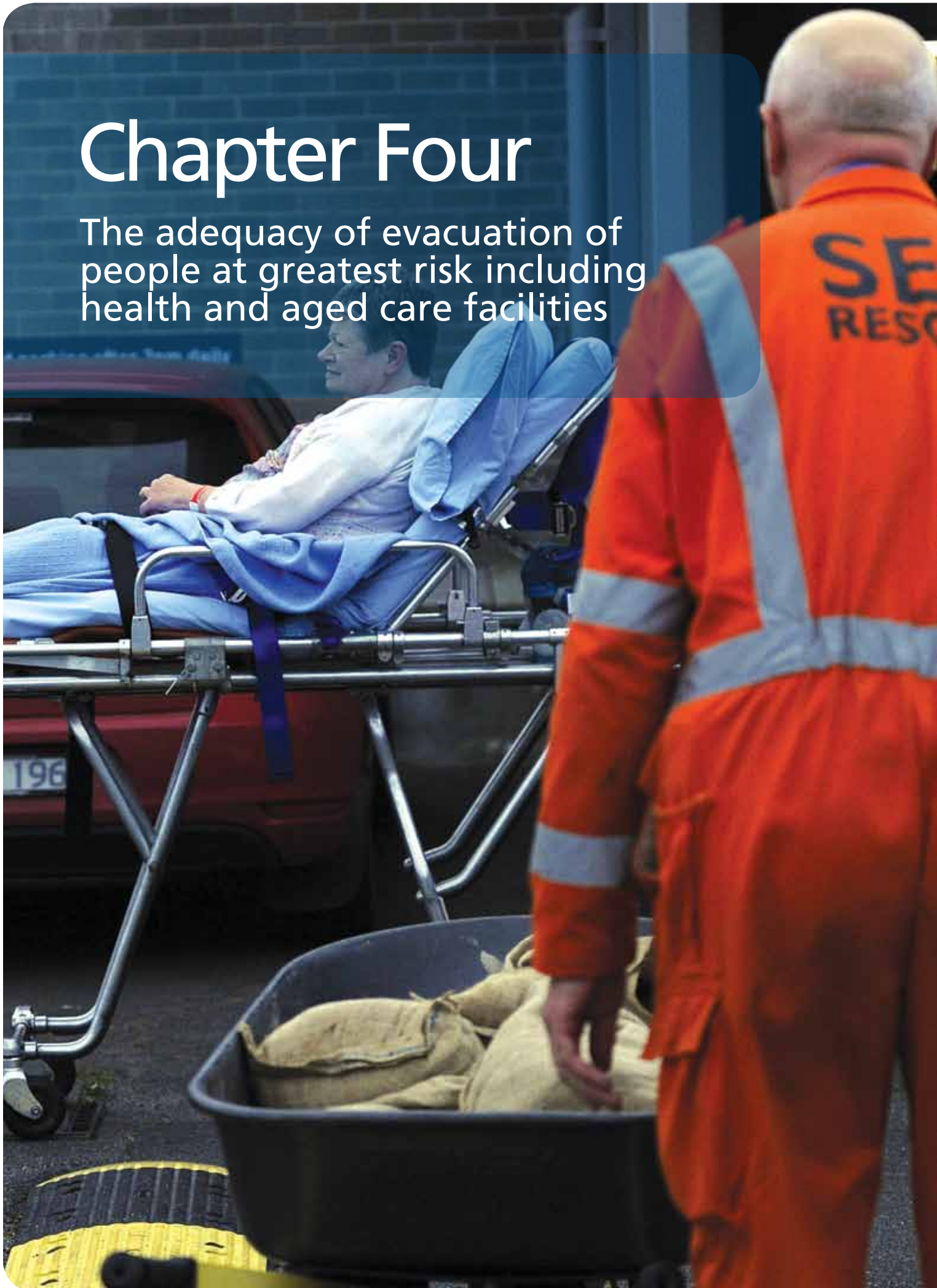


Chapter Four

The adequacy of evacuation of people at greatest risk including health and aged care facilities



In dealing with Term of Reference Four, the VFR was aware that in its final report, the VBRC made a number of recommendations regarding 'vulnerable people'. With this in mind clarification was sought from DPC as to whether the term 'people at greatest risk' in the VFR terms of reference was interchangeable with 'vulnerable people', or whether the intention was to widen the scope referred to in the VBRC report. The VFR was advised that the term 'vulnerable people' as used by the VBRC was the appropriate reference.

Evacuation framework

Evacuations are a critical consideration in the development of operational plans during an emergency. To implement and execute an evacuation plan the incident controller is reliant on up to date information, the ability to identify those people most vulnerable and the capacity of other agencies to assist in the evacuation process.

The VFR has analysed the evacuations of those people at greatest risk during the 2010–11 floods including health and aged care facilities. To support analyses of the evacuation process the VFR investigated and acquired information from the following:

- existing and interim evacuation guidelines
- VBRC reports
- evacuation case studies
- health sector evacuation policy and procedures
- agencies involved in evacuations
- operators of aged care and hospital facilities.

The VFR also examined submissions received from various stakeholders including individuals, local councils and state bodies. In addition, the VFR considered a number of multi-agency debriefs that were carried out after the flood events.

The general framework for evacuation has been given considerable attention since Black Saturday and the *Final Report* of the VBRC. In its final report, the VBRC made two recommendations with regard to evacuations of vulnerable people.

Recommendation 3

The state establish mechanisms for helping municipal councils to undertake local planning that tailors bushfire safety options to the needs of individual communities. In doing this planning, councils should:

- *urgently develop for communities at risk of bushfire local plans that contain contingency options such as evacuation and shelter*
- *document in MEMPs and other relevant plans facilities where vulnerable people are likely to be situated – for example, aged care facilities, hospitals, schools and child care centres*
- *compile and maintain a list of vulnerable residents who need tailored advice of a recommendation to evacuate and provide this list to local police and anyone else with pre-arranged responsibility for helping vulnerable people evacuate.*

Recommendation 5

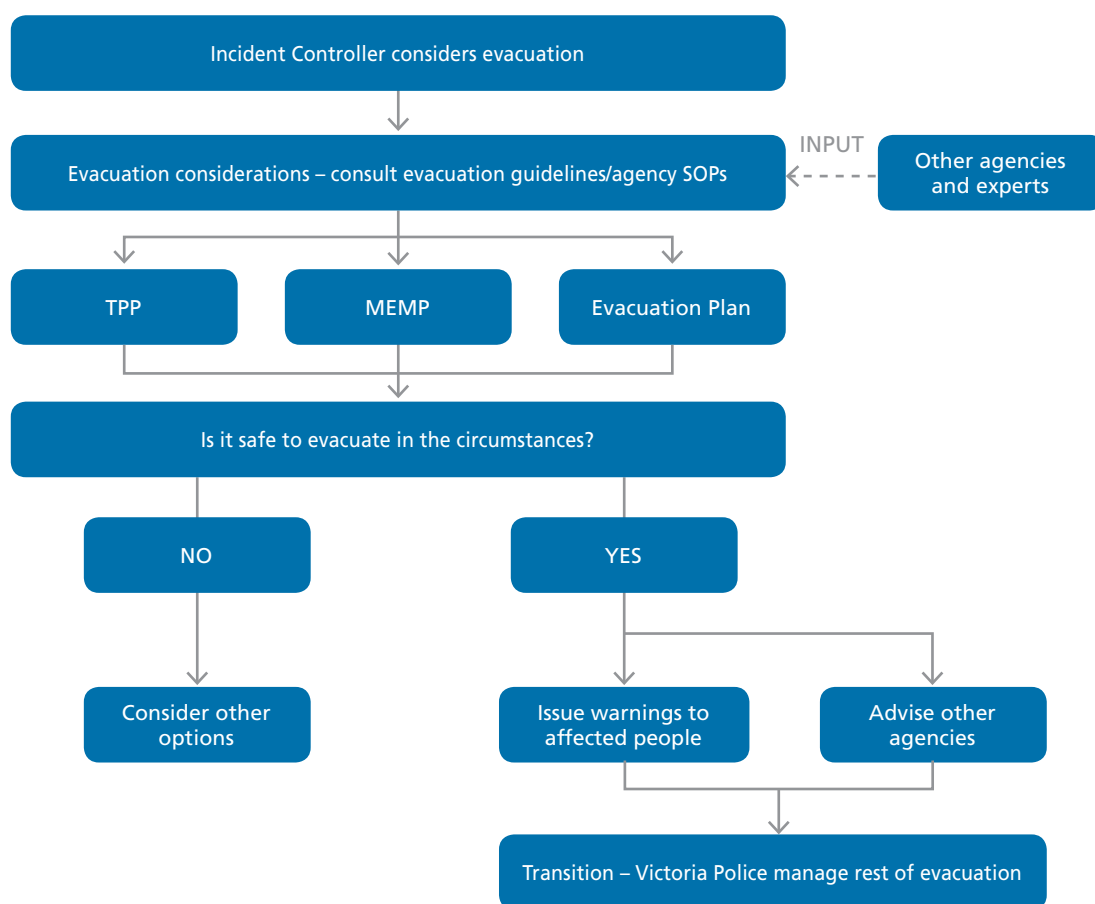
The state introduce a comprehensive approach to evacuation, so that this option is planned, considered and implemented when it is likely to offer a higher level of protection than other contingency options. The approach should:

- *encourage individuals – especially vulnerable people – to relocate early*
- *include consideration of plans for assisted evacuation of vulnerable people*
- *recommend 'emergency evacuation'.*

To respond to these recommendations a range of changes have been made to guidelines governing evacuations. In relation to recommendation five of the VBRC *Final Report*, the most significant change has been the development of new interim

guidelines for evacuation. These new guidelines have been incorporated into the EMMV and SOPs. Figure 20 outlines the process incident controllers now follow in considering and evacuation during emergency events.

Figure 20¹⁸⁵ – Flowchart of evacuation consideration



185 Sourced from: State of Victoria, Emergency Management Manual Victoria, 2011, Interim Evacuation Guidelines, Flowchart 2, Incident Controller's Consideration Process, p 8-42

The EMMV has also been updated to include new sections dealing with vulnerable people:

VicPol, as the agency responsible for facilitating evacuations, will be dependent on local government authorities to have:

- *within their MEMV, identified and documented facilities where vulnerable persons are likely to be situated*
- *a list of those services/agencies that will be aware of vulnerable persons within the community.*

*These lists, including after hours contact details, will be provided to VicPol upon compilation or updating to ensure VicPol has the best available information available in the event an evacuation becomes necessary.*¹⁸⁶

To supplement this requirement, additional guidance was produced for the use of services which care for vulnerable people.

Health and aged care services

Health and aged care services arguably pose some of the greatest evacuation risks. Both services care for large numbers of vulnerable people, most of whom will require considerable assistance in the event of an evacuation. Well developed plans and staff awareness of the plans are critical for this sector.

In Victoria, health services and residential aged care services (RACS) are provided under two distinct governance arrangements and these arrangements influence how services plan for, and respond during emergency events. Health services are those services funded by the Victorian Government and are part of the broader Victorian public sector. Health services deliver services ranging from acute care, primary care, mental health services and aged care. The second range of services are RACS which are funded and regulated by the commonwealth but owned and operated by the private sector or non-government organisations.

Either under legislation or accreditation processes, health services and RACS are required to develop a relocation/evacuation plan based on the particular risk of the facility. It is the responsibility of boards, company directors and management to prepare, have plans in place and make informed decisions about evacuation.

Health services

A number of key documents guide the actions of health services in cases of an emergency:

- the State Health Emergency Response Plan (SHERP) is a sub-plan of Victoria's SERP. The SHERP is the framework for planning a coordinated health approach during emergencies regardless of whether the emergency has local or national implications
- the Hospital Resilience Code Brown Policy Framework, is intended to "assist health services in designing an all hazards external emergency management plan"¹⁸⁷ for internal and external emergencies.

In response to the recommendations of the VBRC and subsequent changes to the EMMV, new policy and tools have also been developed. These policies are *The Bushfire Clients and Services Policy* and *the Residential Aged Care Services for Bushfire Resource*. The DH has also developed the *Seasonal Preparedness Self Assessment Tool* (SPSAT). The SPSAT is designed to prompt health services to consider relocation plans, transport and interaction with emergency services, local government and the state government. While these documents were prepared in response to the threat of bushfires they are a tool that can and are, being used to deal with all hazards.

In addition, the Australian Council on Healthcare Standards (ACHS), require all public hospitals to have emergency and disaster management plans that support safe practice and a safe environment. Australian Standard 4083-2010 (Planning for Emergencies – Healthcare Facilities) requires health services to have emergency management plans which encompass evacuation and maintenance of local preparedness through training.¹⁸⁸

186 State of Victoria, Emergency Management Manual Victoria, 2011, p 3-36

187 Hospital Resilience Code Brown Policy Framework, October, 2008

188 Australian Standards 4083 Planning for Emergencies – Healthcare Facilities available from Standards Australia www.standards.org.au/

Within the framework of the SHERP, in the event of an emergency, a health commander (a senior Ambulance Victoria officer) is appointed to:

- establish and coordinate a Health IMT to direct the emergency health response
- represent the Health IMT on the EMT
- contribute to incident strategy and incident action plan via the incident controller.¹⁸⁹

At the level of an individual health service, once there is a notification of any external emergency which might affect normal operations, the health service will appoint a hospital commander. The hospital commander will oversee all aspects of the incident within the individual health service by activating a 'code brown' response plan. Hospital code brown plans interface with the Hospital Resilience Code Brown Policy Framework¹⁹⁰ and the SHERP.

The Hospital Resilience Code Brown Policy Framework states that "some emergencies require a broader level of coordination that may necessitate the involvement of the department. An example of this could be a hospital internal emergency where a number of patients may need to be evacuated".¹⁹¹ This involvement is likely to take the form of the activation of the Victorian Health Emergency Centre. This centre, along with the department's control centre, performs a number of functions including:

- the analysis of the likely impact of an emergency on the Victorian hospital system
- the sharing of intelligence among stakeholders
- serving as a hub for information about the availability of resources
- taking a command role when an incident is of such proportion that it will overwhelm the Victorian health services.¹⁹²

DHS and DH have advised the VFR that "ultimately, the decision to evacuate a health service is best taken by the Chief Executive Officer or the Hospital Commander as their site delegate. Determining when evacuations are to commence should be undertaken by the Chief Executive Officer and/or the Hospital Commander with the input of a Health Commander and the Department of Health".

Within this emergency management framework, health services are strongly encouraged and supported by DH to plan for, and respond to, emergencies in accordance with the 'all hazards' approach. This includes having predetermined evacuation or relocation plans that may be enacted in response to a variety of emergencies and/or threats.

DH encourages all health services to undertake emergency management planning and preparedness in a consistent manner using departmental and other state resources as a guide while remaining considerate of local risks and circumstances. Health services are encouraged, but not required, to lodge their emergency management plans with DH. In accordance with ACHS standards, the emergency management plans are required to be accessible.

Commonwealth funded and regulated Residential Aged Care Services

Many RACS in Victoria are managed as private businesses or by non-government agencies. Fees of residents in these services are partially subsidised by the Commonwealth Government and are subject to requirements set by the Commonwealth Department of Health and Ageing (DOHA) and regulated by the Aged Care Accreditation and Standards Agency (ACASA).

To gain or maintain approval to operate RACS, the provider must demonstrate that they meet the accreditation standards that are set out in the Quality of Care Principles 1997. These standards set out the minimum requirements a service provider needs to meet to provide an acceptable service. The accreditation process is the way in which the Commonwealth Government verifies that these standards are being met in order for the service to receive funding. The ACASA is responsible for the accreditation process.

The standard of care provided by RACS is governed by both legislation and mandated standards. Section 54 of the *Aged Care Act 1997* sets out the responsibilities of an approved provider. In addition to this Act, the Commonwealth has also established standards with which service providers comply; these standards are detailed under the Aged Care Principles. The ACASA is the agency responsible for auditing compliance with the standards. Part 4 of the Accreditation Standards outlined in the Aged Care Principles, specify that "residents live in a safe and comfortable environment that ensures the quality of life and welfare of residents, staff and visitors."

189 State Health Emergency Response Plan p 10

190 Hospital Resilience Code Brown Policy Framework, October, 2008

191 *ibid* p 13

192 *Ibid*

Further, Standard 4.6 in the Principles specify that – fire, security and other emergencies, requires “Management and staff are actively working to provide an environment and safe systems of work that minimise fire, security and emergency risks.”¹⁹³ Standards for aged care services are currently under review by the Commonwealth Government.

The commonwealth has advised the VFR that the accreditation standards are being strengthened and will be better articulated with a clearer message about the DOHA’s expectations, in particular to emergency management. While interventions will not be spelt out in the standard it is expected that approved providers will develop EMPs, coordinate with their local authorities and be better prepared for such events. The ACASA will be tasked with checking there is a plan in place during an accreditation audit.

The VFR was advised that accreditation is not a one off event and that providers are required to maintain performance. Assessment visits are undertaken by ACASA to assess performance and each facility receives at least one unannounced visit each year. If a provider fails to meet standards this is reported to DOHA which may choose to impose sanctions.

