State Emergency Management Plan, Flood Sub-plan

Edition 3.0

SES

VICTORIA
State Government

Acknowledgment of Traditional Owners

The Victoria State Emergency Service respectfully acknowledges the Traditional Owners of the land and waters. We pay our respects to Elders past, present and emerging, and are committed to working with Aboriginal and Torres Strait Islander communities to achieve a shared vision of safer and more resilient communities.

Authority

This plan has been endorsed by the State Crisis and Resilience Council (SCRC) as a sub-plan to the State Emergency Management Plan.

Authorised and published by
Authorised and published by the Victorian GovernmentMelbourne February 2022

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Executive summary

The Victoria State Emergency Service (VICSES) led the preparation of this State Emergency Management Plan (SEMP) – Flood Sub-plan.

This SEMP – Flood Sub-plan replaces the State Emergency Response Plan (SERP) – Flood Sub-Plan September 2020. The plan was prepared with regard to the SEMP, and the Guidelines for Preparing State, Regional and Municipal Emergency Management Plans.

The plan acknowledges emerging risks arising from the significant flood events in June 2021, October 2021, November 2021 and December 2021. A comprehensive update of the plan will be completed in 2022 to integrate relevant findings from June 2021 Extreme Weather Review.

The plan includes provision of current and accurate information relating to:

- Any VICSES changes in organisation, agency roles and responsibilities.
- Evolution of the sector in relation to multi-agency and cross border arrangements.
- Operational response in a complex and multi-hazard environment that has impacted Victoria since the previous version published in 2016.
- Alignment with arrangements contained in the SEMP approved in October 2021.

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1. Introduction

1.1 Purpose

This plan outlines the Victorian arrangements for managing flood across all emergency management phases, and replaces the State Emergency Response Plan – Flood Sub-Plan Edition 2 published in September 2021.

The plan's purpose 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. This supports a comprehensive, integrated and coordinated approach, and reflects a shared responsibility for flood related emergency management.

1.2 Objective

Victoria's state-level emergency risk assessment, Emergency Risks in Victoria, was published in 2020, and set Victoria's emergency risk profile. Floods were assessed as a 'state significant risk', meaning significant floods were assessed as being a critical and credible scenario for the state.

In alignment with the SEMP, this plan contextualises the current arrangements, roles and responsibilities for flood mitigation, preparedness, response (including relief) and recovery.

VICSES, on behalf of the Emergency Management Commissioner (EMC), coordinated the development of this plan in conjunction with:

- Department of Environment, Land, Water and Planning (DELWP).
- Bureau of Meteorology (BOM).
- Melbourne Water.
- Catchment Management Authorities (CMA's).
- Department of Health.
- Department of Families, Fairness and Housing (DFFH).
- Local Government Victoria.
- Municipal Association of Victoria.

Consultation was conducted with a range of other emergency management agencies.

1.3 Scope

This plan is predominantly in relation to flooding inundation caused by rivers and river systems including their catchments and floodplains. Flash flooding and flooding inundation caused by other natural events are out of scope for this plan and are addressed in the SEMP Storm Sub-plan.

The scope of this plan includes:

- Description of potential and observed consequences of floods to the social, built, economic and natural environments.
- The policy, practices, and programs in place to mitigate flood risks and build community resilience before, during and after a flood event.
- Where relevant, the arrangements and practices for managing flood response and positions with accountability and the agencies responsible for managing specific strategies.
- The multi-agency management arrangements at the national, state, regional and local levels.
- Links to sources of information where the reader can obtain further detail.

References are made to the SEMP where necessary to avoid duplication.

It does not include detail about the operational activities of individual agencies.

1.4 Authorising environment

In 2018, amendments to the *Emergency Management Act 2013* (EM Act 2013) were passed through parliament, requiring the EMC to arrange for the preparation of a state emergency management plan (SEMP).

The SEMP provides for an integrated, coordinated, and comprehensive approach to emergency management at the state level. It contains provisions for the mitigation of, response to and recovery from emergencies (before, during and after), and specifies the roles and responsibilities of agencies in relation to emergency management.

Under the EM Act, floods are a Class 1 emergency. A Class 1 emergency is a major fire or any other major emergency where either Country fire Authority (CFA), Fire Rescue Victoria (FRV) or VICSES is the control agency.

The EM Act defines a major emergency as an event which is:

- A large or complex emergency (however caused), which –

  (i) Has potential to cause or is causing loss of life and extensive damage to property, infrastructure, or the environment; or

  (ii) Has the potential to have or is having significant adverse consequences for the Victorian community or a part of the Victorian community; or

  (iii) Requires the involvement of two or more agencies to respond to the emergency; or
- A Class 1 emergency.
- A Class 2 emergency.

This plan aligns with the SEMP and was prepared with regard to the *Guidelines for Preparing State, Regional and Municipal Emergency Management Plans*; and was endorsed by the State Crisis and Resilience Council (SCRC) on 17 February 2022. This plan was published and took effect 01 March 2022.

Other relevant legislation includes:

- *Emergency Management Act 1986 and 2013.*
- *Victoria State Emergency Service Act 2005.*
- *Essential Services Act 1958.*
- *Planning and Environment Act 1987.*

- *Local Government Act 1989.*
- *Meteorology Act 1955 (Commonwealth).*
- *Water Act 1989.*
- *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

This plan recognises that emergency management and supporting communities to be safer and more resilient, is the shared responsibility of all Victorians, not just the emergency management sector.

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 mitigation of, response to and recovery from floods.

1.7 Exercise 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 Australian Institute for Disaster Resilience (AIDR) Managing Exercises Handbook, available via the AIDR website.

1.8 Review

This plan is being reviewed in 2022, due to expected emergency management sector changes relevant to flood, including the delivery of the June 2021 Extreme Weather Review.

This plan will then be reviewed and updated at least every three years thereafter, with consideration given to earlier revisions as required to ensure the plan provides for a current, integrated, coordinated, and comprehensive approach to storm emergencies, and consideration of potential escalation of climate-related hazards.

Earlier reviews may be triggered by this plan being applied in a major emergency or exercise, or following a substantial change to relevant legislation or arrangements, including the SEMP.

1.9 How to read this plan

This plan should be read in conjunction with the SEMP and SEMP Storm Sub-plan.

Linkages and hyperlinks

This plan refers to a range of existing resources relating to floods, including documents and websites. This plan does not seek to duplicate the information contained in these resources and instead provides links to where the reader can obtain further information.

For more operational or sensitive information, a log-in may be required, such as for documents saved on the Emergency Management Common Operating Picture, (EM-COP) including Joint Standard Operating Procedures (JSOPs).

Documents or resources that are referred to frequently throughout this plan (such as the SEMP) are not hyperlinked in each instance.

All hyperlinks were accurate at time of publication and currency of the linked content remains the responsibility of the host agency.

Consequence management

Secondary consequences for floods can be complex and compounding. The arrangements for managing consequences of floods are contained in relevant SEMP Sub-plans, including, but not limited to:

- SEMP State Storm Sub-Plan.
- State Health Emergency Response Plan.
- SEMP Energy Sub-Plan.
- SEMP Public Transport Disruption Sub-Plan.
- SEMP Bushfire Sub-Plan.
- Roles and Responsibilities outlined within the SEMP.

Where necessary, VICSES has prepared Regional Flood Emergency Plans (RFEP), Municipal Flood Emergency Management Plans (MFEPs), and Municipal Flood and Storm Emergency Management Plans (MFSEPs).

Regional and Municipal Flood Emergency Plans can be found via the VICSES website.

In the case of a concurrent emergency (e.g. COVID-19 or an energy disruption), the arrangements detailed in this plan may need to be adjusted as required.

