sites and across the community</td>
<td>• Provide support, advice, information and assistance to affected individuals, communities, funded agencies and municipal councils</td>
</tr>
<tr>
<td>• Provide community information and facilitate community redevelopment programs</td>
<td>• Assist with provision of temporary accommodation</td>
</tr>
</tbody>
</table>
Preparedness

- Assist Victoria State Emergency Service to identify infrastructure at-risk of flooding for incorporation into planning and intelligence
- Develop awareness in agricultural industries regarding environmental emergencies and risk management planning
- Develop awareness amongst animal owners and agencies regarding planning for and responding to animal welfare needs in an emergency

Response

- Provide advice about the disposal and rehabilitation of livestock
- Provide advice on potential animal welfare issues and arrangements in place for their management
- Coordinate the provision of emergency animal welfare services as per the Victorian Emergency Animal Welfare Plan
- Support the Initial Impact Assessment process
- Facilitate the provision of skilled personnel to provide engineering advice regarding damaged transport infrastructure
- Provide information regarding the status of the transport network and associated infrastructure
- Facilitate the provision of transport capabilities when requested to support evacuation, passenger transport and logistics purposes
- Responsible for marine pollution response

Recovery

- Assess losses of agricultural assets and livestock, and needs of affected persons and communities
- Advise individuals, communities and government agencies on re-establishment of rural enterprises or alternative strategies for economic relief
- Administer specific relief subsidies
- Advise councils on the disposal of dead or maimed stock.
- Advise distribution bodies (e.g. VFF) on needs for donated fodder.
Preparedness
- Manage and maintain contracts for rain and river level gauges used for flood forecasting and warning on behalf of the owners (typically local government, water corporations other than Melbourne Water and CMAs)
- Contribute to flood emergency planning
- Overview and revision of the Victorian Floodplain Management Strategy
- Formulate state government policy and regulation regarding Dam Safety
- Administration of the dam safety provisions in the Water Act 1989
- Approve regional floodplain management strategies
- Coordinate assessment of applications for funding of high priority flood investigations and flood mitigation works
- Support Victoria State Emergency Service through the development of and provision of flood intelligence
- Assist with flood education programs
- Assist with the exercising of flood emergency plans

Response
- Provide access to BoM to its rainfall and river level networks
- Provide access to Incident Control Centre facilities
- Support the Initial Impact Assessment process
- Support emergency relief agencies with the resupply of water and wastewater services to isolated properties and/or communities
- Support communication of warnings to at-risk communities
- Provide advice regarding levees
- Support property protection operations
- Assist resources for pumping floodwater out of buildings and from low-lying areas
- Monitor significant flood events and coordinate the collection of post flood extent data in conjunction with Victoria State Emergency Service, CMAs and local government
- Advise the Minister for Water on flood events and damages
- Support incident management
- Assist with mapping
- Provide personnel to manage aircraft including airbase management and provision of air observers
- Provide advice to Victoria State Emergency Service and Victoria Police on water assets and services
- Control Agency for Dam Safety
- Provide advice regarding dam safety incidents
- Provide advice regarding major power and energy outages including any known need to disconnect electricity or gas
- Provide advice regarding the timetable for restoration of services as available
- Assist with the identification of interdependencies between flood damage and utility services

Recovery
- Assist in the assessment of natural disaster relief claims for restoration of flood damage to public assets