In 2009, the Ministerial Conference on Ageing endorsed a framework that outlined the respective roles of different levels of government when working with RACS to manage emergency events. In response to this decision, the Victorian office of DOHA advised the VFR that it has set in place the following:

- establishment of a 1800 line (1800 078 709) to provide general advice to residential aged care facilities and assist with the identification of alternative accommodation
- establishment of a dedicated email address to receive advice from facilities that have relocated or evacuated and a mechanism for documenting and tracking this information
- upon advice from VHEC or other means, provide email notification to approved providers (residential and community) of advanced notice of severe weather warnings
- development of a Q&A sheet to support operation of the 1800 line for bushfires and flooding
- development of an information kit for providers, including prompt sheets

- provision of annual advice to approved providers reminding them of their responsibilities in an emergency event and general advice to approved providers of both residential and community care about appropriate action to take in heatwave conditions
- establishment of a process for identifying and advising approved providers of potential alternative accommodation options
- assisting DH in delivering annual emergency management workshops targeting providers of primary health and residential aged care services
- mapping of communication pathways to ensure timely communication between the DOHA Victorian State Office (VSO), Victorian emergency response agencies, DH, VHEC, and central office
- establishment of a DOHA VSO Taskforce and SOPs for emergency events.

As with state funded health services, it is the responsibility of the managers of commonwealth funded RACS to determine whether evacuation is required and identify evacuation options.

The VFR has been advised that officers from the DH and DOHA have an increasingly strong and coordinated relationship when it comes to emergency management. Since 2009, DH has made available the support tools described above as well as information sessions to all RACS. In cases of emergencies, a new practice has developed where officials from DOHA, DH and DHS remain in constant contact. Such an arrangement should assist in the development of a coordinated approach across both sectors. It is the view of the VFR that such an arrangement is essential.

For the overall management of emergencies, this dual coordination arrangement means the incident controller needs a strong appreciation of the requirements of these facilities and this complexity needs to be reflected in the work which occurs outside of the emergency environment and in the preparation of evacuation plans.

193 Advice provided to VFR by the Commonwealth Department of Ageing, Victorian State Office

Evacuations: January – February 2011

During the floods of January and February 2011, nearly 600 people in health and residential aged care facilities required relocation, either to another part of the facility or another service. (See table 4)

Table 4¹⁹⁴ – Aged care and hospital facilities relocations

Relocations of people at risk in Aged Care and Hospital Facilities			
January 2011	Acute	Aged	Total
	11	256	267
February 2011	Acute	Aged	Total
	4	327	331

There were also a number of other evacuations involving communities and townships that occurred across the state. Activities associated with evacuations included door knocking, telephone calls, text messaging, internet and media information. Some of these evacuations became rescue operations while other attempts to encourage people to evacuate went unheeded as some members of the community did not understand or respond to the advice provided.

Health commanders were located at the following locations: Creswick, Horsham, Bendigo, Kerang, Charlton, Mildura, Mulgrave and Swan Hill. There were also health commanders located at some health and aged care facilities that were evacuated and at the Field Primary Care Clinic established in Charlton, which provided essential primary care services to the affected community.

From information provided to the VFR, the majority of these evacuations from health and aged care services occurred without incident. However, detailed feedback from VicPol highlighted certain issues, particularly with private operators. These issues include:

- a RAC/retirement village that had a plan in place but delayed the decision to evacuate. This delay placed additional pressure on a range of emergency services which subsequently had to relocate 30 people at short notice
- at least two cases where the aged care service successfully evacuated but failed to advise VicPol that they had done so

- at least two services with no evacuation plans
- one service with a plan but with no alternative facility to relocate to once power was lost
- another service where the plan was centred on internal hazards, but was inadequate to deal with a flash flood event
- at least two services had good plans but were hesitant to activate.¹⁹⁵

The VFR was also provided with records of debriefs involving health and aged care services which provide a valuable insight to what worked well and where there are still areas for improvement. These debriefs highlighted:

- four ambulance transfers at one service took all day. An early decision to evacuate proved wise
- there was a lack of understanding by emergency services of health service requirements and the effect of evacuations
- expectations of greater assistance from emergency services
- contacting services identified by DOHA was at times difficult because after hours contact numbers, were not provided and there was a limited capacity to engage with staff who had decision making authority
- one service evacuated residents without care plans, supplies or staff.¹⁹⁶

All the above cases highlight the need for increased support to health and aged care services to develop plans and increased scrutiny of the quality of plans and training to implement them.

In relation to health services, the VFR notes that most evacuations occurred proceeded in an orderly manner. Case study 1 highlights the complexity of evacuation and the benefits of good planning. Case study 2 highlights the importance of local connectedness.

194 Figures provided by the Departments of Human Services and Health

195 Information provided from Victoria Police

196 Debrief of health and residential aged care services

Case study 1 – Koo Wee Rup Hospital

The evacuation of Koo Wee Rup Hospital was carried out in a timely, coordinated and methodical manner. This hospital had recognised the risk, engaged DOH and Ambulance Victoria, developed and exercised an evacuation plan. The hospital had a sound working relationship with the MERC and, on information provided by the MERC, initiated a self or pre-warned evacuation when informed of the impending flood.

The evacuation of the 40 patients including those with acute needs took approximately six hours. Consensus among those involved in the evacuation process indicated that if hospital management had waited for advice from the control agency it would have been impossible to move those within the hospital in a safe manner prior to the river reaching its peak.

Case study 2 – Dingee Bush Nursing Home

The nurse manager of the Dingee Bush Nursing Centre, the sole health care provider to the surrounding community within a 20 kilometre radius of Dingee, received notification from the Dingee CFA's leadership group of the impending flood. The manager was further advised the CFA would notify them if it was necessary to evacuate the town. Later that evening, the manager received a telephone call from the police officer at Serpentine providing an update of the state of the floodwaters. A discussion between the manager and the police resulted in a decision to relocate the five elderly residents.

Case study 3 serves to highlight an issue the VFR believes needs to be addressed. This case study involved the evacuation of the Rochester and Elmore District Health Service (REDHS). It must be said at the outset that there were no issues in the way hospital staff organised the evacuation. Indeed the

evacuation itself presented no risks for patients. However, this case does highlight gaps within the guidance framework for the evacuation of health and aged care facilities which lead to confusion regarding who had the authority to order an evacuation.

Case study 3 – Rochester and Elmore District Health Service

REDHS is a small rural health service located in north central Victoria approximately 63 kilometres from Bendigo. On 15 January 2011, Rochester experienced unprecedented levels of flooding, resulting in a decision to evacuate 65 REDHS patients.

REDHS management appointed a staff member as a Health Commander (HC) and commenced the planning process to enact the hospital evacuation plan. While the plan was being activated, hospital management contacted the VICSES incident controller located at the Bendigo ICC providing details to the incident controller of the decision to evacuate and to seek support with the evacuation.

In the conversation with hospital management, the incident controller stated that under the current arrangements it was the role of the incident controller to approve an evacuation. The incident controller subsequently dispatched a HC to undertake an assessment of the evacuation requirements.

On arrival, the ICC appointed HC concurred with the original assessment to evacuate, which commenced immediately, however, this was two hours after hospital management had made the decision to evacuate.

The evacuations proceeded smoothly and in the subsequent debrief, the REDHS Chief Executive made reference to the fact that the ICC appointed HC provided invaluable support and assistance.

This example is not intended to reflect criticism towards either the health services staff or the incident controller. Indeed all those involved acted in accordance with their obligations. What the case study highlights is the inconsistency that exists in the instructions and guidance material relating to evacuations of health and aged care facilities. Such matters will be discussed in more detail later in this section.

Observations

As previously indicated, the evacuation of health and aged care services presents all involved with enormous challenges. Regardless of the threat from emergencies, for some people in health and aged care services the very act of relocation may threaten their health and wellbeing. In this context the judgements being made involve weighing up many competing risks. The VFR agrees with DH and DHS that local management is best placed to make such judgements.

Areas for improvement

There are five key areas for improvement in the evacuation of vulnerable people including those in health and aged care facilities:

- clarification of the definition of 'vulnerable people' and 'services for vulnerable people' and including detail in MEMPS
- aligning the requirements and terminology in the documents dealing with the evacuation of vulnerable people
- inclusion of the special circumstances of caravan park residents
- broadening resource material from a fire focus to an 'all hazards' focus
- increasing awareness of the need to plan for evacuation and improving the quality of planning.

Clarification of vulnerability and inclusion in MEMPS

The inclusion of new requirements related to vulnerable people into the EMMV was an outcome of recommendations made by the VBRC and accepted by the Victorian Government. While work on this recommendation is underway, several councils and services were well enough advanced for the VFR to make some preliminary assessments.

Agency debriefs indicated that there are clear signs that the most significant issue is the need to better define the term 'vulnerable person' and 'facilities where vulnerable people are likely to be situated'. This view is consistent with that made in the BRCIM *Progress Report* released in July 2011.

The BRCIM's *Progress Report* states that the lack of a definition of 'vulnerable' or of 'facilities where vulnerable people are likely to be situated' is leading to inconsistency between the approach being taken by councils.¹⁹⁷ The *Progress Report* cites examples where some municipalities have included a broad range of facilities where vulnerable people may be present, while others have included a much narrower list.¹⁹⁸

The BRCIM notes that this lack of consistency is also present in the way contact lists are being collected and maintained with some municipalities providing mobile numbers for after hours contact, while others have only included landlines for business hours contact.¹⁹⁹

On a positive note, VicPol advised the VFR that contact list information is being incorporated into MEMPS by councils.

The VFR recognises the importance of clarifying the definition of 'vulnerable' and the registers containing the details, such as the location and particular vulnerability of those who fit this definition. The incident controller and VicPol are dependent on accurate information for the development of evacuation plans. The finalised definition of vulnerable people should apply to all hazards and not be limited to a bushfire context alone.

The VFR notes that DH and DHS are leading a working group to finalise the definition of a 'vulnerable person' and to determine the types of 'facilities where vulnerable people are likely to be situated'. This work will be reviewed by the BRCIM.

The VFR acknowledges if the definition of vulnerable is too broad it may place unrealistic expectations on those responsible for managing evacuations and delivering pre-emergency event advice and support. The VFR notes the BRCIM *Progress Report* encouraged DH and DHS to progress this work as a priority. At the time of preparing this final report, this work is still to be completed. It is understood that the definition and related policy is only being considered with regard to a bushfire context and further limited to those areas considered to be a high bushfire risk.

In addition, VicPol has raised concerns regarding privacy issues in that "... there is no current vehicle that allows the supply of names of persons (vulnerable or otherwise) when there is not a serious or imminent threat ... VicPol considers the ability to have this information would be invaluable to fully implement the strategic planning and contingency response..."²⁰⁰ The issue of privacy is discussed more fully in Chapter Five of this report.

¹⁹⁷ Bushfire Royal Commission Implementation Monitor, *Progress Report*, July 2011 page 45

¹⁹⁸ Ibid

¹⁹⁹ Ibid

²⁰⁰ Advice provided by Victoria Police

Recommendation 67:

The VFR recommends that:

the Departments of Health and Human Services finalise the definition of 'vulnerable person' and the list of facility types where vulnerable people are located and ensure that the definition and associated policy(ies) are applicable across 'all hazards'.

Aligning requirements and terminology

During the floods of 2010–11, nearly 600 people were evacuated from health and aged care facilities, most without incident. However, the case study detailing the evacuation of REDHS has highlighted inconsistencies between the guidelines governing evacuations from health services.

REDHS management made a decision to evacuate, based on the damage to the hospital and the needs of the patients and in accordance with the guidance provided to health services. From the incident controller's perspective this was a decision that only he/she could make. This confusion was created by the inconsistency between documents designed to provide guidance and detail accountabilities for evacuations.

Following Black Saturday and the subsequent recommendation of the VBRC, there has been considerable thought and work on evacuations. It appears that in some cases this work may have inadvertently incorporated some inconsistencies that need to be addressed.

Recommendation 68:

The VFR recommends that:

the state review and align all policies and procedures for evacuation, such as the interim evacuation guidelines and the State Health Emergency Response Plan, to ensure consistency and to clarify roles and responsibilities.

Caravan parks and vulnerable people

Caravan parks have traditionally been recognised as affordable accommodation for holidays. While some parks continue to primarily provide holiday accommodation, others provide permanent low cost housing. Residents in these latter parks are very often vulnerable due to their age, impairment or lack of access to transport. Many caravan parks are idyllically located next to rivers so that residents may enjoy the environment, however, these sites are often prone to flooding.

The risks applicable to some caravan parks were captured in the following submission to the VFR:

While the caravan park where I reside is not an aged care facility as such, there are several residents who would benefit greatly from an organised evacuation plan due to mobility. While the emergency services provided as much assistance to the residents as possible, it was a task for them to even assess firstly, who may be present in the park and secondly, where they could be located in the park. There is, and remains, no evacuation procedures of which I have been made aware.²⁰¹

In planning for emergencies, section 21 of the Residential Tenancies (Caravan Parks and Movable Dwellings Registration and Standards) Regulations 2010, requires the caravan park owner to have an EMP.²⁰² The VFR notes an emergency management resource titled *Victorian Caravan Parks Flood Emergency Management Plan guidelines* has been developed to assist owner/operators of these facilities. VICSES recommends EMPs for caravan parks include the following information:

- procedures for evacuation
- procedures for warning park occupants
- arrangements for moving vans and where these will be taken
- arrangements for securing hazardous substances including LPG tanks
- evacuation routes including when and where these are likely to close
- location of assembly areas for people without transport
- process for recording details of people who have safely evacuated
- location of evacuation centres
- arrangements for returning vans and residents after flooding.

201 Public submission to VFR, 25 May 2011

202 Residential Tenancies (Caravan Parks and Movable Dwellings Registration and Standards) Regulation 2010, S.R.N0.49/2010, Version as at 27 June 2010

In deciding whether a caravan park owner is complying with this requirement, the council must consult with the relevant fire authority or any emergency service.

While all caravan parks are required to develop EMPs, it would seem that more attention needs to be focused on those where there is a high risk of an emergency event and where large numbers of vulnerable people reside. It may be that only a minority of parks are providing accommodation for vulnerable people, but where this is the situation there may be a case for including such parks on vulnerable persons lists and working more closely to ensure they are linked in with local emergency planning.

Recommendation 69:

The VFR recommends that:

municipal councils undertake a risk assessment of caravan parks and decide if any should be included in the list of facilities where vulnerable people may be located.

Updating guidance and resource material to an 'all hazards' focus

The VFR recognises significant work has been conducted in the development and implementation of emergency management and evacuation planning in Victoria for aged care and health facilities. Evidence suggests emergency response planning encapsulating emergency management and evacuation planning exist in some form at a state level down to a local level.

Each aged care and health facility is required to develop a relocation/evacuation plan based on their own risk. DH and DHS have developed a number of documents to support health and aged care services and with the cooperation of DOHA support has been extended to the private sector.

During the preceding two years, the updating of the guidance material has been focused on responding to the 2009 bushfires and the recommendations of the VBRC. Where evacuation plans were developed, they had been driven by the requirements of the VBRC with a fire focus. Considerable effort has gone into identifying services in areas of high bushfire risk, developing guidance, tools and training to support managers and owners to understand and manage the risk of living with fire. The challenge now is to identify aged care and hospital facilities that will be impacted by a range of emergencies, including flood.

The VFR has had the opportunity to review many of the documents prepared in response to the recommendations of the VBRC and believes most, if not all, of these documents can be easily adapted to an 'all hazards' approach. For example, the VFR is impressed with the *Residential aged care services bushfire resource*²⁰³ and believes that with some amendments it would provide a useful guide for 'all hazards'.

Recommendation 70:

The VFR recommends that:

the state update the current fire specific guidelines and resources for evacuation planning to take an 'all hazards' approach.

Increasing awareness of the need to plan for evacuation and improving the quality of plans

While most evacuations proceeded successfully, it appears to the VFR that many private proprietors of aged care and health facilities are struggling to understand the full extent of their obligations. There is also a risk that too much reliance is placed on emergency services always being able to make a last minute decision to evacuate and potentially an underestimation by all involved of the time it will take to evacuate people who maybe of fragile health. Health services and RACS are given priority but large scale or protracted emergencies may involve a myriad of complications including competing demands, road closures, staff unavailability to name but a few. It is important that these services are given the best available information upon which to make this decision. It is equally important wherever possible that they make this decision early and in consultation with emergency services who will have an overall picture of the often competing demands on necessary services and may also have alternative options.

Consultations with VicPol and debriefs from health and aged care services detailed earlier in this chapter, amplify some of the particular challenges to well planned and implemented evacuations. The VFR was advised of cases where evacuation plans of aged care facilities had not considered the risk of service continuity. For example, during floods services are likely to be faced with the issue of staff either unable to attend the facilities due to flooded roads or unable to leave. The VFR was also advised that in some instances plans had been in place to evacuate these facilities but due consideration had not been given to the matter of suitable transport to move patients. Without comprehensive planning, residents will be at further risk.

²⁰³ State of Victoria, *Residential aged care services bushfire ready resource*, Department of Health, November 2010

The VFR notes advice from DHS and DH that since 2009, DH and DOHA have worked together on a range of strategies to improve the system in RACS. The experience of the floods offers an opportunity to examine what more can be done to support providers and managers.

In addition, these plans should be embedded in MEMPs and operational response plans of control agencies. For example, Ambulance Victoria has advised the VFR that it does not have direct access to the hospital resilience code brown policy framework documents despite the fact that they were involved in a number of relocations/evacuations. Inclusion of health and agency operational response plan information within MEMPs will raise awareness and understanding of the role of the health commander.