2. The Emergency context

2.1 Risks

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 five 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 floodwater 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. Research by BOM has identified that intense, short duration rainfall events in Victoria have become more frequent over the past 60 years. These events are also becoming more intense, particularly in the warm season.
- **King tide:** The term 'king tide' is widely used to describe an exceptionally high tide. These tides are a natural and predictable part of the tidal cycle. The time of year they occur varies by location and between years. They can have very noticeable effects where the ocean meets the land at beaches, estuaries, harbours, and other coastal locations. King tides can increase the impact and extent of riverine flooding. Increases in mean sea level will continue to contribute to a significant increase in the risks associated with king tides
- **Tsunami**: Resulting from undersea earthquakes, landslides, meteorite impacts or volcanic activity. The arrangements for the emergency management of tsunami are contained in the SEMP Tsunami Sub-plan.
- **Dam failure**: 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.
- **Snowmelt:** Snow can be thought of as a reservoir of water, waiting for enough warmth to run down the hill. When conditions warm rapidly, snow can melt quickly. When this happens, it can release volumes of water too great for the downstream river channels, causing riverine flooding. Snow cover and volume is expected to continue to decline due to climate change potentially reducing the risk of snow melt over the longer-term.

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 view the BOM website.

A major factor in this variability is the El Niño – a 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. Detailed information is provided via the BOM website.

Sustained changes in the difference between sea surface temperatures of the tropical western and eastern Indian Ocean are known as the Indian Ocean Dipole, or IOD. The IOD is one of the key drivers of Australia's climate, and can have a significant impact on rainfall. The IOD has three phases: neutral, positive, and negative. Events usually start around May or June, peak between August and October, and then rapidly decay when the monsoon arrives in the southern hemisphere around the end of spring. A negative IOD typically results in above-average winter–spring rainfall over parts of southern Australia, including Victoria, as the warmer waters off northwest Australia provide more available moisture to weather systems crossing the country.

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 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.

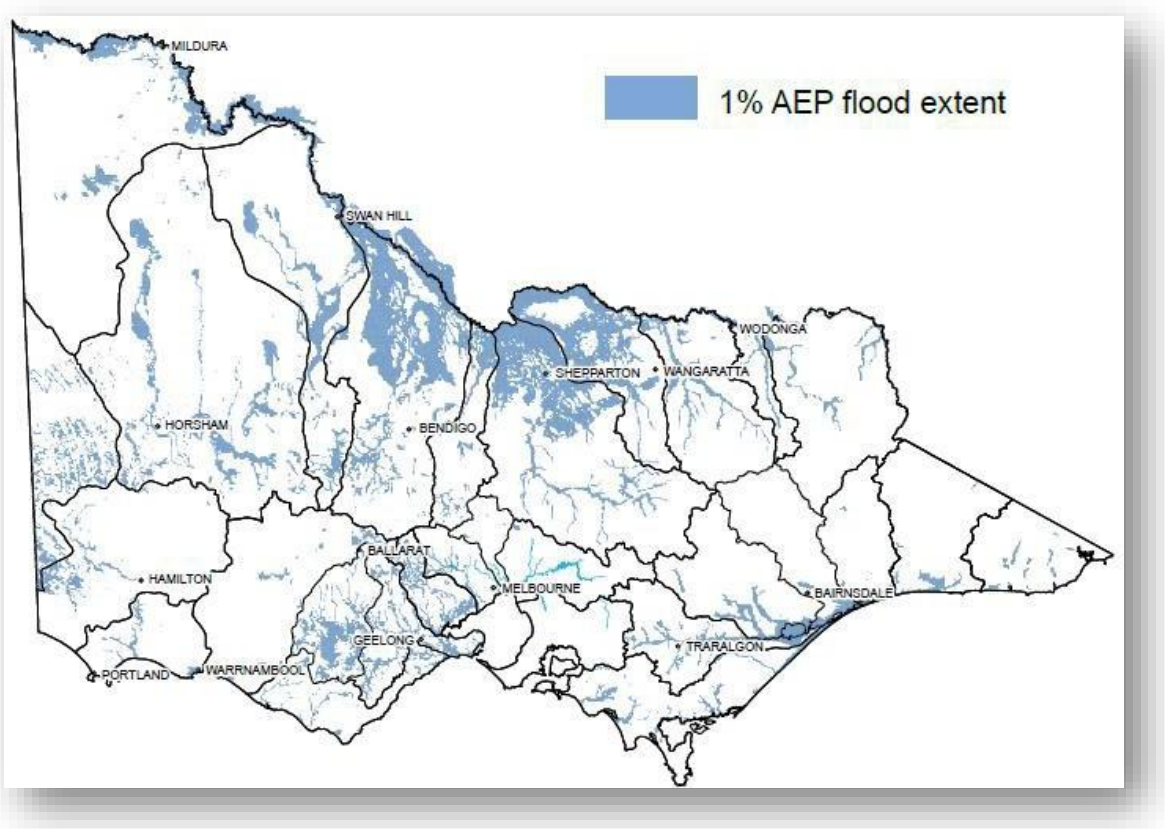

Figure 1 – Areas susceptible to 1% Annual Exceedance Probability (AEP) riverine flooding

2.2 Impacts and consequences

The direct impacts and consequences can occur across a relatively small geographic area for local flood events, through to a large geographic area for widespread riverine flooding. The indirect impacts and consequences can extend to areas considerably beyond the directly impacted areas. This is due to infrastructure and services disruptions.

Floods result in an annual average economic loss of $350m across Victoria. About 11.5% of Victoria's land mass, or 3,190,606 ha, is prone to a 1% Annual Exceedance Probability (AEP) flood. For context, this is about the twice the area burnt in the 2019/2020 Victorian bushfires.

Consequences of floods in Victoria vary but may include:

- Loss of life or serious injury.
- Damage to or loss of:
  - Key infrastructure – road, rail, public buildings.
  - Essential services – power, gas, water, wastewater, telecommunications.
  - Private property including drinking water supplies (e.g. rainwater tanks) and septic systems.
  - Industry/business.
  - Agriculture – crop and livestock.
  - Environment.
- Public and environmental health risks such as:
  - Risks to food safety – especially during power outages.
  - Elevated mosquito borne diseases.
  - Impacts to drinking water quality.
  - Carbon monoxide hazards from generators.
  - Mould.

History of floods in Victoria

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, and January – February 2011, approximately 70 of 79 Victoria's local government areas experienced flood and flood damage.

Along with the substantial impact to residential property and townships, significant loss, damage, and isolation to rural properties and farms was experienced. Damage also 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.

Flooding occurred 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.

Climate change and floods in Victoria

When rain falls, it does not all end up in our waterways. Some rainfall infiltrates into the soil, some is captured in surface depressions, some evaporates away from the surface, and a large amount transpires back to the atmosphere via plants. The hotter and drier the conditions before a rainfall event, the more water is lost before it can contribute to streamflow and flooding.

In natural areas the rain has a much better chance of being absorbed by the soils and plants and being captured within the river systems.

In urban areas flood risk is likely to increase as roads, paving and buildings preventing the water being absorbed. The resulting flash flooding caused by heavy, short-duration rainfalls may impact urban areas and infrastructure, and disrupt essential water and wastewater services.

In coastal areas, an increase in mean sea level has, and will continue to contribute to a significant increase in the risks associated with coastal erosion and flooding.

3. Managing flood emergencies

3.1 Emergency Management Priorities

The State Emergency Management Priorities are outlined in the SEMP, and guide all decisions before, during and after any emergency, and apply to all aspects of this plan.