Emergency Services Telecommunications Authority (ESTA)
- Advise Triple Zero of flood warnings
- Provide facilities for Emergency Management Liaison Officer (EMLO)
- Implement staffing arrangement to manage surge for an imminent event
| **Environment Protection Authority (EPA)** | • Assess the environmental impact of the emergency  
• Determine practical measures to protect the environment  
• Advise emergency services on the properties and environmental impacts of hazardous materials  
• Ensure that appropriate disposal methods are adopted for detritus and waste  
• Implement the Community Environmental Trauma Protocol when required |
| **Levee Owners/Managers** | • Maintain and operate levee systems  
• Provide advice regarding condition of levees and locations of potential problems identified  
• Provide information about the operation of levees and information regarding consequences of its overtopping or failure to Victoria State Emergency Service and floodplain risk management agencies  
• Monitor levees and provide the Victoria State Emergency Service Incident Controller with updates regarding the status of levee |
| **Life Saving Victoria** | • Support Victoria State Emergency Service with the warning of at-risk communities  
• Support flood rescue operations where training and equipment are suitable |
| **Melbourne Water Corporation** | **Preparedness**  
• Assist with exercising of flood emergency plans  
• Maintain rain and river level gauges used for flood forecasting and warning  
• Undertake flood risk mapping, maintain drainage and flood protection infrastructure  
• Develop and maintain flood warning systems in conjunction with BoM, Victoria State Emergency Service and other state and local agencies  
• Partner with Victoria State Emergency Service for community education programs |
| **Response** | • Provide flood predictions for key forecasting locations within Melbourne Metropolitan catchments (Yarra, Maribyrnong, Westernport, Dandenong Creek, Werribee, Diamond Creek, Merry Creek, Kororoit Creek and Plenty River)  
• Manage and operate a flood-warning network on major rivers and creeks and provide information and access to rainfall and river level gauges to the Bureau of Meteorology  
• Provide rainfall and river level data on the internet  
• Provision of emergency works to alleviate flooding and clearance of Melbourne Waters drainage assets after flooding has occurred  
• Support the Initial Impact Assessment process  
• Implement crisis and incident management plans when assets fail to perform their function (water supply and sewerage)  
• Provide information on impact to water assets or services |
Metropolitan Fire Brigade (MFB)

- Provide access to ICC facilities
- Support incident management
- Support initial impact assessments
- Support the warning of at-risk communities
- Support Victoria Police with evacuations
- Provide resources for pumping floodwater out of buildings and from low-lying areas
- Assist with cleanup operations, including the hosing out of flood-affected properties
- Coordinate the deployment of fire resources to communities if access is expected to be lost
- Respond to incidents involving orphan waste (such as chemical drums floating downstream)
- Assist with mapping
- Support flood rescue operations where training and equipment are suitable
- Provide a swift water capability
<table>
<thead>
<tr>
<th>Municipal Councils</th>
<th>Preparedness</th>
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<tbody>
<tr>
<td></td>
<td>• Assist Victoria State Emergency Service with the development of Municipal Flood Emergency Plans where flood risks have been identified</td>
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<td></td>
<td>• Assist with and contribute to flood education programs</td>
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<td></td>
<td>• In partnership with the Victoria State Emergency Service exercise Municipal Flood Emergency Plans</td>
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<td></td>
<td>• Maintain Council owned rain and river level gauges used for flood forecasting and warning</td>
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<tr>
<td>Response</td>
<td>• Provision of resources as available and needed by the community and response agencies</td>
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<tr>
<td></td>
<td>• Support the Initial Impact Assessment process</td>
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<tr>
<td></td>
<td>• Provision of engineering advice</td>
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<td></td>
<td>• Provide access to Bureau of Meteorology, to rainfall and stream data used for flood forecasting and warning</td>
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<tr>
<td></td>
<td>• Provision of facilities for emergency services staging areas</td>
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<td></td>
<td>• Support when requested and wherever possible with the following:</td>
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<tr>
<td></td>
<td>• warning of at-risk communities</td>
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<td></td>
<td>• reconnaissance / initial impact assessment of areas likely to be affected by flooding</td>
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<td></td>
<td>• partial/full road closures and determination of alternative routes</td>
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<td>• property protection and flood mitigation including provision of resources</td>
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<td></td>
<td>• construction of temporary levees</td>
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<td>• Co-ordination of the provision and operation of emergency relief (includes catering, emergency relief centres, emergency shelters and material needs)</td>
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<td>• Clearance of blocked drains and local roads, including tree removal</td>
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<td></td>
<td>• Assist with debris removal</td>
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<td></td>
<td>• Assist with the provision of plant and skilled operators</td>
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<td></td>
<td>• Support to VicRoads for partial/full road closures and determination of alternative routes</td>
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<tr>
<td>Recovery</td>
<td>• Provision of information services to affected communities</td>
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<td>• (e.g. using information lines, newsletters, community meetings and websites)</td>
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<td></td>
<td>• Provision and staffing of Recovery/Information Centre(s)</td>
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<td></td>
<td>• Formation and leadership of Municipal/Community Recovery Committees</td>
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<tr>
<td></td>
<td>• Post-impact assessment — gathering and processing of information</td>
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<td></td>
<td>• Survey and determination regarding occupancy of damaged buildings</td>
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<td></td>
<td>• Environmental health management — including food and sanitation safety, vector control, such as removing dead animals (domestic, native or feral) from waterways</td>
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<tr>
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<td>• Oversight and inspection of rebuilding/redevelopment services</td>
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<td></td>
<td>• • Provision and/or co-ordination of spontaneous volunteers</td>
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<td>• • Provision of personal support services (e.g. Counselling, advocacy)</td>
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<td>• • Co-ordination of clean up activities, including disposal of dead animals (domestic, native and feral)</td>
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<td>• • Provision/co-ordination of temporary accommodation</td>
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<tr>
<td></td>
<td>• • Repair/restoration of infrastructure (e.g. Roads, bridges, sporting facilities, public amenities)</td>
</tr>
</tbody>
</table>
### Parks Victoria
- Control agency for waterway pollution within its operating area
- Support agency for emergency flood situations within its parks and reserves
- Support incident management
- Rehabilitation of flora and fauna affected by an emergency within its parks and reserve
- Clearing and restoration of roads, bridges and other assets within its parks and reserves
- Close and evacuate at risk camping grounds in National Parks
- Provide support to flood warning agencies in streamlining the process of approvals for flood warning network installations on Parks Vic land