The VFR is aware that within specific agency systems there is a wealth of information that would support a better informed response activity. For example, the VFR is aware that Ambulance Victoria has a web based system called 'Noggin', producing maps of Victoria that can depict the location of every aged care and health facility. Such information, if overlaid on projected flood inundation maps, would be invaluable to plan evacuations and relocations well in advance of approaching hazards.

Recommendation 71:

The VFR recommends that:

the commonwealth consider including (as part of its review of standards for aged care services) requirements for:

- robust 'all hazards' evacuation plans that include current after-hour contact details of people who are able to make authoritative decisions during an emergency; and
- rehearsal of those plans.

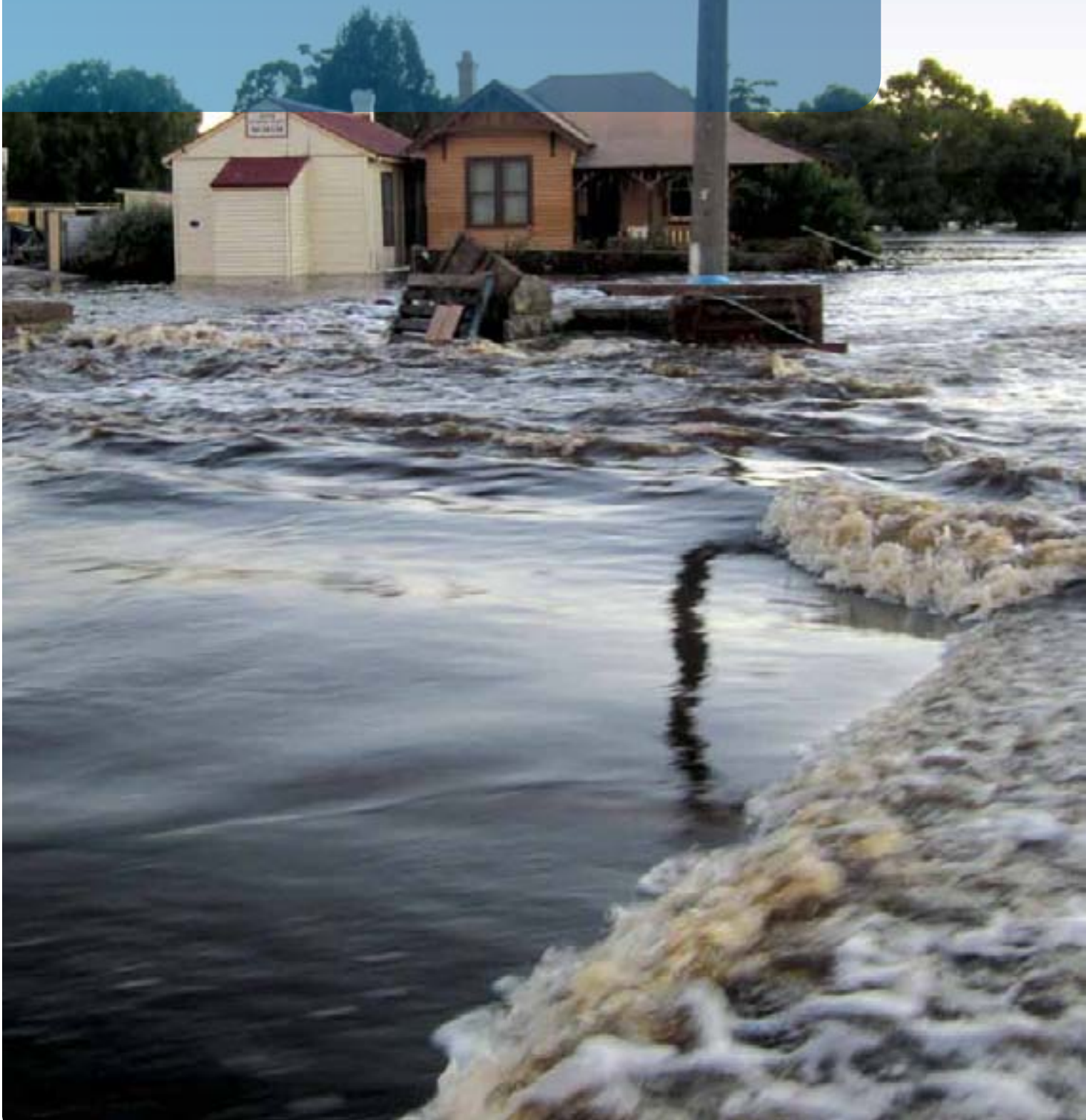
Recommendation 72:

The VFR recommends that:

the state and the commonwealth, during a flood event, make information available on providers who have capacity to accommodate patients and residents who require evacuation.

Chapter Five

The adequacy of clean-up
and recovery arrangements



Any natural disaster inevitably leaves damage that must be cleaned up so that the community can return to some sense of normality. For local councils and state government agencies, this requires timely information about the level, location and type of damage, a plan to manage the task and some funding certainty. For individuals, businesses and primary producers, it requires knowledge of what assistance is available, a clear understanding of who is responsible for what and permission from the relevant insurance company to commence cleanup.

Damage caused by the floods from September 2010 to February 2011 left many householders, businesses, and primary producers facing a significant task to clean-up their properties.

Following the flooding of early 2011, the Victorian Government implemented the Flood Clean-up Strategic Plan. Five million dollars was distributed to councils to manage the collection and clean-up of household goods, furniture and appliances, skip bins and haulage, tipping and waste disposal, restoration of streetscapes and meeting the costs of providing initial community services such as generators, food, fodder and the recovery of stray livestock.

During the VFR consultations, many local councils, volunteers and agencies such as the CFA, ADF and VICSES were commended for the assistance they provided with clean up. While residents, businesses and primary producers raised various issues that were locally specific, the systemic issues highlighted to the VFR were:

- a lack of clarity regarding responsibility for repair and cleaning up areas such as crossovers and culverts
- the impact insurance issues had on the clean-up process
- an absence of timely and accurate information and optimal use of the Rapid Impact Assessment (RIA) process
- difficulties coordinating spontaneous volunteers
- confusion over the availability of financial assistance to deal with the repair and clean-up. This issue is dealt with in Chapter Seven of this report.

Lack of clarity regarding clean-up responsibilities

Some members of the community shared with the VFR their frustration regarding the repair of infrastructure or assets located at the interface of public and private land. In some instances, the frustration was with the agency that was thought to be in control. At other times, it was with the fact that no one seemed to take ownership of particular problems. In some cases, the individual was aware that it was their responsibility but wished to advise the review that:

- they thought the law was unfair or inappropriate
- the approvals that they were required to obtain before commencing the repair works were unduly onerous (specifically, cleaning up waterways)
- they wished they had been aware of their repair and maintenance obligations ahead of the flood event so it could have been planned for.

Clarifying the legislation that establishes clean-up and repair responsibilities and communicating these responsibilities to the public ahead of a flood event would enable landowners to better assess their risks and liabilities and to commence clean-up as quickly as possible after a natural disaster. Also it would enable individuals to better develop their individual resilience to disasters.

The main types of asset that were raised with the VFR were:

- crossovers between private driveways and public roads
- culverts under crossovers between private driveways and public roads
- roadside drains
- bridges
- debris in and on the banks of creeks (including rubbish from the floods and vegetation).

Some of these assets are the subject of a statutory duty (that is, the responsible authority has an obligation to repair), others are the subject of a statutory power, the exercise of which is a matter of discretion for the agency. Generally speaking, a public authority which is under no statutory obligation to exercise a power comes under no common law duty of care to do so.

The VFR received legal advice that repair obligations/powers in these circumstances are as follows:

Type of asset	Obligation or power to repair?	Who has obligation/power?
Crossover between a private driveway and a public road	Discretionary power	<p>In an urban area – the council.</p> <p>Otherwise – VicRoads.</p> <p>An urban area is one in which –</p> <p>(a) a speed limit of 60 km p/h or less applies (other than for road works or a street event etc); or</p> <p>(b) there are buildings on land next to the road, or there is street lighting, at intervals not exceeding 100 metres for –</p> <p>(i) a distance of at least 500 metres; or</p> <p>(ii) if the length of the road is less than 500 metres, over the length of the road.</p>
Culvert under a crossover connecting a public road to a private driveway	Obligation	<p>Culverts (constructed by a road authority) adjoining arterial roads – VicRoads.</p> <p>Culverts (constructed by a road authority) adjoining all other roads – councils.</p> <p>Culverts over an irrigation channel, sewer or drain constructed by a water authority – the constructing water authority.</p> <p>(NB: <i>Road Management Act 2004</i> could also be interpreted to put culverts in the same position as crossovers, however, the above analysis seems to be the generally accepted interpretation.)</p>
Roadside drain	Obligation	<p>Roadside drains adjoining arterial roads – VicRoads.</p> <p>Roadside drains adjoining all other roads – councils.</p>
Bridges	<p>Obligation</p> <p>Discretionary power</p> <p>Discretionary power</p> <p>Obligation</p>	<p>Bridges connecting two sections of public road – if arterial road, VicRoads; otherwise, the council.</p> <p>The land between the bridge and a private property boundary – in an urban area, the council, otherwise VicRoads.</p> <p>Bridge constructed by VicRoads or a council over a footpath or channel to facilitate access over an obstacle and into private property – VicRoads or council (depending who constructed – VicRoads for arterial roads, council for local roads).</p> <p>Bridge constructed by a water authority (on public or private land) due to that authority sending water into the waterway – the water authority.</p> <p>Bridge fully on private land – landowner (unless constructed by a water authority due to that authority sending water into the waterway).</p>
Debris in and on the banks of creeks (including rubbish, willows)	Discretionary power	<p>CMA/Melbourne Water, except in the following circumstances:</p> <p>If a creek is located on Crown land and a Committee of Management has been appointed, that entity will be responsible.</p> <p>If a creek is located within a national park, DSE will likely have a management agreement with a third party such as Parks Victoria, which may make that third party responsible.</p> <p>Any debris beyond the banks of the creek is the responsibility of the council.</p> <p>Also, while CMAs have the statutory discretionary power to clean-up waterways themselves, in respect of vegetation removal, they have tended to pass local laws under s219 (and s194) of the Water Act. These bylaws require landowners to obtain a permit, which enables them to remove vegetation from waterways themselves.</p>

Where a responsible authority has a discretionary repair power, it will typically create a policy to guide that statutory discretion. The VFR was provided with such a policy created by DSE setting out proposed action priorities to guide CMAs with flood recovery. It would appear to the VFR that most authorities acted in accordance with their respective guidelines and that, on the whole, the clean-up and repair of these assets after the floods was adequate in the circumstances. However, the VFR suggests that, in the future, such policies be made accessible to the public, as this would reduce misunderstanding in the community about both repair obligations and activities being undertaken after a flood event.

Recommendation 73:

The VFR recommends that:

the state review the legislation and policies that set out clean-up and recovery responsibilities for infrastructure such as crossovers, culverts, drains, bridges and waterways, including consideration of:

- whether the entities who are given obligations or powers to undertake clean-up works have the capacity to do so; and
- the appropriateness of having different legal regimes for what is essentially the same piece of infrastructure.

If the review reveals that the current responsibility matrix is inadequate, the state develop an action plan to address the identified shortcomings.

Recommendation 74:

The VFR recommends that:

the state make available to the public a clear guide of who is responsible for:

- clean-up and recovery of various types of infrastructure that straddle the public/private boundary; and
- the policies agencies will follow in determining whether to repair infrastructure under their control.

Insurance

The issue of insurance was not included in the VFR's terms of reference, and the VFR notes that a House of Representatives Standing Committee on Social Policy and Legal Affairs is currently conducting an inquiry into the operation of the insurance industry with specific reference to extreme weather and disaster events.²⁰⁴ While the VFR will make no recommendations regarding insurance, it would be remiss of the VFR if it did not pass on some of the observations gleaned from visits to flood affected communities and municipalities.

In its submission to the VFR, the Corangamite Shire highlights the range of issues which confronted those in flood affected areas:

*The varying interpretation and degree of insurance cover has caused a significant issue for all impacted residents and businesses. The fact that some properties required three or more insurance assessors to assess damage and often a hydrology report prior to rejecting or accepting claims clearly identifies that a level playing field is not present in the insurance industry.*²⁰⁵

A research report prepared for Mr Paul Weller MP, the Member for Rodney, states:

*A resident of a town, suffered severe structural damage to his house but this damage, as well as temporary accommodation costs, were entirely covered by his insurer. At the other extreme, a few local business owners were not covered by their insurers and were forced to pay for all repairs and replacements not covered by the Rural Finance grant out of pocket.*²⁰⁶

204 <http://www.aph.gov.au/house/committee/spla/insurance/info.htm>

205 Corangamite Shire Submission to VFR, 27 May 2011

206 Alexander Sheko, *An assessment of the effectiveness of financial assistance provided by the Victorian Government for emergency recovery after the January 2011 floods in Victoria.*, June 2011

There is no doubt that the confusion, anger and concern over what is interpreted as the capriciousness of the insurance companies will impact on many people's capacity to recover. It was apparent to the VFR that any review of insurance issues must consider what can be done to improve the timeliness of insurance assessment. Protracted assessment processes delay people from cleaning up their properties and this in turn delays their longer term recovery. The Shire of Campaspe reported that:

Through feedback from the community, it is understood that there have been long delays in insurance companies attending properties to carry out assessments. This situation meant people could not start work on cleaning up their properties for days or weeks and in many cases meant living in a flood damaged dwelling.²⁰⁷

More worryingly, loss of confidence in insurance poses enormous risks to the community and to the resilience based approach underpinning disaster management in Australia. It has been estimated that on average the Australian community spends \$1.58 billion each year in recovery from natural disasters.²⁰⁸ In December 2009, COAG adopted a resilience based approach to disaster management. This approach is built on shared responsibility, a better understanding of the risks that we live with and empowering communities to act. As the Australian Strategic Policy Institute notes, "Insurance is an important tool that individuals can use to increase their own resilience to natural disasters and to reduce the welfare losses they suffer as a result of those disasters".²⁰⁹

It is vital that the current review of the insurance industry arrives at a point where the community can have confidence in the equity of the product and that the processes of assessment can be undertaken in a timely manner.

Local government clean-up issues

Local government commented positively on the financial assistance provided for the clean-up. However, they also raised a number of systemic issues. Some of these issues turned on the capacity of small councils to fulfil emergency management roles generally, particularly when there have been a number of flood events over a relatively short period of time. This issue is dealt with in more detail in Chapter Six of this report.

The systemic issues raised by municipalities were:

- difficulties in getting access to timely and accurate data to plan and prioritise works through the RIA process
- management of spontaneous volunteers
- assurance of financial assistance to deal with the clean-up. This issue is dealt with in Chapter Seven of the report.

Rapid impact assessment

Historically in Victoria, impact data collection has been ad hoc and lacking coordination. Heightened public awareness and access to both formal and informal information has generated an increased expectation from government and the community for accurate and authoritative information in a ready-to-use format at times of emergency.

Major emergencies, such as the 2006–07 Great Divide bushfires and the 2007 Gippsland floods, highlight the need for immediate assessment of the impact during the initial stages of an emergency affecting an area or community. In response to that need, RIA was developed in August 2007. The OESC, in partnership with DHS, initiated a project to develop a framework for RIA. The framework was piloted during emergencies between January 2008 and February 2009 and learnings were integrated into the ongoing development of RIA and the framework.

The stated intent of RIA is to capture the nature and scale of the impact on people, community infrastructure, the economy and natural and built environments during the initial 48 hours of an emergency. The RIA provides processes and tools to:

- gather and identify information to assist response activities
- rapidly determine the impact of the emergency and identify recovery assistance requirements
- provide information to the government (and the community) on the emergency impact to promote confidence in the management of the incident
- establish a standard process for coordination, gathering, recording and reporting impact related information.²¹⁰

207 Shire of Campaspe submission to VFR, 18 May 2011

208 Australian Strategic Policy Institute, *Sharing Risk Financing Australia's disaster resilience*, Special Report February 2011, Issue 37

209 *ibid*

210 Office of the Emergency Services Commissioner, *Draft Rapid Impact Assessment Framework*, 2010, p 6

The EMMV stipulates that:

The control agency has the overall responsibility for the instigation and management of the RIA process.

To ensure that the RIA processes are undertaken in a timely manner, resources from all agencies and organisations involved in the emergency may be tasked to collect, confirm and exchange relevant information.²¹¹

Prior to the development of the RIA, various organisations collected information on damage and impact related to their specific area of interest or responsibility. The RIA process references the importance of establishing links to these sources.²¹² The range of information sources includes state government departments and agencies, the Insurance Council of Australia and the National Registration and Inquiry System (NRIS). In this regard, the RIA seeks to provide a way to collect, collate and analyse information from a wide range of sources.

The EMMV states that the control agency will decide when the RIA will cease. The criteria for this decision include:

- the incident has been controlled and no further impact is anticipated
- the incident has been controlled and recovery activities are taking prominence
- the resources of the IMT can effectively take over the information collation, analysis and dissemination process.²¹³

The newly revised process was tested during the 2010–11 floods and during January 2011 the largest single deployment of RIA resources was activated in support of flood operations. The January event saw a state RIA cell, active from the 14 January to 13 February 2011. Over 20 MFB Commanders deployed as coordinators to IMTs across the state to capture impact information. Over 150 ADF personnel and command staff capable of remote operation, 18 Unimog high clearance vehicles and Sea Hawk helicopters were made available to undertake RIA activities.