The priorities are:

- Protection and preservation of life and relief of suffering 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.

3.2 Shared responsibilities

Flood events can have significant impacts and effect large areas. As with all hazards, flooding can also not be fully mitigated from potential impacts on the community. As such, it is imperative that there is a shared responsibility for communities to understand and take action in an emergency, and for agencies to provide information to aid this decision.

The SEMP recognises that emergency management is the shared responsibility of all Victorians, not just the emergency management sector. The ‘shared responsibility’ approach seeks to ensure:

- The interests, values, and expectations of stakeholders in, or members of, communities are understood and considered.
- Ownership of the SEMP and responsibility for its implementation is broadly shared.

Examples in the context of floods include:

- Individuals being aware of their flood risk and following advice from emergency services when responding to warnings.
- Municipal councils 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 risk assessments to gain an appreciation of flood risk.
- Engaging with the community agencies 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.
- Helping communities to recover and learn following a flood and build their resilience to future events.

Section 3.5.3 Community preparedness, sets out community engagement for preparedness.

3.3 Roles and responsibilities

The SEMP details the roles and responsibilities for flood.

3.3.1 State Crisis and Resilience Council

The State Crisis and Resilience Council (SCRC) is the peak crisis and emergency management body to the Victorian Government, and provides advice to ministers and relevant cabinet sub-committees. It is responsible for the development and implementation of whole of government emergency management policy and strategy. It does not make operational or tactical decisions.

3.3.2 Emergency Management Commissioner

Under the EM Act, the EMC has legislated management responsibilities across major emergencies. These include response coordination, ensuring effective control arrangements are established, and consequence management.

3.3.3 Victoria State Emergency Service

VICSES is the control agency for flood as defined in the roles and responsibilities section of the SEMP. Additional to the activities listed in the VICSES agency role statement in the SEMP, VICSES is also responsible for:

- Undertaking strategic planning for response.
- Provision of public information and warnings including the provision of public safety advice to the community.
- Supporting Victoria Police with evacuations.
- Rescue of persons entrapped by collapsed structures.
- Protection of property from further damage.

3.3.4 Supporting agency roles and responsibilities

A range of government and non-government agencies/organisations have the skills, expertise, and/or resources to support flood emergency response, relief, and recovery.

These agencies include:

- Emergency Management Victoria (EMV).
- Bushfire Recovery Victoria.
- BOM.
- DELWP.
- Catchment Management Authorities.
- Water corporations.
- Municipal councils.

- Victoria Police.
- Department of Health.
- Department of Families, Fairness and Housing.
- Department of Jobs, Precincts and Regions (DJPR).
- CFA.
- FRV.
- Ambulance Victoria.
- Environment Protection Authority.
- Department of Transport (DOT).

Refer to the SEMP agency role statements for further details of the roles and responsibilities that support agencies may undertake across all the emergency management phases related to floods.

3.3.5 Emergency Management Teams

Emergency Management Teams can be activated for response at each tier as follows:

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

More detailed information on emergency management teams is outlined in the SEMP.

3.3.6 Emergency Management Planning Committees

Emergency Management Planning Committees operate at the regional and municipal tiers to guide mitigation and preparedness activities.

More detailed information on emergency management planning committees is outlined in the SEMP.

3.4 Mitigation

3.4.1 Flood mitigation policy framework

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 mitigation 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 flood warning services, local and municipal flood plans, land use zoning, and building restrictions.

DELWP is responsible for policy and oversight of floodplain risk management arrangements. Implementation is carried out at the regional level though regional floodplain management strategies developed in consultation with local stakeholders and communities.

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

Refer to the SEMP Roles and Responsibilities – Mitigation for further details.

Victorian Floodplain Management Strategy

DELWP maintains the Victorian Floodplain Management Strategy (VFMS), released in April 2016. This strategy sets the policy and accountability framework for flood related mitigation activities in Victoria.

The strategy is available via the Victorian Government website.

Regional Floodplain Management Strategy

Regional Floodplain Management Strategies (RFMS) were released in 2017, and set out the implementation of flood mitigation activities for a region. There are nine RFMS aligning with CMA areas: Corangamite, Glenelg Hopkins, Wimmera, Mallee, North Central, Goulburn Broken, North East, East Gippsland, West Gippsland, and Port Phillip and Westernport.

These RFMS are available from the relevant CMAs, and from Melbourne Water for the Port Phillip and Westernport area. RFMS were developed by CMAs after a significant consultation phase with community and key stakeholders including VICSES, and were released in 2017.

3.4.2 Land use planning and building controls

Land use planning and building controls are key risk mitigation measures in Victoria by regulating land use and development, to ensure flood hazard and risk are considered and managed. They influence where growth and development occur and ensure that development can better withstand impacts. Land use planning that considers natural hazard risks is a critical mitigation measure in preventing future disaster losses in areas of new development. Working with municipal councils and CMAs, DELWP administers the land use planning and building controls system response to floods. Land use planning and building control systems are important for creating more flood resilient communities. Particularly, strategic planning, through local planning schemes is critical in setting out how settlements and rural areas will grow and change in response to the threat of flood. Building regulations ensure new buildings are constructed with regard to flood risk. Flood mapping is a key element of the land use planning and building regulatory framework. Mapping criteria identifies whether an area should be designated an Urban Flood Zone (UFZ), Floodway Overlay (FO), Land Subject to Inundation (LSIO) or a Special Building Overlay (SBO).

3.4.3 Levee management

About 98% of Victoria's 4,000 kms of levees protect rural land and are not formally managed. The VFMS states that flood mitigation infrastructure outside Melbourne Water's region that is not currently subject to formal management arrangements will remain that way, unless the relevant municipal council (through a RFMS or local assessment) determines that the infrastructure should be brought into formal management arrangements through a Water Management Scheme, or other appropriate arrangements. Historically these levees 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 municipal councils to a high standard as Water Management Schemes, and the municipal councils are expected to maintain them. However, there are 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 CMAs and DELWP. This information is being incorporated in FloodZoom, Victoria's flood intelligence platform (see section 3.4.4 for further information).

3.4.4 Flood intelligence

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

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

VICSES works closely with CMAs, DELWP, other agencies, and trusted local sources as appropriate, to ensure available sources of flood information are utilised.

DELWP maintains the FloodZoom flood intelligence platform. FloodZoom is a web-based system and is the central repository of all near real-time and historic flood data for the state. FloodZoom assists VICSES and other emergency services agencies in identifying the possible local consequences of flooding, and supports CMAs in land use planning and flood risk assessments. For significant riverine flood events, flood intelligence may be shared via EM-COP.

Inquiries regarding FloodZoom access should be directed to accounts@floodzoom.vic.gov.au.

3.4.5 Flood warning services

Flood warnings and notifications are provided by BOM, Melbourne Water, and VICSES.

BOM has a requirement under the Commonwealth *Meteorology Act 1955* (BOM Act) to warn the community with regard to extreme weather, and provide services to VICSES. The services provided by BOM are documented in its Service Level Specification for Flood Forecasting and Warning Services for Victoria (SLS), and can be found via the BOM website.

BoM is the forecasting agency for riverine flooding caused by rainfall where typical rain-to-flood times are six hours or more. The BOM service covers Victorian catchments, with the exception of Melbourne metropolitan catchments where Melbourne Water is the forecasting agency. Predictions for locations immediately downstream of dams affected by storage operations rest with storage operators, and are incorporated into BOM warnings.

BOM produce and issue the following official forecast and warning products related to flood risk:

- Severe Weather and Severe Thunderstorm Warnings, issued on land and coastal forecast districts.
- Flood watches, which are issued one to four days ahead of flood producing rain as a heads up for possible flooding at river basins level, potentially covering the whole of Victoria.
- Flood warnings, which provide predictions of river levels and/or flood impact levels (minor, moderate, major) at key river gauges for catchments with a defined flood warning service.