### VICROADS
- Manage road closures and diversions
- Undertake traffic management planning
- Provide information to the Emergency Management Team and the community about flooded roads and road closures
- Provide skilled personnel to provide engineering advice regarding damaged structures
- Support the Initial Impact Assessment process
- Assist with the communication of warnings and information provision to the public through the use of variable message signs
- Provide engineering assistance and advice
- Clear debris from VicRoads managed roads
- Assist with the provision of plant and skilled operators

### Victoria Police
- Control Agency for search and rescue on land and Victorian waters (including water rescue from floodwaters)
- Coordinate evacuation in consultation with Incident Controller
- Coordinate USAR resources in consultation with Incident Controller
- Coordinate registration of evacuees – with support from the Australian Red Cross
- Coordinate public enquiry system for disaster victims
- Coordinate disaster victim identification
- Assist with media management
- Traffic management planning
- Support Initial Impact Assessments
- Disseminate warnings to vessels
- Support with the warning of at-risk communities

### Victorian Water Authorities (other than Melbourne Water)

#### Preparedness
- Assist with exercising of flood emergency plans
- Maintain rain and river level gauges used for flood forecasting and warning

#### Response
- Provide skilled personnel to provide engineering advice regarding damaged structures where available
- Support the Initial Impact Assessment process
- Provide information on impact to water assets or services
- Provide access to BoM to rainfall and stream level gauges used for flood forecasting and warning
- Performance and monitoring of gauges
- Activities as detailed above regarding Dam owners/operators
- Assistance of expert personnel to support incident
- Management teams where available
- Assist with flood emergency planning
### Volunteer Marine Search and Rescue Services

- Support the warning of the at-risk communities
- Support Victoria Police with the evacuation of at-risk communities
- Support marine property protection tasks
- Support emergency relief agencies with the resupply of isolated properties and/or communities
- Support water rescue operations where training and equipment are suitable (note: that operations involving service vessels will typically be restricted to navigable waters on coastal estuaries and lakes).