The VFR received a number of comments regarding the RIA process from submissions and from operational debriefs. In analysing this input against the current process a number of issues were highlighted.

Firstly, there is little understanding of the primary purpose of the RIA. From comments made in various debriefs and written submissions, it appears the understanding of what the RIA is intended to deliver varies widely. This variation ranges from a view that it will provide a preliminary assessment that might be 50 per cent accurate, to a view that it will contain a high level of detail. Based on discussions with OESC, it is their belief that the RIA process would feed into a more detailed and evolutionary Post Impact Statement. However, if this is the intention, there is no documentation which defines this linkage, what should be included in this statement and which agency is responsible for collecting and analysing this information. In the absence of this, it is unsurprising that there is an expectation that the RIA process will fill that need. The VFR notes that an OESC RIA Practice Note developed in 2010 remains in draft format and is yet to be formally issued.

Secondly, while the RIA protocols detail the range of information sources, including information collected by agencies such as VicRoads and DPI, comments made in debriefs suggest that the relationship between these processes and the RIA is not well understood. In addition to the lack of understanding, it would also appear that different systems are used by agencies making the collation and analysis of this material a burden for the control agency. Corangamite Shire advised the VFR that:

After the flood event the coordination of the RIA and the exchange of information was highly disorganised. The Skipton community were subjected to five assessments in seven days with almost all of these assessments resulting in no information exchange between agencies.²¹⁴

Thirdly, it appears that damage caused by floods appears to have been more difficult and time consuming to assess than fire. Any analysis of the RIA needs to examine how the implications of different events might affect the process.

211 State of Victoria, Emergency Management Manual Victoria, 2011, Part 3, 2010

212 Office of the Emergency Services Commissioner, *Rapid Impact Assessment Operating Protocols*, 2010

213 *ibid*

214 Corangamite Shire submission to VFR, 27 May 2011

The final and perhaps most important issue is ownership and as raised by the OESC with the VFR:

The intention was always for the control agencies to maintain responsibility for RIA. OESC coordinates the RIA to assist control agencies. However, recent experience has demonstrated that there is a reluctance on the control agencies part to take ownership of RIA. This continues to be a point of uncertainty and contention as the implementation of this valuable process moves forward to become embedded into control agency processes.

On the question of ownership, the VFR believes there are two interrelated issues. The first is which organisation has responsibility for the continued development of the RIA, specifically policy development and operational guidelines. At present this responsibility has fallen to OESC, but longer term ownership is less clear. The second issue is that raised by the OESC: ownership of the function during an emergency. Currently the EMMV is clear on this point; the control agency is responsible for the RIA. However, as discussed in Chapter Three, the capacity of control agencies to fulfil all the required obligations in an emergency remains a challenge. If this situation remains unchanged, there needs to be an analysis of why there continues to be this level of confusion relating to RIA and to address any underlying issues.

Recommendation 75:

The VFR recommends that:

the state, in respect of the Rapid Impact Assessment process:

- resolve which agency/ies has policy and operational responsibility for this process
- define the purpose of Rapid Impact Assessment; and
- review the process, in light of the 2010–11 floods, to examine options to improve the efficiency of the collection of information.

Volunteers

Local councils reported on the important role volunteers played in the clean-up effort. Buloke Shire Council stated in their submission that “Buloke has been incredibly well serviced by volunteers during the crisis”.²¹⁵ The Victorian Farmers Federation (VFF) similarly stated that “... even the smallest period of assistance from volunteers has been appreciated by members and helped to boost the morale in the region. Members have been overwhelmed by the support provided from volunteers.”²¹⁶

DPCD is the Victorian Government agency charged with responsibility for policy development and support for volunteering.

As part of this responsibility, DPCD maintains a website to support volunteering activities in Victoria. Following the bushfires of 2009, DPCD developed the emergency volunteer register. The register was due to be tested and released in the latter part of 2011. However, this release was brought forward due to the floods in January. The register allowed interested people to register with details of their skills and what due diligence checks they had undertaken. These details were sent to local government on a weekly basis. As part of this process, 468 people registered as potential volunteers.

Advice provided to the VFR is that local councils did not use this resource and information from DPCD confirms this advice. DPCD suggested to the VFR that bringing the initiative forward meant that local councils had no time to factor this resource into their emergency plans and given the number of local people who volunteered, there was little need for local councils to call upon support from outside local or adjacent communities. The reality is that given the logistical task of transporting, accommodating and supporting volunteers who live long distances away, considerable pre-planning is required if this potential resource is going to be capable of being used in future events.

In its submission to the VFR, the MAV commented that “the state opened a volunteer registration service, but did not coordinate the allocation of volunteers and materials to match the requests for assistance from those in need”.²¹⁷ A range of suggestions for supporting councils were made to the VFR. The first was that DPCD should develop resources that would assist councils to manage and support local volunteers who come direct to councils. Such assistance could include information on processes for assessing, supporting and managing volunteers. The second suggestion was that DPCD consider providing their regional staff to smaller councils to assist them in managing volunteers during an emergency event.

215 Buloke Shire Council submission to VFR, 26 May 2011

216 Victorian Farmers Federation submission to VFR, 27 May 2011

217 Municipal Association of Victoria submission to VFR 27 May 2011

The MAV also highlighted the issue of insurance coverage for volunteers:

Flood affected councils were expected to organise this (the allocation of volunteers to task) locally, but were only covered by liability insurance if volunteers were undertaking 'council-owned' recovery work. In future, any volunteer efforts should be established from the outset to either:

- *comply with councils' insurance policies which allow coverage for volunteers where the volunteer workers are working on that activity or project, within the scope of their agreed duties, for and on behalf of the council (including activity on private property where appropriate permission/approval has been sought) or*
- *the state take responsibility for volunteer coordination efforts (as occurred after the Brisbane floods) or*
- *the state funds volunteer coordinator positions managed by councils to execute these tasks as occurred after the flood events in early 2011.²¹⁸*

It may well be that there are other alternatives to that suggested by MAV, but it is clearly an issue that needs to be addressed.

Recommendation 76:

The VFR recommends that:

the Department of Planning and Community Development review the volunteer register and examine additional options to support councils in volunteer management, including the development of tools and staffing support.

Recommendation 77:

The VFR recommends that:

the Department of Planning and Community Development examine strategies to address and clarify insurance coverage of community volunteers in emergency events.

Recovery

The EM Act defines recovery as 'assisting persons and communities affected by emergencies to achieve a proper and effective level of functioning'. By its very nature, recovery involves all levels of government, non-government organisations, the private sector, communities and individuals. In Victoria, DHS is the agency responsible for coordinating recovery planning and operations. DHS also manages and provides a range of recovery services.

Initiating recovery needs to begin while the emergency event is happening. In the first instance, people affected may need to be offered early relief in the form of shelter, food, personal support and information. Governments and non-government agencies need to assess the impact and begin to plan what is needed for longer term recovery.

The Emergency Relief and Recovery Plan in Part 4 of the EMMV outlines how the relief and recovery process should work. The plan details the policy, principles, roles, and responsibilities associated with planning for and recovering from emergency events.

Recovery is a long term process and given the timeframe of the VFR, it will not be possible to make an assessment of the longer term recovery effort. This report focuses on relief and early recovery service delivery and planning. During VFR consultations and in submissions the key issues raised with the VFR were those of relief and recovery centres, data/information collection and sharing, the transition from response to recovery, outreach support and psychosocial supports.

218 *ibid*

Relief and recovery centres

During any emergency, the first critical task is to provide emergency relief, which the EMMV defines as “the provision of essential needs to persons affected by, or involved in the management of, an emergency”.²¹⁹ The primary function of emergency relief is the provision of shelter, food, registration of individuals and material aid.²²⁰ Municipal councils are responsible for coordinating emergency relief at the local level.

Emergency relief is provided in emergency relief centres that are established by local councils in locations that are safe and as convenient as possible to local residents. Relief is also provided to people who are unable to leave their properties by providing outreach. Between September 2010 and February 2011, 50 relief centres and 28 recovery centres were opened. Comments provided to the VFR by people in flood affected communities indicate that most people were satisfied with the support and services they received.

While local councils were generally satisfied with the operation of the emergency relief arrangements, most raised the issue of information collection and sharing.

Cross-border issues

In two locations close to the New South Wales border, assistance was sought from councils in New South Wales to establish relief centres. While assistance was forthcoming and appreciated, the difference in the systems and arrangements between Victoria and New South Wales “was not ideal in the middle of such a large emergency when staff were already stretched and facing a range of complex issues”.²²¹

In responding to the VFR, DHS stated that they are aware of the difficulties that were experienced and will progress discussions to “develop a mutual operating agreement for future events”.²²²

Information collection and sharing

There are various reasons why organisations collect personal information during or after an emergency.

Firstly, in the event of an emergency, all states and territories activate a process that registers people affected so their friends and family can obtain details of their whereabouts and safety. This registration process is the National Registration and Inquiry System (NRIS) and it is the responsibility of the police in each state and territory to collect the required information. Red Cross, on behalf of the police, collects the information for NRIS. People affected by the emergency can register at relief centres, over the telephone or online. NRIS was activated during the 2010–11 floods and over 10,500 people were registered and nearly 400 enquiries were made.²²³

Secondly, the EMMV requires DHS to coordinate and manage a single registration form that serves the dual purposes of replacing lost identification and identifying immediate welfare and support needs.²²⁴ The EMMV states that this form assists to facilitate a coordinated approach for access, as well as aiding the understanding of the events impact.

Thirdly, the EMMV states that, after an emergency, DPI will visit all affected properties within the farming, rural activity, rural conservation and green wedges zones of the affected area to assess the impact of the event, commence remediation activities and further plan for recovery.²²⁵

Fourthly, the EMMV requires local councils to engage in post-impact assessment – gathering and processing of information survey and determination regarding occupancy of damaged buildings and provision of personal support services, for example counselling and advocacy.²²⁶

219 State of Victoria, Emergency Management Manual Victoria, 2011, p 4-4

220 Emergency Relief Handbook, Department of Human Services, 2010. p 3

221 Gannawarra Shire Council Submission to VFR, 25 May 2011

222 Advice to the VFR from the Departments of Health and Human Services

223 *ibid*

224 State of Victoria, Emergency Management Manual Victoria, 2011, p 4-26

225 *Ibid* p 4-37

226 *Ibid* p 7-60

Fifthly, the EMMV states that assessments for recovery should be informed by RIAs immediately after the flood event, which are led by the control agency. The EMMV states:²²⁷

These will be used by the relevant lead sector service provider to coordinate temporary service provision, relief and recovery planning and reconstruction, with support provided by emergency services, municipal councils and the State Recovery Coordinator (DHS) where required. Following the initial assessments, technical teams undertake more detailed assessments where required and should coordinate with response agencies and the State Recovery Coordinator (DHS) to ensure safe access and prevent duplication.

Information duplication

A common theme raised in consultations with the community, local government and agencies was the duplication in collecting information after the flood event. Some people affected by the floods complained of having to 'tell their story' to multiple agencies, which exacerbated the personal stress they were going through after the event.

Most agencies involved in the recovery effort agreed that obtaining coordinated, accurate and timely information on individuals affected by emergencies would be beneficial to the recovery of individuals and communities.²²⁸ A number of local governments queried whether the information collected through NRIS could be used for purposes beyond enabling people in affected areas to be located by friends and family. For example, Gannawarra Shire Council noted, "information sharing (electronic) access across agencies would have reduced the burden on evacuees and flood victims from having to repeat their personal information and situation several times and made checks on individuals much easier".²²⁹

The VFR notes that such information could be used to identify who was affected, ensure contact was made and that critical needs were identified early. The VFR notes that the VBRC made similar observations in respect of information sharing after the bushfires, attributing the duplication in collecting information to privacy concerns and different registration forms for different government agencies.²³⁰

The above description of the points at which agencies are required to collect information falls into two categories; information which is broadly intended to identify all people impacted in an area and information intended to identify damage or people needing assistance. The first collection tends to take place in the early stages of an emergency from either a relief centre or personal or telephone outreach. The second would normally take place after the emergency had subsided and people had returned home. Different agencies have different roles to play during an emergency and each will require information to allow them to acquit their responsibilities. However, the one overarching objective is to ensure that those affected by an emergency event are safe and aware of the support that is available.

The VFR believes that achieving this objective will be more likely if this process builds on the information that is collected at the early stages of the emergency. During consultations with local communities it was apparent that relief centres were used as places where people could seek safety, support, and information.

From the information provided to the VFR by DHS and Red Cross, it appears there are two separate strands of work occurring on this issue: the upgrade of NRIS and other work being undertaken by Centrelink.

Council of Australian Governments

DHS has advised the VFR that COAG has tasked the National Information Security Coordination Group with the development of a standard national application form for the replacement of lost identity documentation. Centrelink is coordinating this at the national level. DHS advised the VFR that Victoria requested that this form serve the dual purposes of assessing identity documentation and assessment for recovery services but the other states did not wish to take this approach.

227 Ibid p 4-12

228 Various Local Government submissions to the VFR

229 Gannawarra Shire Council submission, to VFR, 25 May 2011

230 2009 Victorian Bushfires Royal Commission, *Victorian Bushfires Royal Commission Final Report, Volume 11 Part Two*, Parliament of Victoria, July 2010, p 333

National Registration and Inquiry System upgrade

The Red Cross advised the VFR that a planned national upgrade of NRIS, known as NRIS 6, would expand NRIS capacity from a registration system to a platform that could be used by recovery agencies to maintain contact with individuals and identify their needs. In August 2011, the Commonwealth Attorney-General announced that \$1 million will be invested to update NRIS, with a further \$250,000 to develop an electronic tracking system to provide more accurate information about peoples' movements during a disaster which will facilitate improved services at evacuation centres.²³¹

Given the widespread use and acceptance of NRIS as a registration tool, the VFR suggests that extending its capacity is a sensible way to improve assistance to people affected by disasters. Responses from Red Cross and DHS to the VFR indicate that DHS is not currently involved in the upgrade of NRIS. As the key recovery agency, it is critical that DHS is involved in this work.

If NRIS 6 is unable to deliver the expected benefits then DHS needs to pursue the development of a system that will ensure the collection of information that can be used by those involved in the recovery effort.

Issues with sharing information

Regardless of the future of NRIS as a platform for recovery planning, a national approach to the sharing of the various types of personal information identified above is required. Current understanding and arrangements are contributing to emergency management personnel taking an unhelpfully cautious approach to sharing information after an emergency.

As the Benalla Rural City Council noted, "service delivery could be done in a more streamlined manner if the systems used by various agencies integrated or complemented each other".²³²

The VFR was informed of examples of agency personnel engaging in unhelpfully cautious decisions regarding information sharing:

- two councils reported Red Cross volunteers being reluctant to provide the council with access to lists of evacuees who had registered at the relief centre based on privacy concerns.²³³ The time it took to escalate and resolve the matter significantly delayed an effort to identify any unaccounted for people
- a council was asked to provide the same list to local groups of volunteers who wanted access to the list to enable them to help a group of local residents. The council's hesitation in providing this information created tension with local volunteer groups who saw it as an overly bureaucratic response in a time of crisis. The council's reluctance was driven by the fact that these groups had no formal role under the state's emergency management framework and thus were not subject to the information sharing frameworks in the EMMV. Councils also noted that the agencies they dealt with in respect of the floods would cite the *Information Privacy Act 2000* as a reason either not to share information or to demand it.²³⁴

Privacy legislation

The state²³⁵ and commonwealth²³⁶ privacy statutes do allow for some sharing of personal information during and after an emergency. These include:

- where there is consent
- where disclosures are necessary to lessen or prevent serious and imminent threats to health, safety or, sometimes, welfare (the commonwealth principles exclude reference to welfare, meaning it may be more difficult for entities subject to commonwealth Information Privacy Principles (IPPs) such as Red Cross or Centrelink to rely on such provisions to disclose information after a flood when the immediate threats to life and health have diminished)
- where the information was collected for the purpose of the proposed disclosure or where disclosure would have been reasonably expected for a related secondary purpose; or
- in the situation of disclosures by VicPol only, where necessary for community policing functions.

231 http://www.ag.gov.au/www/ministers/mccllelland.nsf/Page/MediaReleases_2011_ThirdQuarter_5August2011-3.6millionforemergencymanagementinitiatives

232 Benalla Rural City Council submission to VFR, 2 June 2011

233 Submissions made to VFR, 26 May 2011

234 *ibid*

235 *Information Privacy Act 2000*; *Health Records Act 2001*

236 *Privacy Act 1988* (Cth)

Information sheet 02.10 *Emergencies and Privacy* published by the Office of the Victorian Privacy Commissioner states that privacy law does not stand in the way of responding to legitimate emergencies. The Commonwealth Office of the Privacy Commissioner similarly states the commonwealth privacy law is not a barrier in an emergency or a disaster. The VFR has been informed that the Office of the Victorian Privacy Commissioner has suggested that the use of section 24(3) of the EM Act, in conjunction with IPP 2.2(f) could be used to remove any remaining legislative barriers to agencies obtaining necessary personal information during and after an emergency.