3.4.6 Severe Weather and Thunderstorm Warnings (BOM issued)

Severe Weather Warnings are issued by BOM when heavy rainfall and/or damaging winds are likely to, or have developed, 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.

Severe Thunderstorm Warnings are issued by BOM when severe thunderstorms are likely to, or have developed, 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 more detailed warnings are issued. These warnings depict and describe individual severe thunderstorms and their forecasted paths.

3.4.7 Flood watch (BOM issued)

BOM will issue a flood watch when the combination of forecast rainfall and catchment conditions indicates flooding is possible. A flood watch may be issued on any catchment and basin in Victoria, including those that do not have an established flood warning service. Due to the high uncertainty attached to rainfall forecast and, to a lesser extent, to the estimation of antecedent catchment conditions, a flood watch highlights a possible flood risk over a broad geographic area and time frame, rather than specific locations and times. The primary purpose of a flood watch is to provide early advice to communities and the relevant emergency service organisations of the potential flood

threat from a developing weather situation. Typically, a flood watch is issued 1 to 4 days before an anticipated flood event, depending on the confidence in rainfall forecasts. A flood watch is finalised by BOM when all catchments within its area of coverage are either covered by a flood warning, or are no longer at risk of flooding.

3.4.8 Flood warnings (BOM issued)

BOM will issue flood warnings when minor flooding or above is predicted, or has been recorded at locations specified in the SLS. Flood warnings provide predictions of flood severity (minor, moderate and major) and/or peak water levels at forecast locations (river gauges).

Flood warnings are issued closer to the time of flood impact compared to flood watches. In general, with three to 24 hours lead time, depending on catchment response behaviour, forecasting capability, and needs of emergency responders. Being issued closer to the time of expected flood impact than flood watches, usually after rain has started to fall and rivers have started to respond, flood warnings have less uncertainty than flood watches. The primary purpose of flood warnings is to inform emergency response from agencies and the community. Water level predictions made in flood warnings are based on near real-time river levels and rainfall observations (gauges and radar), forecast rainfall and assessment of catchment dryness conditions.

Flood warnings and predictions are upgraded and downgraded as a flood rises, peaks, and falls. A flood warning is finalised by BOM when all gauges within the flood warning area (catchment) have fallen below the minor flood level.

3.4.9 Flood warning services (Melbourne Water issued)

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 Philip and Westernport region, and provides flood forecasts to BOM, who disseminate official forecasts and warnings for key locations on rivers and creeks (Flood Warnings).

3.4.10 Emergency management agency issued flood warnings

Agency notifications

VICSES and BOM work in close partnership to ensure the timely notification of flood events in Victoria. VICSES implements a detailed notification process for floods, which is documented in the VICSES Standard Operating Procedures (SOPs) and in relevant EM Sector Joint Standard Operating Procedures (JSOP).

Community notifications

VICSES seeks to meet the second state emergency management priority by being proactive in early warnings to the community, regarding the potential for floods and their associated impacts.

VICSES leads the coordination of business rules that govern community notifications issued under the Australian Warning System (AWS) for flood. The business rules set triggers for the three warning levels, and are found on:

- Riverine Floods: EMCOP – Library – IMT Toolbox – IMTTB – Public Information – EMCOP Business Rules – Riverine Flood Business rules.
- Flash Floods: EMCOP – Library – IMT Toolbox – IMTTB – Public Information – EMCOP

Business Rules – Flash Flood Business rules.

- Further detail on the roles and responsibilities for community notifications for different flood events and readiness levels are outlined below.

Riverine floods

Refer to Flood Readiness and Activation Trigger Considerations (also see section 3.6.1 of the plan).

Agency command (Readiness levels 1,2,3a):

- Issuer: VICSES Regional Duty Officer (RDO) or Warnings and Advice Duty Officer (WADO) if time critical (WADO must be requested to issue community notification by RDO/ Regional Agency Commander (RAC)).
- Authorisation: VICSES RAC.

Incident Control Centre (ICC)/Regional Control Centre (RCC)/State Control Centre (SCC) activated (Readiness levels 3b, 4 & 5):

- Issuer: Information and Warnings Officer (IWO) / Public Information Officer (PIO).
- Authorisation: Incident Controller

In locations that do not currently receive a BOM flood warning service, otherwise known as unmonitored locations, community notifications maybe issued where there is a verified risk to life or property. Refer to the Riverine Flood Public Publishing Business Rules on EM-COP.

Figure 3 sets out the riverine flood community notifications issued by Victorian emergency management agencies and their alignment with BOM warnings.

Flash floods

Flash floods can occur due to severe weather or severe thunderstorms without concurrent riverine flooding. Readiness levels are for severe weather and severe thunderstorm are defined in the Storm Readiness and Activations Triggers Considerations (refer to Activation – SCC Planned Activation at EMCOP – Library – State Control (SCC) – Procedure's – Activation-SCC Planned).

VICSES flash flood community notifications are managed by VICSES RDOs and/or RACs (because of the localised impacts), but may be delegated to the Public Information Section of relevant ICCs when activated.

Agency command (Readiness levels 1,2,3a):

- Issuer: VICSES RDO or WADO if time critical (WADO must be requested to issue community notification by RDO/RAC).
- Authorisation: VICSES RAC.

ICC/RCC/SCC activated (Readiness levels 3b, 4 & 5):

- Issuer: IWO/PIO.
- Authorisation: Incident Controller

Figure 4 sets out the flash flooding community notifications issued by Victorian emergency management agencies.

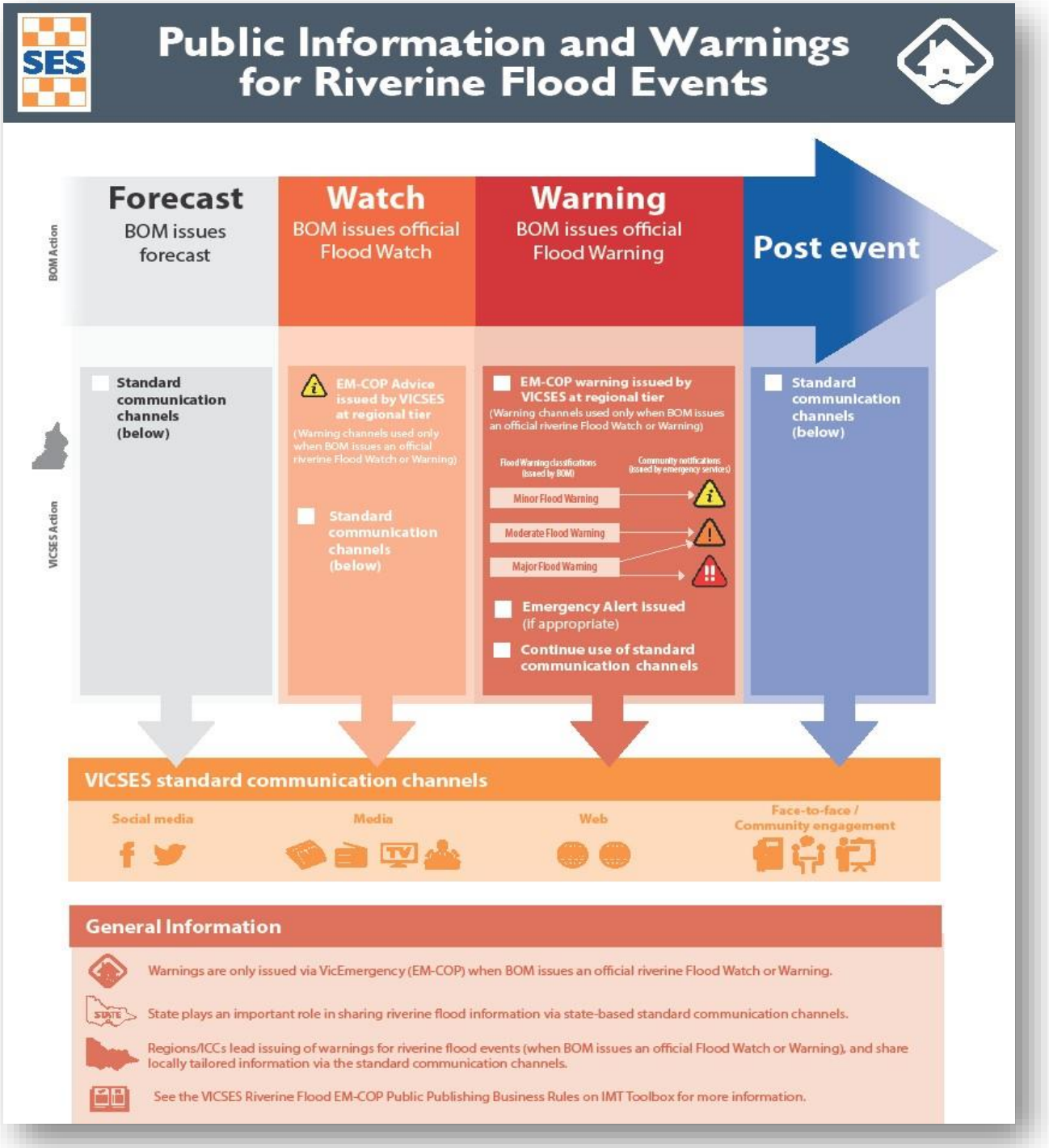

Figure 3: Riverine flood community notifications (2018)

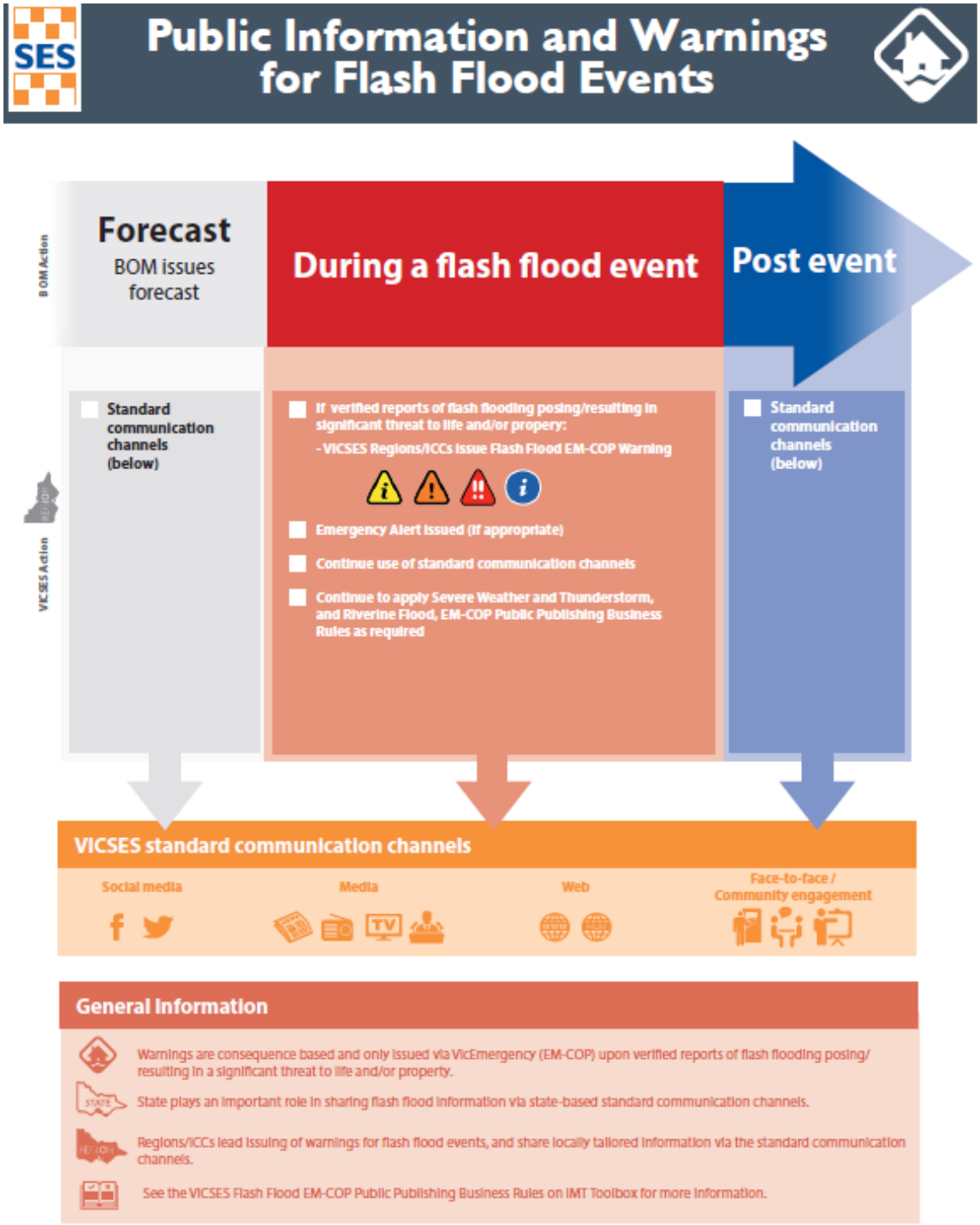

Figure 4: Flash flood community notifications (2018)

3.4.11 VicEmergency and warning channels

VICSES use the state endorsed multi-hazard warning platform, EM-COP Public Publishing, to disseminate public information and warnings to the community via VicEmergency and its associated channels.

VicEmergency warning recipients include emergency broadcasters (i.e. commercial and ABC radio) who are required to re-disseminate warning information and sound the Standard Emergency Warning

Signal (SEWS) if required, in accordance with the Emergency Broadcasting Practice Note and the agreed Memorandum of Understandings (MoU).

A range of approaches are used by VICSES to disseminate public information and warnings that are selected based on the needs of the community and the nature of the event. Examples include:

- Door knocking for evacuation of a small area if time permits.
- Emergency Alert (EA) for urgent dissemination of warnings to telephones (including mobile phones) within a specific geographic location.

Adjoining states will be consulted over public information messages if impacts have occurred in a border area.

3.4.12 VicEmergency Hotline

Community members can call the VicEmergency Hotline (1800 226 226) to access emergency information during and after major incidents in Victoria, including flood events. It also offers information to help Victorian's plan for and recover from emergencies.

The VicEmergency Hotline is staffed by operators from Monday to Friday 8:00am – 6:00pm, with opening times extended during significant emergency events. The hotline also features an automatic text to speech function, which ensures Victorians can access important emergency information outside of operator hours, at any time of the day or night, by entering their postcode.

The hotline is managed by the DELWP Customer Contact Centre. The VICSES State Agency Commander may, in consultation with the State Response Controller (SAC), request enhanced readiness and staffing in anticipation of, or in response to, an emergency event. This may include extending the operating hours of the centre beyond standard arrangements, including weekends.

3.5 Preparedness

Preparing for flood events includes developing arrangements to ensure that resources and services needed to respond can be efficiently mobilised and deployed.