However, the VFR's view is that existing privacy law does somewhat stand in the way of responding to and recovering from emergencies. Firstly, declarations under the EM Act suspending the operation of legislation during a 'state of disaster'²³⁷ have never been used in Victoria and the declaration provisions in the *Privacy Act 1988* (Cth) to suspend privacy legislation are not used for all emergencies.²³⁸ Secondly, the exclusion of reference to welfare in the commonwealth law principles has the potential to cause confusion, given that state and federal agencies operate in the recovery space. Thirdly, without pre-planning and an appropriately drafted protocol that all stakeholders are familiar with, the VFR appreciates that the legislative matrix may be too complex to be able to be properly engaged with during an emergency. An individual, during a high pressured emergency situation, who is asked to consider whether a particular disclosure is for the primary or secondary purpose of collection or could be said to be reasonably contemplated or relates to an individual's safety would understandably err on the side of caution and likely choose not to share information.

The VBRC recommended the state consider amending the EM Act to introduce a graded scale of emergency declarations short of disaster. In response to this, the VFR understands DOJ is conducting a review of the state of disaster provisions in the EM Act. The review is considering amending the Victorian Information Privacy Act to make it consistent with the declaration provisions in the Commonwealth Privacy Act, "remov(ing) any impediments to the legitimate use of personal information to assist in facilitating recovery efforts after a major emergency".²³⁹ The VFR suggests that any such review extend to the Victorian *Health Records Act 2001* and is accompanied by discussions with the commonwealth about bringing state

and federal legislation into line. However, the VFR notes that declaration provisions are only effective if they are used and that many of the perceived problems with the current legislation could be avoided by pre-planning.

Current guidance on privacy obligations

The concept of the emergency sector requiring guidance on the legislative framework surrounding personal information is not unique to Australia. In the United Kingdom, the Cabinet Office prepared and publicised a guide entitled *Data Protection and Sharing – Guidance for Emergency Planners and Responders in 2007* "to develop tailored guidance for the emergency community to dispel some of the myths and provide a useful resource to inform future emergency planning, response and recovery".²⁴⁰

Similarly, the Victorian Privacy Commissioner notes:²⁴¹

When a serious threat to public health or safety occurs, disclosure may be necessary and the organisation may need to respond in a fast and effective manner to a request for information. ... It is advisable for organisations to develop an 'emergency data policy' and put a set of protocols in place before such a request occurs. This way, the organisation and its staff can quickly and confidently handle requests for information in emergency situations. Policies and protocols should include both an 'escalation process' for dealing with such disclosures, and guidance for determining who will disclose the information, what information should be released, and to which organisations.

237 Under ss 23 and 24(2)(b) of the *Emergency Management Act 1986* (Vic) declaring that the operation of the whole or a Part of an Act is suspended, or under Pt VIA of the *Privacy Act 1988* (Cth)

238 Declarations were made suspending the *Privacy Act 1988* (Cth) on 11 February 2009 regarding the Victorian bushfires and 13 January 2011 regarding the Queensland and New South Wales floods, but not the Victorian floods

239 State of Victoria, *Implementing the Government's response to the 2009 Victorian Bushfires Royal Commission*, May 2011, p 40

240 <http://interim.cabinetoffice.gov.uk/media/132709/dataprotection.pdf>

241 Information Sheet 2.10, *Emergencies and Privacy*, available at [http://www.privacy.vic.gov.au/privacy/web2.nsf/files/emergencies-and-privacy/\\$file/info_sheet_02_10.pdf](http://www.privacy.vic.gov.au/privacy/web2.nsf/files/emergencies-and-privacy/$file/info_sheet_02_10.pdf)

In an attempt to provide a useable guide to what types of personal information agencies could share under the privacy legislation in and after an emergency, an information sharing protocol was developed in 2006. The protocol applied to Red Cross, VicPol, the State Coroner, Ambulance Victoria, DHS, MFB, CFA and EMA. The protocol is managed by VicPol.

The protocol set out specific purposes for collection of information and specific purposes for use of information, according to the relevant agency body. In respect of data collected through NRIS, the protocol stated:

- Red Cross use of the (NRIS) dataset will be strictly limited by VicPol for the management of the emergency (clause 13)
- recipient organisations will make requests to VicPol for access to specific data consolidated within NRIS (clause 14)
- VicPol will control access to information consolidated within the NRIS dataset (clause 14).

Red Cross noted to the VFR that the protocol is more restrictive than the legislation requires and fails to acknowledge the role of local councils and Centrelink in recovery.²⁴² It noted the example of the lack of clarity under the protocol as to whether Red Cross could advise those people who were registered with NRIS that they may be able to access certain classes of relief funds.

The VFR also makes the following comments about the current protocol:

- it was drafted as an MOU that 'expires'. This misunderstands the purpose of an information sharing protocol which is to provide parties with guidance on applying the legislation
- the VFR is advised that the DSE and VICSES refused to sign the protocol, acting on internal legal advice which noted that an MOU did not override privacy legislation. Again, this misunderstands the purpose of the protocol, which is, in its development, to encourage agencies to engage in the intellectual exercise of applying the legislative provisions to contemplated situations and during the emergency, to provide guidance to responders
- the protocol is drafted as a legal agreement. In times of emergency, a plain English guide such as the United Kingdom example referred to earlier in this section, which contains case studies and a flow chart, would be more useful.

The VFR acknowledges that VicPol has been very obliging in response to requests to use NRIS more comprehensively, however, the VFR's view is that it is timely to review the protocol to remove some of the potentially unnecessary restrictions and make it a more useful and appropriate document.

Recommendation 78:

The VFR recommends that:

the state review the potential for National Registration and Inquiry System 6 to provide a single point of information collection to both register individuals and plan the delivery of recovery services. If the review determines National Registration and Inquiry System 6 is unable to fulfil this function, the state should work with the commonwealth and other states to implement the necessary changes to National Registration and Inquiry System 6. If National Registration and Inquiry System 6 is unable to be developed as a single information collection system:

- the state should develop and implement a single point of information collection system, including how information obtained from outreach activities can be incorporated into this system and how such information may be linked into the Rapid Impact Assessment process.

Recommendation 79:

The VFR recommends that:

the state amend the current protocol governing National Registration and Inquiry System information collection and sharing to:

- clarify the role of councils and Centrelink during and after emergencies
- ensure the amended protocol is written in plain English and easily understood; and
- coordinate, in conjunction with the state and federal privacy commissioners, the development of a new National Registration and Inquiry System information sharing protocol in line with the proposed National Registration and Inquiry System 6 and state or federal privacy legislation.

²⁴² Australian Red Cross advice

Outreach

Outreach support is an important component of recovery. The EMMV states that outreach support aims to:²⁴³

- confirm impacts to premises and principal places of residence
- inform household/community recovery needs
- identify emerging needs to assist in information for planning
- provide the opportunity for people who are socially isolated or vulnerable to receive recovery related information and be advised of available services
- reduce anxiety in people affected by a disaster
- enable people to 'tell their story' to someone who will be supportive and attentive
- provide referral to other community services including counselling where requested.

The EMMV requires DPI to visit all affected properties within designated areas and for municipal councils to organise outreach support to assess the impact, provide information to residents and identify vulnerable groups.

Throughout the consultations with the community, there has been universal support and appreciation for the outreach services provided. Local councils also confirmed the value of this service. Likewise, the submission from the VFF states that:

*The response of the Red Cross has been greatly appreciated by members of the farming community, particularly in areas like Charlton, where families have been unable to re-enter their property for an extended period of time and were provided with considerable support from this group.*²⁴⁴

DPI advised the VFR that at the beginning of the floods they mapped the possible extent of the inundation and identified 3,333 landholders. Between 20 January and 11 February 2011, the DPI customer service centre made 2,173 contacts. Of these 256 visits were undertaken and 1,322 referrals to other agencies were made.

Despite what appears to be a fairly comprehensive approach to outreach to the farming community, one common theme in the consultations was that those on farms sometimes felt that they were forgotten. Remaining in contact with those who are isolated will always present challenges to those involved in the recovery effort. It is therefore timely to examine the effectiveness of the current arrangements to ensure that opportunities for improvement are not lost. The VFR notes that in some areas organisations such as BlazeAid were providing invaluable assistance to farmers. It may be that such organisations can also be linked in the outreach effort.

During the consultations, a number of councils referred to outreach which they had organised. The response from DHS identifies a number of other outreach activities. However, it is difficult to get a complete picture of the outreach that was organised through local councils and DHS. Further, it is not clear that there are any triggers for when a local council should activate outreach.

DHS advised the VFR of a number of proposed improvements to early outreach including telephone follow up with recipients of grants and a system to allow for the collection and analysis of information.

Recommendation 80:

The VFR recommends that:

the state review the way early outreach occurs and implement changes that will ensure that there is a consistency of approach regardless of which agency undertakes the service.

243 State of Victoria, Emergency Management Manual Victoria, 2011, p 4-37

244 Victorian Farmers Federation submission to VFR, 27 May 2011

Longer term recovery package

In response to the impact on individuals, communities, businesses, the environment and the economy, the commonwealth and Victorian governments provided funding to a range of services and initiatives designed to support recovery.

There are a number of distinct recovery packages:

- those aimed at assisting the local economy included grants and loans to businesses, employment initiatives, financial counselling
- those aimed at restoring the environment, including initiatives such as restoring Victorian Parks
- those aimed at repairing or replacing infrastructure, including initiatives such as repairing damage to arterial roads and rail network.

The major issues associated with these activities are addressed in arrangements in Chapter Seven of this report. This section of the report deals with issues related to the recovery of individuals and communities.

One key initiative was the allocation of funds that enabled communities to come together. The importance of re-establishing local networks has long been recognised in Victoria. Funding for Flood Recovery Officers and funds to organise local events is a critical part of recovery. Such initiatives foster opportunities for mutual support and a sense of life returning to normal.

A number of key services were put in place to support individuals following the floods. In addition to outreach, casework services were funded in Loddon-Mallee, Grampians and Southern Metropolitan regions. Casework provides practical one-on-one support to families and individuals. Such assistance might mean seeking out information, following up issues, advocating on behalf of a family or individual. For those significantly impacted by the floods, the task of sorting out day to day issues is daunting and as demonstrated following the Black Saturday bushfires, such support eases some of this burden.

In addition to outreach, counselling services were also funded. In recognition of the particular needs of farming families, Sustainable Farm Families was established.

The funding of services designed to provide support to individuals and communities affected by the floods was not an issue raised in many submissions. Given the timing of the VFR consultations, it is not surprising that the issues which were raised were of a more immediate nature.

The Victorian Council of Social Services (VCOSS), the peak body of the social and community sector in Victoria, did however make a substantial submission to the VFR. While VCOSS made a number of constructive suggestions in their submission they stated that many community service organisations reflected on the increased coordination, improved communication and strong response and recovery frameworks which have been developed following the 2009 Victorian Bushfires. In reference to the psychosocial recovery response, they stated:²⁴⁵

There appears to be a greater understanding within government of the long term nature of recovery ... This is shown by earlier commitments to funding recovery services at the local level with timeframes more closely reflecting best practice.

VCOSS suggests that services such as mental health first aid training and community mental health forums need to be provided within the first few weeks, rather than months following the emergency. This suggestion is consistent with a recommendation made in Chapter Seven of this report regarding ensuring certainty of funding for recovery services after an emergency.

Housing

The issue of supporting people who were unable to return home after the floods was not raised in many submissions or during the consultations. As indicated elsewhere in this report, insurance issues have been the dominant and immediate concern for homeowners.

The EMMV states that the provision of emergency accommodation should be planned for as part of a MEMP.²⁴⁶ Emergency accommodation is a place where people are able to stay while waiting to return to their home. In many cases, the relief centres fulfilled this function. DHS have advised the VFR that in most cases the MEMPs do not identify any options.

²⁴⁵ VCOSS submission to VFR, 3 June 2011

²⁴⁶ State of Victoria, Emergency Management Manual Victoria, 2011, p 4-32

DHS assists families and individuals in finding interim accommodation when their primary place of residence is destroyed or damaged to the point that it cannot be occupied for an extended period. Some short term financial assistance may be available for such arrangements but longer term financial support is not automatic.

While it is difficult to know the exact number of houses destroyed or significantly damaged by the floods, the best estimate is around 2,000. As was the case following the Black Saturday fires, it appears that most people whose houses were significantly impacted by the floods made private arrangements for alternative accommodation.

DHS arranged interim accommodation for many families. DHS advised the VFR that the Black Saturday experience was that of all those who finally required interim accommodation, 85 per cent sought out such assistance in the first six months of the event. However, given the complexity of insurance issues and the time it is taking for people to get an accurate assessment of flood damage, a different pattern may arise after the 2010–11 floods.

Despite this situation, DHS have advised the VFR that they have learnt lessons from the 2010–11 floods which will be factored into future planning. The first of these lessons relates to the collection of data and the importance of knowing not only the quantum of houses affected but also the location and raised the possibility of GPS enabled real time technology solutions that could be a part of the RIA.

Secondly, arrangements need to be in place ahead of emergency events. Following Black Saturday, caravans were donated and while the supply was quickly available, the task of ensuring they were of a suitable standard proved costly and led to delays in providing them to people affected by the fires. DHS informed the VFR that following the floods they decided to secure new caravans by a commercial lease. Planning and negotiating these arrangements took longer than expected and DHS will need to have plans in place ahead of any disaster rather than seeking to put such arrangements in place during an emergency event.

DHS have advised the VFR that the arrangements put in place for the floods were more promising and will form part of their future planning.

Public health

The floods of 2010–11 gave rise to a number of public health risks. Disruption to power, water supplies and increased amounts of stagnant water created an increased risk to the community. The most serious of these were an increase in mosquitoes, release of sewage into the environment and the presence of mould in buildings.

DH is the agency responsible for minimising these public health risks. In particular, the EMMV states it is responsible for implementing legislation, programs and monitoring procedures to minimise public health risk from:

- infectious diseases
- contaminated food
- contaminated water supplies
- radiation and chemicals.²⁴⁷

No systemic issues were raised with the VFR regarding the strategies used to deal with these issues. The VFR was advised that in February 2011 regular surveillance identified the Murray Valley encephalitis virus in animals. In response, a Mosquito Borne Virus Task Force was established and headed by VicPol with representation from all key agencies. The Taskforce coordinated actions that included:

- additional surveillance
- aggressive mosquito control programs in affected areas
- strategic pumping of stagnant water
- a comprehensive communication strategy was developed in collaboration with Tourism Victoria
- health alert to all Victorian doctors
- testing of human blood samples.

DH reported to the VFR that there had been no human case of Murray Valley encephalitis.

Under the *Safe Drinking Water Act 2003* and regulations, the water corporations undertook precautionary testing and reported to DH. 12 towns still remained on permanent boil water advisories as at June 2011. In some areas, limited supplies of drinking water were being supplied.

²⁴⁷ State of Victoria, Emergency Management Manual Victoria, 2011, p 7-31

The growth of mould was another issue that affected communities. The continued presence of water and humid weather prevented buildings from drying out and mould flourished in this environment. Despite people's best efforts in cleaning affected areas, the mould returned. Revised information was provided by DH and DHS but it is likely that the problem of mould will continue for some time.

Given the public health risks associated with the floods, including the added demand on local government environmental health services, it would appear that all agencies worked to ensure that these risks were managed and wherever possible mitigated.

Transition to recovery

At a certain point after the initial emergency, the relevant agencies must decide to undergo the "transition from emergency response to relief and recovery".²⁴⁸ What this means is that the agency controlling the activities to deal with the emergency transfers responsibility to DHS. DHS then coordinates the recovery. While not documented in the EMMV, the usual process is that the relevant response agency and the recovery commander sign a commonly agreed plan that set out roles and responsibilities of relevant agencies.

As noted in an article in *The Age* newspaper of 11 February 2011, in the United Nations context, "successful post disaster recovery depends on how fast critical decision makers can change their focus from the immediate disaster to the rehabilitation. How these decision makers can mobilise communities to look forward".²⁴⁹ This principle is reflected in the EMMV which states that "recovery should commence as soon as practical and after the threat to human life subsides".²⁵⁰

Part 4 of the EMMV lists the factors which will influence the timing of the transition from response to recovery. They include the:

- nature of the hazard/threat and whether there is a risk of a recurring threat
- extent of impact on communities, as this may determine if a prolonged transition period needs to be implemented
- extent of and known level of loss and damage associated with the emergency
- considerations for the resources required to be activated for effective recovery arrangements.²⁵¹

Issues with transition to recovery

From the multi-agency de-briefs and submissions to the VFR, it appears that state policy on transition from response to recovery may require clarification or review. In most municipalities, transition to recovery happened smoothly. However, in some areas, particularly those areas in the north west where flood waters were not able to quickly dissipate, issues arose.

The following case study involving Mildura (refer next page) highlights some of the systemic issues raised with the VFR, as well as the particular issues that need to be dealt with during an emergency.

In the case of the issues confronting agencies in Mildura, the formation of a transition to recovery taskforce achieved two critical things. Firstly, it assisted local agencies to identify and prioritise the competing pressures. Secondly, it authorised the work being undertaken by Lower Murray Water (LMW). With a strategy and approval for LMW in place, the transition to recovery was agreed and formalised.

In a broader context, the experience in Mildura arose from an unusual range of factors, but the reality is that each large scale emergency has the potential to present previously unanticipated challenges. LMW responded to the Mildura situation when they utilised their expertise to move large pools of water. The formation and involvement of the taskforce to assist those managing such complex challenges was an appropriate response that needs to be factored into the strategies available to be used if necessary in other such future events. However, the Mildura experience also highlighted the often experienced issue of confusion about the process of transition to recovery.

Recommendation 81:

The VFR recommends that:

the state clarify the transition to recovery arrangements including the processes for approving and funding of essential works after transition to recovery has been formalised.