Preparedness activities include:

- Identifying and assessing the risk.
- Developing policy, arrangements, and plans.
- Ensuring adequate resources, systems and processes are in place.
- Training response personnel and educating stakeholders and potentially affected industries and communities.
- Maintaining and developing expertise.
- Conducting exercises.
- Evaluating preparedness and response activities.
- Ensuring the necessary relationships, formal and informal mechanisms are in place across government and industry to support community outcomes.

The risk management approach aligns with the SEMP and outcomes and objectives of the Sendai Framework for Disaster Risk Reduction 2015–2030 and the National Disaster Risk Reduction Framework. At the state level, EMV is responsible for coordinating the state-wide emergency risk assessment published in the Emergency Risks in Victoria report.

3.5.1 Regional flood planning

Where flooding is identified through the Regional Emergency Management Planning Committee (REMPC's) Regional Emergency Risk Assessment (RERA) as a high risk to a region, VICSES will provide advice and support to the REMPC to ensure the Regional Emergency Management Plan (REMP) contains at a minimum arrangement for the response to a flood vent based on all-hazards and all-agency response.

Regional Flood Emergency Plans (RFSEP) or Regional Flood and Storm Emergency Plans (RFSEP) are prepared by VICSES for regions as warranted by the assessed flood risk. In some cases, the REMPC may adopt the prepared flood plan as a sub-plan or complementary plan to its REMP.

Flood narratives for each of the six VICSES regions has also been created in 2020 as a complementary component to the plans, providing emergency management personnel with key insights about the known high-risk flood prone locations within the region that may be impacted with over floor flooding, or have a significant risk to flooding. Note: VICSES central regions encompasses the south, east, and north west emergency management regions.

3.5.2 Municipal flood planning

Where flooding is identified through the Community Emergency Risk Assessment (CERA) as a high risk to a community, VICSES 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 based on an all-hazards and all-agency response to flooding.

Municipal Flood Emergency Plans (MFEP) or Municipal Flood and Storm Emergency Plans (MFSEP) are prepared by VICSES for municipalities as warranted by the assessed flood risk. In some cases, the MEMPC may adopt the prepared flood plan as a sub-plan or complementary plan to its MEMP.

3.5.3 Community preparedness

VICSES has developed a Community Resilience Strategy Renewal 2019-22 (the Strategy). A key and measurable outcome of the strategy is to increase the level of interest, and support behaviour change within communities, so they are more aware, informed and prepared for emergencies by supporting them to understand their risk, and the relevance of taking action before, during and after emergencies. Information can be found via the VICSES website.

Community preparedness material for flood can also be found via the VICSES website.

3.6 Response

3.6.1 Readiness

Advice to VICSES of a pending flood event will be provided by either the BOM Regional Forecasting Centre, or the SCC Weather Service. See Section 3.4.5 to 3.4.9 for details for forecasting and warning services.

The VICSES Chief Officer Operations (COO) is responsible for notifying the EMC (in accordance with JSOP3.16 Significant Event Notification). The EMC can assist through the SCC to notify State Coordination Team and the SEMT.

VICSES Flood Readiness and Activation Triggers Considerations employ the following six level readiness framework for notification and escalation arrangements in responding to floods. Readiness levels RL3 (B), RL4 and RL 5 correspond to the Very High, Severe, and Extreme respectively as defined in JSOP2.03. Refer to Figure 5.

Readiness Level	RL 1 Low to Moderate	RL 2 High	RL 3(A) Very High	RL 3 (B) VERY HIGH	RL 4 SEVERE	RL 5 EXTREME
Operations	VICSES Managed			Multi Agency (JSOP02.03)		

Figure 5: VICSES Flood Readiness and Activation Levels

When advice from BOM indicates a flood event with RL1, RL2, RL3A aligning characteristics, the VICSES COO or SAC consults with RACs to establish commensurate control and command arrangements, and advise the relevant partner agencies.

When advice from BOM indicates a flood event with RL3B and above aligning characteristics, the VICSES COO or SAC consults with the State Response Controller (SRC) and the EMC to establish commensurate control and command arrangements in accordance with SEMP and JSOP2.03.

Section 3.4.2 sets out the processes for agency notifications in readiness.

3.6.2 Concept of operations

Readiness Level 1,2 & 3A – VICSES managed

The VICSES Operations Management Manual (OMM) articulates the operational management structures and systems used by VICSES in the management of its command and control responsibilities under the *Victoria State Emergency Service Act 2005* (VICSES Act) for floods, storm, earthquake, tsunami, landslide and rescue to ensure effective and efficient management of operations.

This manual should be read in conjunction with other VICSES doctrine including state, regional and local plans, SOPs, policies and approved Joint Doctrine.

This manual is available to VICSES members on the VICSES Hub. Please contact VICSES SAC if required.

Readiness Level 3B, 4 & 5 –JSOP2.03 – Very High, Severe and Extreme

Readiness levels RL3 (B), RL4 and RL 5 correspond to the Very High, Severe, and Extreme

respectively as defined in JSOP2.03.

For these readiness levels, the SRC exercises control in accordance with the SEMP. Refer to SEMP for guidance on concept of operations when the SRC exercises control.

Refer to JSOP2.03 for the default ICC footprints for flood.

3.6.3 SRC readiness, response and relief considerations

When the readiness triggers for RL3B or above are likely to be met or are met, the SRC can consult with the VICSES SAC to assure the following considerations are made:

- Establishing the control structure for managing the event.
- Confirming agencies at all tiers are activated and appropriate arrangements are in place.
- Providing consistent emergency warnings and information to the community.
- **Confirming agencies with call taking responsibilities, including Emergency Services Telecommunications Authority (ESTA), have resources in place and back up**
- **Confirm positioning of BOM Hydro and flood analysts at SCC, RCCs and ICCs as required.**
- **Confirm positioning of flood rescue resources and command as required.**
- Implementation of evacuation and emergency relief plans.
- 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.
- Identifying mass gatherings and large public events that maybe at-risk, and arrangements to ensure the safety of individuals attending.
- Positioning of Emergency Management Liaison Officers from key support agencies to the SCC and RCCs, where appropriate.
- Ensure that arrangements are in place for initial impact assessment data to be collected and then incorporated into the operational response.
- Arranging for regular meetings of the state, regional and incident emergency management teams.
- Providing whole-of-government situation reports to relevant government ministers.

The above consideration regarding ESTA capacity is bolded to emphasis its' importance in flood events. Flood events can generate a large number of requests for assistance necessitating significant uplift in call taking capacity.

The above consideration regarding BOM Hydro and flood analyst capability is bolded to emphasis its' importance in flood events. Both BOM Hydro and flood analyst provide predictive services capability at both state and incident tiers.

3.6.4 Cross jurisdictional arrangements

The cross jurisdictional arrangements to support operational response to flood events are underpinned by national and inter-state agreements, including:

- Arrangement for Interstate Assistance (AIA) which provides the national governing arrangements for deployments and support.

- Inter-state MOU between VICSES and South Australia SES and New South Wales SES respectively, which detail arrangements for cross jurisdictional response within 40km of the state boundaries.
- Local arrangements are also detailed in VICSES regional plans.

Some of the key considerations when establishing cross jurisdictional arrangements that are relevant to flood response include:

- Coordination and negotiation for resource requests when additional support is required by the Australian Defence Force.
- Use of the national warning platform, Emergency Alert, to provide urgent information to community members above and beyond state warning platforms (i.e. VicEmergency).
- Establishment of offline communication (i.e. radio networks).

3.6.5 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.