248 The phrase used in the EMMV at 4-23

249 Andrew McLeod, 'With proper planning we'll bounce back', *The Age*, 11 February 2009

250 State of Victoria, Emergency Management Manual Victoria, 2011, p 4-23

251 *ibid*

Case study – Mildura

The average rainfall in the Mildura area is 200mm per annum. On Friday 4 February 2011, approximately 147mm of rain fell in and around Mildura affecting communities including Birdwoodton, Cardross, Cliffside, Irymple, Koorlong, Merbein South and Mildura city.

The Mildura Rural City Council states the Mildura region has approximately 37 catchment basins which are interconnected by a series of irrigation channels and sub-terrain irrigation drainage networks. There is no natural drainage out of these catchment areas into the Murray River riverine areas. This rain event overwhelmed the capacity of these systems to dissipate the water.²⁵²

As a result, large stagnant pools of water covered roads, farming properties, houses and community facilities in the region. The presence of these pools of water was seriously impacting the community and industry, particularly because it restricted movement on the road network. A strategy was urgently required to prioritise the pumping to dissipate the water. In addition to this challenge, strategies were also needed for the short term repair of road and rail networks, as well as dealing with the impact on sewerage systems and mosquitoes.

The only agency that had the capacity to move these pools of water was Lower Murray Water (LMW), using existing irrigation and drainage pumps. LMW did not feature in any of the municipal plans and does not have a specific statutory function in emergency response.

With the process of pumping well underway, the local VICSES then assessed that it was time to transition to recovery, a view that was not shared by other key players, especially DHS. The different points of view are summed up in the following statement from Mildura Rural City Council to the VFR:

Tension was created between services due to the interpretation of the transition from response to recovery. VICSES felt that recovery had started earlier than other services and there were members at the MECC that were reluctant to sign the transition document due to the potential costs and potential for liability that may have been incurred by responding agencies that may not have been covered had the transition been made. The agency most at risk was LMW as they were working outside their normal scope of practice. LMW stayed in response mode until all pumping completed. Initial position on cost coverage was unclear until MECC established and position clarified.²⁵³

As described in Chapter Three, the situation in Mildura was also unusual in that multiple events in the Loddon Mallee region meant that the ICC in Bendigo and then Swan Hill, was stretched and the Mildura MECC acted as a de facto ICC.

While the local VICSES staff had formed the view that the response phase had ended, no formal agreement could be reached. The reason for this was that other agencies were concerned how this would affect the work to deal with the stagnant pools of water, which agency could set priorities for the work and who could authorise the costs. Faced with the unresolved issues there could be no basis for an agreement to transition to recovery.

Taskforce

To resolve the deadlock, a taskforce headed by VicPol was established to travel to Mildura and assist the local agencies to develop a strategy to address the various issues. The taskforce was comprised of senior representatives from the Department of Transport, DSE, DHS, DPI and OESC. LMW, Mildura Rural City Council and VICSES were also involved.

From Thursday 17 February, the taskforce discussed the transition process with the local EMT, the MECC and Municipal Recovery Management Team. DHS then led discussions on transition with the Incident Controller, MERC and EMT members. On Saturday 19 February 2011, transition to recovery was formalised at the local level.²⁵⁴

252 Mildura Rural City Council submission to VFR, 30 May 2011

253 ibid

254 Advice to the VFR from the Departments of Health and Human Services

Chapter Six

The adequacy of service delivery by state and federal government agencies, local governments and volunteer based organisations



Emergency management planning

The EMA produced *Manual on Emergency Planning* notes that planning is designed “to produce a set of arrangements that will provide the basis for managing emergency impacts”²⁵⁵ and “it is from these plans and the process for developing the plans that all related programs, strategies and arrangements should flow.”²⁵⁶

The planning framework for emergencies in Victoria is outlined in the EMMV.²⁵⁷ This framework describes the state, regional and municipal level planning that is essential for effective and comprehensive emergency management:

*Planning does not, however, guarantee that the process of managing emergencies will inevitably proceed smoothly and without difficulties or complications.*²⁵⁸

Plans at all levels must be written and produced in a consultative manner to promote involvement by all relevant parties. The EMMV highlights that “well managed planning process develops trust between agencies and individual officers and, perhaps most importantly, commits agencies to particular roles and helps develop shared goals”.²⁵⁹

The EM Act legislates the requirement for three plans: the SERP, the State Recovery Plan (SRP) and that each municipal council prepares and maintains a MEMP. No other emergency management plans are specified in the EM Act. Other Acts prescribe the requirement on councils to prepare fire management plans.

State plans

As described in Chapter Three of this report, the SERP sets out the organisational arrangements for managing the response of all agencies having roles and responsibilities in relation to the response to emergencies. The responsibility for preparation of the SERP rests with the Chief Commissioner of Police as the SERC.

Following the Black Saturday bushfires of 7 February 2009 and in responding to the VBRC and subsequent request from the then Minister for Police and Emergency Services, the Chief Commissioner revised the SERP. The revision of the SERP had a particular emphasis on clarifying the command, control and coordination for emergencies, including the various roles and responsibilities of those performing the coordination and control functions during emergencies.

A number of submissions to the VFR pointed out that the latest revision of the SERP, in responding to the VBRC, has become rather bushfire centric in many parts. The SERP does contain an emphasis in some parts which are bushfire specific, for example ‘Control of Major Fires’, ‘Neighbourhood Safer Places’ and ‘Declaration of Emergency Area Associated with Bushfire’. No other particular hazard or emergency, such as flood, has this level of emphasis in the SERP.

State and regional recovery plans

Similar to the requirement in the EM Act for the preparation and review of the State Response Plan (now known as SERP), a State Recovery Plan is also required to be prepared and for an agency to be appointed as the coordinating agency for recovery. That agency in Victoria is DHS. The recovery coordination agency must appoint an officer or employee to be the State Recovery Coordinator (SRC).

In turn, the SRC must appoint a person to be the recovery coordinator for each region. In addition to this requirement, the SRC “may establish at state and regional levels, such committees as are necessary to plan coordinated emergency recovery by all agencies having roles or responsibilities in relation to emergency recovery”.²⁶⁰

The EM Act at section 17E specifies the requirements for a state emergency recovery plan:

The state emergency recovery plan is to contain provisions –

- (a) specifying the roles of agencies in emergency recovery
- (b) relating to the coordination of the activities of agencies
- (c) specifying the roles and responsibilities of coordinators appointed under section 17D
- (d) defining regions for the purpose of section 17D.

255 Emergency Management Australia, *Manual on Emergency Planning*, Manual 43, Australian Government, Attorney General's Department, 2004, p 1

256 Ibid p 2

257 State of Victoria, *Emergency Management Manual Victoria*, 2011, Part 5

258 Ibid p 5-1

259 Ibid

260 *Emergency Management Act 1986*, s 17E

In October 2010, the Victorian Auditor-General tabled in Parliament a report of a performance audit of DHS' role in emergency recovery.

The audit examined the effectiveness of DHS' emergency recovery management, including whether:

- planning is comprehensive, current and supported by testing, evaluation and training
- recovery operations are coordinated, efficient and effective.

The audit reviewed the Emergency Management Branch, a shared service between DH and DHS in three regional areas and one metropolitan area.²⁶¹

While the Auditor-General acknowledged that DHS does effectively coordinate recovery operations and deliver recovery services, with department staff responding well to the needs of affected individuals and communities, the audit report concluded that:

Recovery planning is not comprehensive or always current. DHS does not use recovery plan tests and operation evaluations adequately to inform planning. While training content and frequency are good, more senior staff need to participate. DHS needs better strategic direction to support consistent recovery capacity across the state.

The Auditor-General made 10 recommendations, which were accepted by DHS and action has commenced on all of these which, when completed and implemented, should lead to improved delivery of recovery services.

The State Relief and Recovery Plan was also published in October 2010 as Part 4 of the EMMV under the title 'State Emergency Recovery Arrangements' and includes sections covering:

- emergency relief and recovery management planning
- emergency relief and recovery activation
- emergency relief services
- emergency recovery services framework
- testing, evaluation and review.

During meetings and within submissions to the VFR, the majority of councils highlighted their appreciation and acknowledged the level of service provided by DHS and supporting recovery agencies during the 2010–11 floods.

State and regional flood plans

The State Flood Response Plan (SFRP) in place at the time of the 2010–11 floods in Victoria was developed by VICSES and published in November 2007. The purpose of this plan is to provide strategic guidance for effective emergency response to flood events in Victoria. The plan describes the roles and responsibilities of agencies and organisations within floodplain management, forecasting of weather events, dissemination of information to the community and those with a role in minimising the threat and impact to people, property and the environment.

The plan also outlines the existing flood response framework including a planning hierarchy describing the elements that should be considered for response planning at state, regional and municipal levels. The plan requires all VICSES regions to develop a regional flood response plan. It is noteworthy that the plan also points out 'any widespread flooding is likely to transcend emergency management and other jurisdictional boundaries'.

The plan further states that regional flood response planning needs to be in accordance with VICSES and DHS regional boundaries to take account of catchment management regions. The VFR notes that the boundaries and catchment areas are different.

A revised version of the plan is currently in draft. The VFR notes that this plan is titled 'State Flood Emergency Plan' as opposed to 'Response' and is broader in its guidance across prevention, response and recovery – although still focusing regional level planning on state government boundaries.

While revision of this state plan, particularly in light of the 2010–11 floods, is commendable and appropriate, considering the broader emergency management changes resulting from the VBRC, it is a concern that the state plan for flood – response or otherwise – has existed without update for almost four years.

Regional flood plans have been developed since 2007 but an examination of these plans by the VFR raises a number of concerns.

The regional plans, despite all citing the requirement for annual review (or review following significant flooding in the region), have not been updated for between two to three years. Most are merely a direct copy of the information contained within the state plan and perhaps most importantly, bear little resemblance to the response undertaken during the 2010–11 floods.

²⁶¹ Victorian Auditor-General, *The Department of Human Services' Role in Emergency Recovery* October 2010 p 5

Regional planning

There is no requirement within Victorian legislation for regional emergency management planning. The EM Act requires the Chief Commissioner, as State Coordinator, to appoint a member of the police force as coordinator for each region and municipal district, who in the event of an emergency may give directions to all relevant agencies concerning the allocation of resources in responding to the emergency.²⁶² The SERP specifies that the Regional Response Coordinator chairs the Regional Emergency Response Planning Committee. Part 5 of the EMMV states that “planning for both response and recovery at the regional level is required because many emergencies traverse municipal boundaries”.²⁶³ This was particularly evident in the Victorian floods.

The EMMV also notes the importance of regional planning, stating that “many services provided by state government agencies are administered and delivered at a regional level”.²⁶⁴ The importance of this point cannot be overemphasised as these regionally based services become significant during wide scale, protracted emergencies.

The broad objectives of a regional emergency response plan are to:²⁶⁵

- identify, control and support agencies for different types of emergencies
- coordinate arrangements for the utilisation of regional resources in support of the emergency response plans of specialist agencies
- identify support available from adjoining regions
- identify support available to adjoining regions.

As noted in the EMMV, agency roles need to be clearly identified in the regional plans and there need to be assurances that each agency has the capacity to fulfil roles required of them within the region. Victoria has not undertaken any comprehensive assessment of the capacity, or indeed the capability, of its agencies to determine to what level of ability any agency, or jointly with other agency support, can undertake its defined service delivery role in any widescale or protracted emergency. An examination of a sample of regional plans, particularly those for flood, suggests they are aspirational at best, in the absence of any meaningful recognition of agency capability and capacity having been completed.

Recommendation 82:

The VFR recommends that:

the state (consistent with recommendation 46) develop a model for determining the capability and capacity of departments and agencies with roles and responsibilities in large scale or protracted emergencies. The issues of capability and capacity should be addressed at all levels of emergency management planning.

Municipal planning

As stated previously, the EM Act requires that “a municipal council must prepare and maintain a MEMP”.²⁶⁶ Part 5 of the EMMV, in referring to regional plans,²⁶⁷ points out the need to contain information about the risks to the community and that the risk assessment conducted by municipal emergency planning committees will often indicate these risks. Identifying the risks within municipalities is at the heart of the municipal emergency planning process.

Apart from the requirement in the guidelines for municipal emergency planning for identifying risks and subsequent consideration of developing specific sub-plans for high risks, such as flood sub-plans, there is no legislative or definitive requirement for sub-plans for high risks to be developed by councils.

It was brought to the VFR's attention that one council, which was severely affected by the floods, was advised by VICSES some months before the floods of the need for a flood sub-plan. According to the council, they did not see the need for this plan stating they were in a period of protracted drought and due to other requirements (including the recent requirements for increased bushfire specific planning and initiatives) were not in a position to develop a flood plan. The subsequent audit of their MEMP, as required by the EM Act, was passed, despite not having a flood plan and despite a large proportion of the municipality being on a floodplain. The council, in hindsight acknowledged that this was a failing on their part, but more particularly a greater failing of the MEMP audit process and requirements.

262 *Emergency Management Act 1986*, s 13 (1) and (2)

263 State of Victoria, *Emergency Management Manual Victoria*, 2011 p 5-28

264 *ibid*

265 *ibid* p 5-29

266 *Emergency Management Act 1986*, s 20

267 State of Victoria, *Emergency Management Manual Victoria*, 2011, p 5-29

The VFR has found that many councils that are on, or administer areas that are floodplains, have no flood sub-plans and of those that do, many are incomplete or have been in draft for some time.

Audit of plans

The only emergency management plans in Victoria that undergo auditing (or are required by legislation to be audited) are the MEMPs and municipal fire prevention plans. The requirement to audit MEMPs was introduced into the EM Act in 1994 and requires every MEMP to be audited at least once every three years by the Director of VICSES. Municipal fire prevention plans have a similar requirement for audit by the CFA.²⁶⁸

Emergency Management Act 1986 (as at 24 Oct 2011)

21A Audit of MEMPs

- (1) A MEMP must be audited during the period commencing 1 July 1995 and ending 31 December 1996 and thereafter at least once every three years by the Director of the Victoria State Emergency Service to assess whether the plan complies with guidelines issued by the Co-ordinator in Chief.
- (2) The Director of the Victoria State Emergency Service must during the audit invite submissions on the municipal plan from the regional DISPLAN committee and the regional recovery committee.
- (3) A municipal council must within three months of receiving an audit report forward a copy of its written response to the audit report to the Director of the Victoria State Emergency Service.

Although the audit of MEMPs are undertaken as specified, agencies and councils have questioned the appropriateness of VICSES performing this audit function, particularly as VICSES plays an intrinsic role in assisting councils in developing the MEMP. The VFR is also aware that this concern has been raised at various levels and emergency management forums and committees for some time.

There is overwhelming support for these audits to be undertaken by an agency or suitable body independent from the planning process. The majority of support is for this role to be undertaken by OESC. The idea of this role being undertaken by OESC was raised by the Secretary of the DOJ in her evidence to the VBRC, in which she emphasised the importance of this function focusing far more on the quality of plans, rather than what some have referred to as a somewhat 'tick the box' process. It has also been raised with the VFR that auditing should encompass the plans at regional level for both response and recovery.

The varying degree to which plans remain in draft form and the length of time between reviewing and updating these plans, suggests that a regime for auditing of all emergency plans at all levels on a regular basis is required.

Recommendation 83:

The VFR recommends that:

the state task the Emergency Services Commissioner with the responsibility to develop and undertake the regular audit of emergency management plans at all levels.

Role of the commonwealth and its agencies

Victoria, like all other Australian states and territories, is responsible for the safety and welfare of its citizens. This requires maintaining a capability to respond to a major emergency. This is done through the resources of state, local governments, non-government agencies, the community, volunteers and the private sector. In widespread, large scale and protracted emergencies, often the state's own resources are extended to the extent that necessary actions can no longer be adequately undertaken. In these circumstances, the commonwealth is called upon to provide assistance.

The commonwealth cannot provide assistance to the state to deal with emergencies unless officially requested by the affected state or territory. This request may only be made by a designated state or territory officer or officers. In the case of Victoria, the Chief Commissioner of Police, as the SERC, is the officer nominated to request commonwealth physical assistance.

²⁶⁸ Country Fire Authority Act 1958 s 55 (b)

In order for the commonwealth to provide support, the following criteria must be met:

- assistance must be required to save life or property, or to relieve suffering
- the task must be beyond the resources of the affected state or territory, those resources are already fully committed or they cannot be mobilised in time
- the task cannot be undertaken by commercial means available within the affected state or territory.

Following a request for commonwealth assistance, the Commonwealth Attorney-General's Department (AGD) determines the appropriate response, based on the substance of the request. The ADF, because of its capabilities and state of readiness, is frequently used to provide the requested support. The AGD in determining the required response to the request considers the need, timings, priorities and contacts to determine how best the commonwealth can meet that request. The AGD arranges this assistance to states and territories in accordance with the Commonwealth Government Disaster Response Plan (COMDISPLAN). COMDISPLAN coordinates the provision of Commonwealth Government physical assistance in the event of a disaster in Australia.

In parallel with the AGD response to requests, several commonwealth departmental regional offices and statutory authorities, such as Centrelink, automatically implement their own response and recovery procedures, keeping the AGD informed of the actions they are undertaking.

Australian Defence Force

Support provided by the ADF in emergencies such as the Victorian Floods is referred to as Defence Assistance to the Civil Community (DACC). This assistance was provided to Victoria predominantly during the January 2011 floods.