VICSES has developed a pilot project to improve communication from Flood Observers to Incident Management Teams (IMTs) using the Snap, Send, Solve app. To support the pilot of this project, networks of local flood observers have been created in each region to provide pictures from the field to the Intelligence Section in IMTs depicting flood behaviour and impacts.

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

VICSES has developed a Local Knowledge Policy which outlines key strategies for incorporating local knowledge into the management of flooding, and can accessed via the VICSES website.

3.6.6 Access to flood analyst and intelligence

For RL 3B and above, Flood Analysts will be deployed, as required by SRC, comprising members of DELWP, CMAs, VICSES and private technical specialists. Flood analysts will use available sources of flood information, including flood studies, gauge data, mapping outputs (available through FloodZoom) and local knowledge through established networks such as municipal council, Flood Wardens, and local observers to provide information on possible predicted flood consequences to inform public information and response actions.

VICSES in collaboration with DELWP has established the Flood Analyst role that comprises of a number of engineering consulting firms under VICSES managed formal agreements, along with CMA personnel to deliver technical specialists to support the Intelligence Section. VICSES has developed and manages internal doctrine to support the deployment of the Flood Analyst role, and leads the capability and capacity building of those undertaking the role.

BOM provides flood intelligence and information in a number of forms when a significant flood event occurs. In addition to forecasts, Flood watches, and flood warnings, BOM will provide regular briefings, and will activate the Victorian Flood Desk to support 24/7 operational response. The Flood Desk may be contacted by emergency management personnel to seek further intelligence over the phone. Further intelligence products may also be created to inform planning activities, such as the Flood Scenario Outlook.

For high impact weather events, BOM will provide a meteorologist, and at times a hydrologist at the SCC, to provide weather and flood briefings including ongoing liaison and state teleconferences as required. When staffed, the representative at the SCC shall be the primary contact for weather and

flood information from BOM.

DELWP and CMAs in partnership with municipal councils 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.

The state's flood mapping and spatial products are available in FloodZoom and accessible by a link on EM-COP.

Printed flood mapping products are also made available at each ICC, including flood inundation mapping and flood travel time schematics.

Operational response and planning maps may also be generated using e-Map Water by personnel in the Intelligence section.

3.6.7 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 for a predicted flood event (Readiness Level 3B and above) the EMC, on advice from the SRC, will identify areas at risk of requiring rescue and notify the Victoria Police Senior Police Liaison Officer (SPLO) and the officer in charge of the Water Police Search and Rescue Squad, to request pre-deployment of water rescue resources to these areas via the Victoria Police Rescue Coordination Centre (Water Police and Search and Rescue Squads).

In conducting rescues, Victoria Police will often require assistance of appropriately trained and equipped personnel from support agencies (including VICSES, Volunteer Marine Search and Rescue Organisations, CFA, FRV 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 flood rescue activities.
- Identify and source required resources.
- Deploy required police and support agency resources.
- Contribute to the development of the rescue plan for the incident.

3.6.8 Health response

During a storm event, the Department of Health has a support function to minimise the impacts on individuals, communities, public health and the health system.

The State Health Emergency Response Plan (SHERP) outlines the arrangements for coordinating the health and medical response to emergencies. The State Health Emergency Response Plan is a sub-plan of the SEMP.

The State Health Agency Commander and State Health Coordinator are responsible for directing health resources. The State Health Commander (Ambulance Victoria) is responsible for directing the

pre-hospital response in an emergency. Both roles are represented on the SEMT.

Floods have the potential to affect electricity supplies across the state, and in some instances lead to widespread and prolonged power outages impacting many people. Some of the most vulnerable people during such outages are life support customers including ventilator dependent customers, who rely on electricity for medical reasons. The Department of Health works with many partners to facilitate support for these groups during widespread and prolonged power outages in recognition of their unique vulnerability to this type of event.

The Department of Health administers Victoria's safe drinking water regulatory framework, which requires water businesses to have emergency management arrangements and procedures for dealing with an incident, event, or emergency that may adversely affect the quality or safety of drinking water, or result in water being supplied that poses a risk to human health. The department is also the control agency for drinking water contamination.

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 (Refer to SEMP Roles and Responsibilities – Table 8).

3.6.9 Restricting access

To ensure public safety, it may be necessary to restrict access to affected areas. Victoria Police and relevant land managers will coordinate the restriction of access to these areas as directed by the Incident Controller.

Traffic management will be conducted in accordance with the JSOP for Traffic Management (JSOP3.10).

Analysis of traffic management requirements and development of traffic management plans will be undertaken in consultation with relevant road managers.

3.6.10 Evacuation and relocation

AIDR's Evacuation Planning Handbook defines evacuation as a risk management strategy that may be used to reduce loss of life or lessen the effects of an emergency on a community, prior to the onset of, or during, an emergency. It involves the planned movement of people threatened by a hazard to a safer location and, typically, their eventual safe and timely return. For an evacuation to be effective, it should be appropriately planned and implemented.

Evacuation is a scalable activity, in that it may be applied to individuals, a house, a street, a large facility (i.e. school or hospital), a suburb, a town or a large area of the state. Where an area is identified (by means of local knowledge, prior history of a higher risk of evacuation, etc.) as requiring a specific detailed evacuation plan, consideration should be made to include this plan as part of the respective MEMP.

The Incident Controller is responsible for making a decision as to whether evacuation is a safe option for communities and individuals. In making this decision the Incident Controller may seek advice from other agencies or communities, as detailed in JSOP03.12 – Evacuation for Major Emergencies.

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

3.6.11 Initial impact assessment

The Incident Controller is responsible for initiating and managing Initial Impact Assessment (IIA). The aim of IIA is to capture, during the initial 48 hours of an emergency, the nature and scale of the flood impact on people, community infrastructure, and the economic, natural, and built environments, in order that emergency relief and early recovery activities can commence.

IIA typically begins in the first 24-48 hours of an emergency event, and is focused on the collation of immediate impact data. IIA is a preliminary assessment generally from visual inspection undertaken

by response agencies, assisting in determining the scale and impact of the flood impact emergency on people, community infrastructure, and the economic, natural, and built environments.

IIA provides early information to assist in the prioritisation of immediate needs of individuals and communities, requirements of Secondary Impact Assessments, and supports commencement of emergency relief and early recovery activities. To ensure the expedient collection of information, the Incident Controller may task personnel from any response agency to collect relevant information.

The EMC is responsible for ensuring the coordination, collection, collation and reporting of incident data and impact assessment processes as required. All agencies have a responsibility to assist the EMC with the IIA process as per the SEMP and the relevant Impact Assessment guidelines available on EM-COP.

The data from IIAs is used to identify where to focus early recovery activities (including secondary impact assessments).

3.6.12 Properties located behind levees

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 monitoring, maintenance, and operation of levees. Best practice guidelines for levee management are available via the DELWP website.

3.6.13 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, have physical disability or are frail.
- People who suffer from health conditions that are likely to be exacerbated through either direct exposure or stress caused as a consequence of flooding.

3.6.14 Powers to enter land

The *VICSES Act 2005*, Part 3, Section 32AB, provides the power to enter land or premises with or without the consent of the occupier of the land or premises, if a service member reasonably believes that entry is urgently required to protect life or property in the course of responding to, or preparing for, a flood, earthquake, landslide, or when undertaking a rescue.

The risk to life or property must be deemed urgent for members to enter land or premises without consent. To this end, and to support consistency and effective management of incidents, the VICSES Chief Officer Operations (COO) has determined in VICSES SOP035 ‘Entering land or premises during operations’ the steps to be followed by authorised personnel in making a decision to enter land or property. Members are required to comply with this SOP.

Only Incident Controllers, VICSES Crew Leaders and VICSES Agency Commanders at incident, regional, and state tiers are authorised to make a decision to enter a property with oral consent, or without the consent of occupiers.

Section 32AB applies to VICSES members, or a person who voluntarily places themselves at the disposal of the COO and is directed by a service member. Therefore, such directions should be noted in logbooks where a support agency is operating under the control structure.

Where a decision has been made to enter land or premises without consent, the authorised person who made the decision to enter the property must ensure that the SOP035 is followed in regard to notifying the occupier in writing that the service (or its representative) has attended to deal with an emergency situation. Victoria Police are to be notified through VICSES dispatch (or line of control) should there be threat to life.

3.6.15 Powers to construct, remove or alter levee and/or remove debris

The *VICSES Act 2005*, Part 3, Section 32AC, provides the power to construct, remove or alter a levee and/or remove debris if a service member reasonably believes that removal is required to protect life or property.

Debris removal may be required in situations where trees and other items are restricting access, or where a build-up of debris is obstructing waterways and exacerbating flood effects.

To support consistency and effective management of incident(s) the COO has determined in VICSES SOP036 'Construction, Removal or Altering of Levee and Removal of Debris' the steps to be followed by authorised personnel in making a decision to construct, remove, or alter a levee and/or remove debris. Members are required to comply within this SOP.

The following persons are authorised to make a decision and direct activities associated with the construction, removal or alteration of a levee:

- State Response Controller.
- Regional Controller.
- SAC or RAC.
- An endorsed Level 2 or Level 3 Incident Controller (where appointed).

Section 32AC applies to members of VICSES, or a person who voluntarily places themselves at this disposal of the COO and is directed by a service member. Therefore, it should be noted in logbooks where a support agency is operating under the control structure.

Section 32AC (2) requires the VICSES authority to as soon as practicable remove any levee constructed, replace any levee removed, or restore the site.

The COO (or nominated delegate) or SRC in consultation with the EMC will determine whether the construction, removal, or alteration of the levee or the removal of debris is taken, under section 43 of the VICSES Act, to be damage to land or property caused by the emergency.

Section 43 provides that any damage caused by the service, service member, SRC, controller deployed in a Class 1 emergency, or a person acting under the direction of a service member, is taken to be damage caused by the emergency for the purpose of insurance policies, despite any clause or condition to the contrary in the policy.

Where insurance coverage is unlikely, the COO (or delegate) in consultation with the EMC will determine who will lead the restoration and/or rehabilitation of land and/or premises where a decision is taken to temporarily construct, remove, or alter a levee.

3.6.16 Property protection

Property may be protected by:

- Sandbagging to minimise entry of water into buildings.

- Encouraging businesses and households to lift or move contents.
- Construction of temporary levees in consultation in accordance with Section 3.6.15 of this plan.
- The Incident Controller shall determine the priorities related to the use of sandbags, which shall be consistent with the strategic priorities and the VICSES 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.

3.6.17 Management of flooding downstream of dams

VICSES and DELWP have developed arrangements for the management of flooding downstream of dams. These can be found in the State Emergency Plans section of the EMV and VICSES websites.

3.6.18 Energy, communications, water, agricultural and transport disruptions

Floods can disrupt energy, communications, water (potable and waste), agriculture/dairy industries, and transport services.

Refer to SEMP Roles and Responsibilities for details on restoration of services resulting from floods in various settings.

Refer to the SEMP for details of coordination arrangements related to restoration of services.

3.6.19 Animal welfare

Floods can result in significant displacement and other welfare issues for livestock, companion animals and wildlife.

The SEMP Roles and Responsibilities defines DELWP as the control agency for wildlife welfare arising from a declared emergency, and DJPR as support agency for welfare of livestock and companion animals.

3.6.20 Relief

Emergency relief involves the provision of essential needs to individuals, families, and communities during and in the immediate aftermath of an emergency. The relief needs of individuals, families, and communities will be complex and specific to each incident. However, there are a number of overarching relief priorities for flood emergencies which are:

- Provision of need-based assistance for the immediate health and wellbeing of individuals and communities.
- Planned and timely access to restore critical infrastructure (including transport infrastructure, power, and telecommunications).
- Planned and timely return of communities to storm impacted areas to minimise further physical and psychological harm.
- Provision of timely, relevant, and tailored relief information to assist community members to make informed decisions.
- Effective and efficient state, region/incident and local relief coordination arrangements.

Refer to the SEMP for the relief responsibilities of the Incident Controller Regional Controller, and SRC.

In line with the SEMP Roles and Responsibilities, relief coordination operates at both tier level and activity level. Tier level coordination is as follows:

- **Local** – Municipal councils are responsible for coordinating relief at a local level, which includes establishing relief centres.
- **Regional** – the DFFH will coordinate relief at the regional level.
- **State** – EMV will coordinate relief arrangements at the state level.

Several agencies, government departments, and non-government organisation have responsibility for coordinating or providing direct assistance to individuals, families, and communities, or indirect assistance through the resupply of essential goods or services to communities isolated in an emergency. State leads are identified in the SEMP's Relief Services and Co-ordination table.

3.6.21 Debris removal and clean-up

Refer to SEMP Roles and Responsibilities for details on debris removal and clean up resulting from floods in various settings.

3.6.22 Management of spontaneous volunteers

Refer to SEMP Roles and Responsibilities Table 14 for details on management of spontaneous volunteers.

3.6.23 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.

Resupply operations to emergency relief centres and individuals will be aligned to the emergency relief operation managed by emergency relief agencies at the relevant tier of operation. Supporting agencies may be requested to assist with performing logistics functions through Emergency Management Team arrangements.

VICSES can support isolated communities through assisting with the transport of essential items to isolated communities.

3.7 Recovery

3.7.1 Transition to recovery

The SEMP specifies the arrangements for the coordinated planning and management of transition from response to recovery in Victoria.

Transition plans should be developed collaboratively between Incident Controllers and Regional Controllers, and Recovery Coordinators/Managers at the relevant tiers with appropriate and agreed resources both prior to, and post transition. The community must receive continuous services during the transition.

An important component is a seamless transition of communications, where recovery messaging should be integrated with response information as early as possible to facilitate a smooth transition to recovery, alongside other components required for effective transition to recovery.

Key concepts guiding transition include:

- Coordination of transition from response (including relief) to recovery in partnership with the lead

recovery agency, and in consultation with other agencies affected by the transition.

- Seamless transition of information, impact data, and consequence planning.
- Continuity of emergency management for individuals and community.
- Integration of recovery within the IMT – supporting knowledge management into recovery (this is an opportunity to more broadly discuss municipal presence in the IMT that supports this concept).

Transition from response to recovery is not always a clearly defined step. For floods impacting on a large geographic area, there may be a legitimate need to instigate recovery in some areas while the response phase is still in operation. This is a phased transition to recovery. The teams at the relevant incident, regional, and state tiers should agree on the timing and phasing of the transition, the activities required, and who is responsible.

3.7.2 Environments

Recovery is undertaken across four environments - social, economic, built and natural, that provide a framework within which recovery can be planned, reported, monitored and evaluated. The environments and their areas of activity can be adapted to meet the needs of people and communities affected.

3.7.3 Coordination

Recovery activities will be undertaken in accordance with the SEMP, and will commence during the response phase. As such, high levels of understanding and cooperation are required between response and recovery organisations at each operational tier (local, regional, and state).

The response function will continue at least until the following conditions are met:

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

Recovery coordination responsibilities are outlined in the Roles and Responsibilities section of the SEMP and include:

- For state recovery coordination: Bushfire Recovery Victoria.
- For regional recovery coordination: Bushfire Recovery Victoria.
- For municipal recovery coordination: Municipal councils.