Defence Assistance to Civil Communities

Categories of counter disaster and emergency assistance

Category 1

DACC Category 1 is emergency assistance for a specific task(s) provided by Local Commanders/Administrators, **from within their own resources**, in **localised emergency situations** when immediate action is necessary to save human life, alleviate suffering, prevent extensive loss of animal life or prevent widespread loss/damage to property. Provision of DACC Category 1 assistance should not normally exceed 24 hours.

Category 2

DACC Category 2 is **emergency assistance**, beyond that provided under Category 1, in a **more extensive or continuing disaster** where action is necessary to save human life or alleviate suffering, prevent extensive loss of animal life or prevent loss/damage to property, and when state and territory resources are inadequate.

Category 3

DACC Category 3 is assistance associated with recovery from a civil emergency or disaster, **which is not directly related to the saving of life or property**.

Source – Defence Instructions (General) Operations OPS 05-1 AMDT 9
16 March 2004

During the period 14 to 17 January 2011 local ADF units provided immediate DACC Category 1 assistance (emergency assistance under local arrangements), including personnel, equipment and aircraft to assist Victoria and as the extent of the impact of the floods across communities became clearer, assistance transitioned to Category 2.

This transition officially occurred on Tuesday 18 January 2011, when the Victorian Government formally requested assistance from the ADF through the AGD. ADF resources committed to the Victorian floods included ADF reserves, who were particularly utilised throughout the January floods, along with additional specialist resources provided by regular ADF resources and personnel, such as aircraft and aircrew. The ADF has advised the VFR that the use of Reservists is, and will continue to be, an important source of capability, particularly in establishing links with local communities and in making use of local knowledge.

The assistance provided by the ADF to the Victorian floods included:

Rotary wing aircraft support. ADF helicopter assistance provided air-lift of food, emergency supplies and key personnel from Victorian government agencies (police, survey teams, and a hydrologist). In addition, ADF helicopter assistance was available to provide air evacuation, search and rescue and aero medical evacuation if required.

Fixed wing aircraft support. ADF fixed wing aircraft (C-17 Globemaster) provided strategic air-lift of emergency supplies and transport of ADF personnel from Amberley.

Rapid Impact Assessments. ADF personnel engaged with local communities and conducted over 3400 RIAs, providing much needed situational awareness of the immediate impact of the floods to disaster coordination planners. This information assisted Victorian state authorities in prioritising the deployment of state assets and requests for ADF assistance. A key element of this support was the provision of high clearance ADF vehicles (medium sized Mercedes Benz Unimog vehicles – 4WD trucks) able to drive along flooded roadways.

Supply support. Supply support included petroleum resupply, food resupply by road, general ground transportation, as well as accommodation and rationing for interstate police and emergency services (including working with liaison officers from the MFB).

General support. General support tasks included evacuation/transportation of personnel, rescue assistance, sandbagging, door knocking, patrolling levees and general advice and support to the VICSES.

Liaison. Key ADF personnel were deployed to SCC and ICCs in order to provide timely advice and situational awareness to the various stakeholders.

A key factor in the use of the ADF in assisting with a state's response to an emergency is that the ADF are given specific tasks, which are unable to be undertaken within or by the state's own resources. The ADF does not merely provide extra people for any need that may arise.

During some of the VFR's community consultations and within a small number of the written submissions to the VFR, many members of the community did not understand the purpose of ADF personnel during the floods, having an expectation that anyone in uniform was there to assist with anything that they required help with. In some cases where people were attempting to undertake their own protective responses to the floods, they expected that any ADF personnel nearby would assist, however, this is not the purpose of the ADF support, unless this is specifically tasked to the ADF to perform. The ADF is normally tasked to achieve a specific outcome or objective that is sought. For example, a requested outcome or objective may be to assess the impact on specific areas, supply drinking water for 1000 people, provide transport for equipment or supplies.

In large scale protracted emergencies such as the Victorian floods, it is important for communities to be aware of particular agency roles and undertakings so that expectations may be managed accordingly.

The VFR considers that when support from the ADF is provided to the Victorian community, the purpose of this support should be widely communicated to the public.

In summary, ADF assistance provided during the floods incorporated:

- over 250 ADF personnel were engaged in the provision of DACC support
- two Navy Seahawk helicopters undertook over 45 hours of flying time
- rapid impact assessments conducted across 57 towns
- over 76,000 sandbags were carried and delivered by ADF aircraft
- almost 200,000 sandbags were distributed.

In responding to specific matters raised by the VFR, the ADF indicated that 'familiarity with arrangements for tasking of ADF capabilities was limited at some levels throughout the state emergency management agencies...'. The provision of ADF liaison officers within the SCC and ICCs assisted in alleviating some of the lack of understanding regarding the defence assistance arrangements. While the ADF believe this did not have a significant impact on the conduct of ADF tasks, broader awareness among Victoria's emergency management agencies of these longstanding arrangements would be beneficial.

Recommendation 84:

The VFR recommends that:

the state ensure:

- where external assistance is provided to Victoria during emergencies, communities are advised of the specific purpose of that assistance, through media and other information channels; and
- all agencies provide incident management personnel with information regarding the arrangements for tasking Australian Defence Force resources and that this advice is reinforced during emergencies where Australian Defence Force support is provided.

Protection of essential services

Charlton

The Charlton electricity sub-station is located on a floodplain. On Friday 14 January 2011 at approximately 10.30pm²⁶⁹, it was inundated by flood waters, causing approximately 8,000 households and businesses to lose electricity supply. The power outage caused communications failures, which impinged on the emergency response. It also caused loss of mobile telephone and internet services, which restricted people's ability to receive flood warnings. The power loss also affected food supplies, water supplies, fuel supplies and the management and treatment of sewerage and effluent.²⁷⁰ The Buloke Shire Council told the VFR that the failure of the Charlton sub-station in some instances caused more damage than the flood itself.²⁷¹

DPI was advised by Powercor of the inundation of the Charlton sub-station at 9.15am, Saturday 15 January 2011. The power supply was progressively restored across the shire from Sunday 16 January 2011. In some parts of the municipality, it took up to four days before supply was available. This was because of the need to do safety audits on all the lines before re-energising the feeders from the sub-station.

By the evening of 17 January 2011, less than 1000 properties were still without electricity. Many of these properties had been inundated and needed to be inspected (by private electricians, who were in short supply) before electricity supply could be fully restored.²⁷²

No steps were taken by Powercor to protect the sub-station ahead of the floods.²⁷³ At the time of drafting this report, the sub-station remained without any structural flood mitigation protections. In October 2011, Powercor met with the Buloke Shire Council and proposed to take two steps in respect of the Charlton sub-station:

- they proposed to immediately change their procedures such that when there is a flood or heavy rain, the company's first move will be to isolate and turn off the part of the sub-station that was inundated in January
- early in 2012, Powercor will raise the piece of infrastructure that was affected in January 2011 plus other parts which are currently around a metre off the ground (as a further precaution). The reason this cannot be done earlier is that Powercor needs this lead time to plan how it can continue to supply electricity to the area while the works are being undertaken. The works will take around two weeks.

Kerang

Some days later, before the Loddon River was due to impact on Kerang, the Gannawarra Shire Council notified Powercor (the maintenance service provider) that it believed the levee surrounding the Kerang terminal station to be inadequate. SP AusNet (the owners of the terminal station) carried out a risk assessment of the sub-station and concluded that the priority area for protection was the control building, which contains all the controls and protection for the switchgear in the sub-station.

The council and the ICC were initially advised that SP AusNet would not be reinforcing the levee around the terminal station but only sandbagging the essential infrastructure inside the terminal station.²⁷⁴ The council thought this would not be sufficient, given the experience of the Charlton sub-station and persisted with its representations to Powercor and SP AusNet.²⁷⁵

269 Buloke Shire Council submission to the VFR, 26 May 2011

270 *ibid*

271 *ibid*

272 The onus is on the customer to commission a registered electrician to check the premises and certify it as safe to restore power. In the aftermath of the floods, it was difficult to access services from these electricians. <http://www.marchmenthill.com/psi-online/2011-06-23/mopping-up-the-floods-four-businesses-discuss-the-key-lessons-for-australian-electricity-networks>

273 *Op.cit*

274 Gannawarra Shire Council submission to the VFR, 25 May 2011

275 *ibid*

On Monday 17 January 2011, Powercor and SP AusNet employees and contractors began sandbagging the control building and working on the levee around the sub-station. For the next 48 hours, two excavators and crews of SP AusNet and Powercor employees filled sand bags, strengthened the sand bag walls, laid plastic on the external face of the external levee to combat erosion from the flowing flood waters and repaired leaks and breaches in the levee. These workers were assisted by the townspeople of Kerang who had abandoned their homes in order to protect the terminal station. At one point, there was a human chain from the roadway to the control building laying additional sandbags to strengthen the sandbag wall around the control building. This chain was made up of people from the local community. In a gesture of thanks for their efforts in helping protect the terminal station, SP AusNet made a donation of \$5,000 to both the Kerang CFA and VICSES.

SP AusNet remains of the view that the actual 2011 flood peak would not have affected operation of the terminal station even without the construction of the temporary perimeter levee. The only part of the terminal station reportedly at risk from the flood was the control room which was protected.

The flood peaked around midday on 19 January 2011 around midday. Had the floodwaters breached the control room, more than 20,000 Victorians living in the north west of the state would have been without power.

As at 12 April 2011, the sandbags remained outside the station. SP AusNet advised ABC Radio:

At the moment the temporary levee that was constructed around the Kerang terminal station remains and will do so for the next few months at least, we're obviously in ... talks with the local landowners and representatives down there to future proof the terminal station.²⁷⁶

In September 2011, the sandbags remained outside the station.²⁷⁷ The VFR was advised that SP AusNet is investigating options to provide additional flood protection to the site. SP AusNet also advised the critical equipment at the terminal station is found to be sufficiently elevated to have been unaffected at the actual 2011 flood peak, it may not justify further mitigation.

The industry

Until the early 1990s, the State Electricity Commission of Victoria was responsible for the generation, transmission and distribution of electricity in Victoria. In 1993, the Victorian government embarked on a program to disaggregate and corporatise the state owned electricity utility. The privatisation of Victoria's electricity supply was intended to lead to lower prices for electricity consumers and more efficient management of the industry. The corporatised components (such as power stations) were then sold to private entities.

SP AusNet owns Victoria's electricity transmission network (that is, the network that moves energy from where it is generated to a terminal station, such as those at Charlton and Kerang). These stations are owned by SP AusNet. Powercor is the electricity distributor for northern and eastern Victoria, including from the Charlton and Kerang power stations. This means it is responsible for the quality and reliability of the supply of energy through the maintenance and management of energy assets (poles, wires, pipes and meters).

State policy

The EMMV states that DPI is responsible for:

- development, testing and review of measures designed to manage electricity, gas or liquid fuel emergencies
- liaison with other agencies and jurisdictions including the Australian Energy Market Operator, Energy Safe Victoria, electricity and petroleum industries in relation to emergency prevention and preparedness
- provision of support through information to other departments and organisations preparing for, or engaging in, prevention tasks
- investigation of 'demand side' response to supply shortages.²⁷⁸

²⁷⁶ <http://www.abc.net.au/news/stories/2011/04/12/3188738.htm?site=milduraswanhill>

²⁷⁷ Advice to VFR from Gannawarra Shire Council, 27 September 2011

²⁷⁸ State of Victoria, Emergency Management Manual Victoria, 2011, p 7-38

Further, the EMMV refers to electricity distributors and the Australian Energy Market Operator (AEMO) as 'key support agencies' to DPI in the event of essential service disruption.²⁷⁹ A support agency is one that provides services, personnel or material to support or assist a control agency, another support agency or persons affected by an emergency. The EMMV states that if an essential service disruption is:

*not being resolved effectively by support/other agencies (e.g. the essential service providers) under plans and procedures for dealing with such situations, the specified control agency will take ultimate responsibility, within the powers available to it, to resolve the situation.*²⁸⁰

It is of note that the EMMV specifically contemplates that essential service providers will have plans and procedures for dealing with emergencies.

The National Electricity Market

The obligations on essential service providers to have plans and procedures for dealing with emergencies need to be considered in the context of the intergovernmental agreement regarding the National Electricity Market (NEM).²⁸¹ The NEM interconnects five regional market jurisdictions (Queensland, New South Wales, Victoria, South Australia and Tasmania) whose cooperation under the NEM is secured through commonwealth legislation, complementary legislation in individual jurisdictions known as the National Electricity Law and the National Electricity Rules,²⁸² and MOUs. These arrangements transfer regulatory functions from individual jurisdictions to a national framework. In particular, the AEMO and the Australian Energy Regulator have now taken over many of the regulatory arrangements for electricity that were previously the responsibility for state government authorities. In particular, the AEMO has power to direct NEM participants to do any act if it is necessary to do so to secure electricity supply.

Victoria has legislation (that predates the NEM) which gives the government powers to direct people to take certain actions during emergencies. In Victoria, the provisions that could have been used to compel SP AusNet or Powercor to take steps to protect the Kerang and Charlton power stations are as follows:

- the *Electricity Industry Act 1993*, sections 95-99 (allows the Minister to compel electricity suppliers to take steps to protect infrastructure and ensure continuity of service)
- the *Vital State Industries (Works and Services) Act 1992*, sections 5-9 (gives the government power to direct persons or bodies to take steps to operate and maintain any vital industry, which includes energy. This Act was intended for use during industrial disputes, but could in theory have been used after the floods).

Under the NEM MOU on the Use of Emergency Powers, the Victorian Government has agreed to allow the procedures agreed by the NEM to be followed before Victoria will exercise any of the above powers. In short, these procedures involve allowing the AEMO to assess the situation, consult with the NEM participants and be the body that makes any direction to industry stakeholders to take action to secure electricity supply.²⁸³ The National Electricity Market Emergency Protocol sets out specifically how this will be done. In accordance with the Protocol, from 13 January 2011, DPI participated in regular industry teleconferences hosted by the AEMO to scope the extent of actual and potential disruption for electricity (and gas) supply, and provided this advice to its Minister. It did not take ultimate responsibility, within the powers available to it, to resolve the situation, either by utilising its emergency powers to direct the industry to take steps in respect of the Charlton or Kerang power stations or taking those steps itself.

DPI advised the VFR that the NEM does not consider the outage of sub-stations to 'automatically give rise to an emergency in the NEM unless they in turn affect the stability of the power system'. DPI suggested that it did not consider that the threshold for action under Part 6 of the Electricity Industry Act was reached by the situation in Charlton and Kerang, stating that:

*These powers are only available if there is a major threat to the security of Victoria's electricity supply and actions need to be taken to resolve a situation that cannot be taken by industry participants themselves.*²⁸⁴

²⁷⁹ Ibid, p 7-2

²⁸⁰ Ibid, p 3-6

²⁸¹ Made in 2004, as amended in 2006, building on the original agreement of 1996

²⁸² The legislative basis of the NEM comprises the enactment of an Act in South Australia and associated regulations adopted by each of the other participating states by complementary legislation, collectively forming the National Electricity Law. In 2005, the National Electricity Law was amended in all jurisdictions

²⁸³ The MOU refers to NEMMCO, however, the amended Law and Rules replaced NEMMCO with AEMO as the national electricity market and system operator

²⁸⁴ Advice to the VFR from DPI

Intergovernmental context

The lines of political accountability are blurred when state legislation and emergency management policy contemplate state government agencies being able to take steps to ensure continuity of essential services in such situations, but the state has entered into an intergovernmental agreement not to do so.

The VFR acknowledges the policy drivers behind the NEM and the transferral of the state's regulatory functions to the AEMO. As DPI advised the VFR, the NEM supports "economically efficient investment in measures to sustain and improve reliability of supply up to a level consistent with the value that customers place on supply reliability".²⁸⁵ However, it seems inconceivable to the VFR that not expending funds to erect structural floodwater diversions from the Charlton sub-station and Kerang terminal station would be consistent with customer expectations of supply reliability.

It is acknowledged that the electricity industry would have had the same difficulty obtaining adequate flood maps and warnings as others ahead of the 2010–11 floods. The VFR hopes any improvements to flood risk assessment, including the intelligence gained as a result of the 2010–11 floods, will enable the essential services sector to take a more proactive approach to ensuring key infrastructure is protected from natural hazards.

Importance of essential services

Society is increasingly dependent on electricity (and other essential services such as water and telecommunications). Also, those essential services are more and more interdependent. Water infrastructure operators rely on electricity for pumping and telecommunications for monitoring operations; the communications industry needs telemetry services to run their operations and participate in the electricity market. In addition, emergency response plans are more and more premised on the availability of essential services. As the Buloke Shire Council noted to the VFR:

If future emergency activities are designed to be dependent on technology, and therefore power supply, far more attention needs to be paid to having reliable power sources in place with adequate back up systems.

The VFR acknowledges that electricity infrastructure is vulnerable to many natural hazards, as well as being a potential target for deliberate sabotage by terrorists or vandals. Resilience to mains electricity failure should form part of all emergency and community services business continuity plans.

Need for government to play a greater role

In the view of the VFR, the state should play more of an active role in ensuring essential service operators take appropriate measures to make their infrastructure resilient to flooding and other natural hazards. Such matters are too important to be left to market decisions alone, just as privatised industries are still required to comply with environmental and occupational health and safety standards. As the Pitt review noted in respect of the lack of systematic resilience planning for essential services before the United Kingdom 2007 floods:

*In economic terms resilience to flooding or other extreme weather is an 'externality'. While utility companies are concerned with resilience for longer term reputational commercial effects as well as for short term supply consequences, it is doubtful that they will take into account the full social costs and benefits of resilience to low probability, high impact events. For example, given the low overall impact of flooding on annual average outages, there is not likely to be a strong enough incentive to ensure sufficient provision and investment in response without explicit government intervention.*²⁸⁶

Government regulation would not necessarily need to be prescriptive. However, all levels of government need to rethink the regulatory approach to essential service resilience to all hazards, be it through prescribed standards, mandated continual risk identification via plans, outcome requirements or a blend of these. The VFR notes that the commonwealth's *Critical Infrastructure Resilience Strategy*, launched in June 2010, proceeds on the basis that government's role is to assist industry ensure the resilience of critical infrastructure rather than require it:

²⁸⁵ Advice to the VFR from DPI

²⁸⁶ Sir Michael Pitt, *Learning lessons from the 2007 floods – Full Report*, 25 June 2008, p. 263-4

*The Australian Government recognises that the best way to enhance the resilience of critical infrastructure is to partner with owners and operators to share information, raise the awareness of dependencies and vulnerabilities, and facilitate collaboration to address any impediments.*²⁸⁷

Regulation does need to be on an ‘all hazards’ basis, however. While state emergency management policy states that the same agencies and arrangements used to respond to routine incidents and emergencies are also used to respond to terrorism incidents, at the planning stage, a separate regime for essential service resilience has been carved out in the terrorism context.²⁸⁸ *The Terrorism (Community Protection) Act 2003* provides that the operators of essential services must prepare risk management plans to identify and mitigate the risk of terrorist acts. There is no equivalent legislative requirement to plan for the risk of natural disasters.

The United Kingdom experience

The Pitt review into the 2007 United Kingdom floods examined the resilience of the United Kingdom’s critical infrastructure in the face of floods and found that the approach taken by the United Kingdom Government to mitigate the risk to the delivery of essential services from natural hazards was largely uncoordinated and reactive, with no systematic shared understanding of the scale of vulnerability in each sector or of infrastructure as a whole to natural hazards. It recommended that the government create a national framework setting out a process, timescales and expectations to reduce the disruption to essential services caused by natural disasters. That framework should balance risks and costs across sectors and aim to:

- provide appropriate economic incentives to infrastructure operators to increase the resilience of infrastructure
- enhance the capacity to act quickly when faced with unexpected events through the introduction of mandatory business continuity planning.

The Pitt review considered that for the purposes of building resilience in critical infrastructure, a minimum standard of one in 200 annual probability would be a proportionate starting point. It recommended that a specific duty should be placed on economic regulators to build resilience in infrastructure. Until such time as this could be legislated for, the review recommended the government should issue interim guidance to the industry regulators in the form of resilience obligations to be met by utilities companies (based on the government set standards) to ensure essential services are appropriately protected against high consequence events.

Recommendation 85:

The VFR recommends that:

the state:

- assess current risk and risk mitigation strategies for essential services, with a focus on ensuring that risks are appropriately identified at all levels of emergency planning; and
- ensure that the responsible authority or owner/operator of essential services put in place appropriate strategies to mitigate any risk to service continuity.

Land use planning and building codes

Reducing flood risk in established areas is costly. It is significantly easier to impose proactive mitigation measures such as land use planning and building standards to minimise further risk before development occurs.

Indeed, compared to mitigation measures that modify the flow of water (such as levees) or response modification (which seek to modify human behaviour through activities such as public education, warning systems and emergency service response), property modification measures are the most cost effective for addressing future risk.²⁸⁹ They are also “less expensive, less inequitable and less environmentally intrusive than structural mitigation”.²⁹⁰

287 Accessed from Attorney-General’s website, *Critical Infrastructure Resilience Strategy*, 2010, www.ag.gov.au

288 *Terrorism (Community Protection) Act 2003*

289 Bureau of Infrastructure, Transport and Regional Economics, Report 106, *Benefits of flood mitigation in Australia*, May 2002, p 15

290 Millierd et al, 1994, 18, cited in Bureau of Infrastructure, Transport and Regional Economics, Report 106, *Benefits of flood mitigation in Australia*, May 2002, p 22

Regulatory context

Planning

Land use planning in Victoria is regulated by the *Planning and Environment Act 1987*, which establishes planning schemes. Each planning scheme consists of:

- state planning policy, which is standard across the state
- standard provisions chosen from a set of standard statewide planning provisions called the Victoria Planning Provisions (VPPs), such as zone and overlay controls
- a local planning policy framework, which is particular to each municipality.

As a general rule, zoning provisions control the use of land and overlay provisions control the development of land. There is one zone control and three overlay controls that relate to flooding. They are:

- the Urban Floodway Zone (UFZ)
- the Floodway Overlay (FO)
- the Land Subject to Inundation Overlay (LSIO)
- the Special Building Overlay (SBO).

The level of planning control in each provision is commensurate with the potential flood risk. For example, the UFZ prohibits most use and development in such zones. It is designed to be applied to urban environments where there is a high potential of flood risk and only low intensity uses and development (such as recreation) are suitable. The FO conveys active flood flows similar to the UFZ but with a lesser risk. The LSIO is used to identify land with a lower potential flood risk, or as an interim measure in areas where accurate flood mapping to identify the floodway is yet to be completed. The SBO only applies to stormwater flooding in urban areas.²⁹¹

Decisions about specific proposals for the use and development of land are made by responsible authorities (usually councils), in accordance with the *Planning and Environment Act* and the relevant planning scheme.

The *Planning and Environment Act* enables CMAs, as referral authorities, to provide advice to the council about flooding. The council must refer an application for a planning permit to the CMA where the land is in a flood zone or overlay.²⁹² Currently, under sections 61 and 62 of the *Planning and Environment Act*, the council must refuse a permit if a referral authority objects, or the council must include on the permit any conditions that are required by a referral authority. Where no flood zone or overlay is in place, a council may seek the advice of the relevant CMA but is not obliged to.²⁹³

As authorities with floodplain management functions under the *Water Act*, CMAs have the technical ability to take into account flood risk when assessing development proposals and to understand the long term implications (to the property, adjoining properties and the catchment generally). Using their specialist knowledge, CMAs are, in most instances, able to alleviate any of these implications by placing conditions on a planning permit, thus most planning permit applications are not refused.

The policy of the state government is to remove the power of CMAs to require councils to refuse planning permits or impose particular conditions and to reduce their power so they can only provide non-binding advice.²⁹⁴ Weakening the current arrangement in this way will inevitably lead to poor flood planning outcomes. This is because councils are not as strongly placed as CMAs to fully understand the implications of inappropriate development in areas of high flood risk. Further, councils are vulnerable to the pressures of short term economic gain (for example increased rate revenue) and pressure groups.

Proposed changes to referral authorities apply to CMAs only, and not to Melbourne Water. Thus, undesirable inconsistency will arise between metropolitan Melbourne and regional Victoria in the consideration of flood risk.

291 VPP Practice Note, Applying the flood provisions in planning schemes: a guide for councils

292 *Planning and Environment Act 1987* s 55, read with standard planning scheme clause 66

293 *Planning and Environment Act 1987* s 52(3)

294 The Victorian Liberal Nationals Coalition Plan for Planning, 2010

Building

Building in flood prone areas of Victoria is regulated via the *Building Act 1993* and the Building Regulations 2006. There is currently no Australian Standard for building in flood prone areas. The Australian Building Code Board is currently developing a national standard for housing and other low rise residential buildings in flood prone areas, as well as an accompanying non-regulatory handbook.²⁹⁵ This development is part of the 2010–11 work program. The Australian Building Code Board will develop draft documentation and release it for public review and regulatory impact assessment before final consideration. If adopted into the Building Code of Australia, the standard will be automatically incorporated into the Victorian Building Regulations 2006.

Currently, only regulation 802 of the Building Regulations 2006 regulates flood risk in building construction in Victoria. It requires an owner to obtain the report and consent of the relevant council to an application for a building permit if the site is on an allotment that is in an area liable to flooding. Land is in an area liable to flooding if:

- it is determined to be so under the Water Act
- it is defined in a planning scheme as such
- it is described as such in a subdivision plan
- it is designated by a relevant council as such.

Exceptions exist for non-habitable and unenclosed structures and structures of less than 20 square metres.

Regulation 802 does not allow the building surveyor (which may be the municipal building surveyor or a private building surveyor²⁹⁶) to specify any other design aspects of the building other than floor height. Floor level must be at least 300mm above any flood levels declared under the Water Act or otherwise determined or consented to by the relevant CMA.²⁹⁷

In determining a flood level, the Water Act states the CMA “may adopt a flood level ... which, in its opinion, is the best estimate, based on the available evidence, of a flood event which has a probability of occurrence of one per cent in any one year”.²⁹⁸ This means that the default practice is to require buildings in flood prone areas to have floor heights 300mm above the one per cent Annual Exceedence Probability (AEP) flood height.²⁹⁹

The sufficiency of this design event and in regulation 802 only referring to floor heights is discussed below, as are the problems of ensuring that land is identified as ‘an area liable to flooding’ so regulation 802 is even able to be invoked.

AEP and ARI

The probability of a particular rainfall amount for a specified duration being equalled or exceeded in any one year period can be expressed as a percentage (the AEP) or as ‘on the average once in every x years’ (an average recurrence interval, or ARI, of x years).³⁰⁰ The BOM explains these terms in the following example.

For Melbourne, a rainfall amount of 48.2mm in one hour can be expected to be equalled or exceeded on average once every 100 years. In this case, the ARI is 100 years and the AEP is one per cent. It is important to note that an ARI of, say, 100 years does not mean that the event will only occur once every 100 years. In fact, for each and every year, there is a one per cent chance (a one in 100 chance) that the event (in this example, 48.2mm in one hour) will be equalled or exceeded (once or more than once).³⁰¹

295 <http://www.abcb.gov.au/index.cfm?objectid=7384D703-28B9-11DE-835E001B2FB900AA>

296 *Building Act 1993*, ss 76 and 78

297 Regulation 802(7)(b)

298 *Water Act*, s 204

299 *ibid* s 204(a)

300 <http://www.bom.gov.au/water/designRainfalls/rainfallEvents/why100years.shtml>

301 *ibid*

All hazards

As with all other aspects of emergency planning and management, the VFR is of the view that any improvements to property modification measures for disasters should be addressed on an 'all hazards' basis. The VBRC noted that "where people live, the standard of the buildings in which they live and how those standards are maintained are crucial factors affecting people's exposure to bushfire risk".³⁰² These words are equally applicable to a flood context.

The VFR notes that the government is currently undertaking detailed hazard mapping for fire risk as part of its VBRC Implementation Plan. Hazard mapping should ultimately incorporate all foreseeable natural hazards, including flood.

Lack of mapping

The need for improved flood mapping and modelling has already been discussed in Chapter One of this report. However, its absence or inadequacy also affects the ability to implement appropriate land use and building controls. This issue has also been raised with the Queensland Floods Commission of Inquiry.

CMAs have a statutory obligation to "find out how far floodwaters are likely to extend and how high they are likely to rise".³⁰³ According to the DPCD Practice Note for councils implementing the flood provisions, ideally, the CMA should collect flood information from flood studies, flood mapping, aerial photographs, historic flood levels, ground levels, soil and geology maps, river surveys and local knowledge and combine such information into a flood information report.³⁰⁴ The council should then incorporate this report into the planning scheme and link the flood boundaries shown in the planning scheme to a set of statements that reference the source of their delineation and include any necessary qualifications.³⁰⁵

DSE advised the VFR that approximately 80 per cent of the floodplains in the state are mapped for a 1 in 100 year event. The sufficiency of flood mapping in Victoria was previously raised in Chapter One of this report, however, anecdotally, the mapping across the country is said to be "patchy and incomplete in coverage, currency and/or accuracy".³⁰⁶

North Central CMA advised the VFR that no towns within its catchment had adequate flood mapping. In particular, it noted that for Carisbrook and Creswick, two towns that flooded in the 2010–11 floods, only anecdotal mapping existed. It attributed this absence of mapping to a lack of a dedicated funding stream but noted that since January 2011, it has received funding to undertake flood studies for both those towns.³⁰⁷ Maps showing the extent of the 2010–11 floods, based on data collected from the community, flood pegging and aerial photography, are now available on the CMA's website, with an additional ten maps to be available by the end of 2011.³⁰⁸

Funding aside, one likely reason for the absence of reliable mapping is the fact that floods of this magnitude were unprecedented in many areas of the state. Much of the data collected during the floods has already filled significant knowledge gaps. The Glenelg Hopkins CMA used the modelling to verify its existing data sets.

On 2 May 2011, the Minister for Water announced a \$19.3 million funding package over four years to improve Victoria's capacity to prepare for floods, which include components to undertake flood risk assessments and flood mapping for up to 25 communities.

The absence of mapping also has consequences for people's ability to obtain affordable insurance. Insurers in Australia do not have access to current accurate maps of flood risk to quantify risk to determine the price of insurance. Where the data is of poor or unknown accuracy, insurers will increase the price of premiums to offset the lack of certainty.³⁰⁹ The Commonwealth AGD recommended in June 2011 that all states take urgent steps to ensure the flood mapping data produced by local governments in their jurisdiction is made available to the insurance industry and other relevant stakeholders, including if necessary by legislation. This was agreed at the Australia, New Zealand Police and Emergency Management Ministerial Meeting on 28 and 29 July 2011.³¹⁰

302 2009 Victorian Bushfires Royal Commission, *Victorian Bushfires Royal Commission Final Report*, Parliament of Victoria, July 2010, p 214

303 *Water Act 1989*, s 202(1)(a)

304 VPP Practice Note, Applying the flood provisions in planning schemes: a guide for councils, 4

305 *ibid*

306 Report on the Environmental Scan into A National Approach to Flood Modelling, June 2011, 9

307 North Central CMA submission to the VFR, 26 May 2011

308 *Bendigo Advertiser*, 4 June 2011, p 35

309 Report on the Environmental Scan into A National Approach to Flood Modelling, June 2011, p 3

310 Communique, Australia, NZ Police and Emergency Management Ministerial Meeting, 28-29 July 2011, p 2

The deficiencies in the mapping of bushfire risk was also of serious concern to the VBRC.³¹¹ There is less excuse in the flood context. As a witness to the VBRC noted:

The level of water in a 100 year flood is a known, quantifiable and discretely defined area and that can be easily mapped and put into the planning scheme. The challenge of mapping a much more dynamic response to a hazard in a bushfire sense is much harder, and the challenge has always been to not only work out what levels of hazard identification are associated with what levels of risk, but also to map them and to map them in a way that can be useful in the time frame over which the planning system works.

Integration of mapping into the planning scheme

Knowledge and understanding of hazards and risks is of little use unless the information can be translated into relevant controls and mechanisms for dealing with them. The system works well when high quality flood information is quickly incorporated into planning schemes and the CMAs can provide advice and decisions on proposals for changes in land use or specific site development.³¹²

DSE advised the VFR that of the flood mapping of the state that does exist, only 70 per cent of these mapped areas are incorporated in planning schemes.

DSE attributes this delay in incorporation to two reasons: the low reliability of mapping information of earlier flood events and the low imperative to incorporate flood controls in planning schemes for sparsely settled areas. It notes that the Ararat, Pyrenees, Corangamite and Queenscliff municipalities have no flood zone or overlays in their planning schemes and that many other schemes could include significantly more information about flood risk.

Unless incorporated, such information can have no role to play in mitigating flood risk. As the North Central CMA noted in its submission:

Local government planners rely on the presence of a flood shape or an overlay or a zone to guide decision making. The absence of this information means that, in some areas, they are required to make a subjective decision on whether a permit application should be referred to the North Central CMA. Consequently, the North Central CMA may not be referred all the applications it should, leading to undesirable development in flood prone areas... There remains nothing in place to prevent future development in these and other flood prone areas until planning schemes and flood mapping are updated.

The North Central CMA identified that new developments in the Pyrenees, Central Goldfields and Hepburn local government areas, particularly in Carisbrook and Creswick, had not been referred to them for advice. During the floods, these new houses experienced repeated over floor inundation.

On the evidence gathered by the VFR, it appears that planning schemes are not amended to match the available flood information because of time and cost factors and the competing pressures experienced by councils.

Time and cost of amending planning schemes

Incorporating flood information into local government planning schemes requires a planning scheme amendment, which follows the normal amendment process including public exhibition. The time taken depends on the complexity of issues and number of submissions but averages over a year.³¹³ It also involves considerable resources on the council's part, which is a challenge for smaller councils.

Possible solutions to this issue were raised in submissions received by the VFR. The Central Goldfields Shire Council wrote to DPCD and asked whether the Minister could amend the scheme to incorporate the updated flood information for Carisbrook (which would take a matter of weeks). The East Gippsland CMA submitted that local government should be compelled to update planning schemes within a set period from the provision of updated flood information by CMAs.

311 2009 Victorian Bushfires Royal Commission, *Victorian Bushfires Royal Commission Final Report*, Parliament of Victoria, July 2010, p 215

312 Glenelg Hopkins CMA submission to VFR, May 2011

313 North Central CMA submission to VFR, 26 May 2011

DPCD reports that the government is considering whether there is a case for automatic 'technical' updates to planning schemes as risk information changes.

Building Regulation 802 provides something of a 'bandaid solution' to the problem of the lengthy planning scheme amendment process, as it can apply to land 'designated by a relevant council' to be liable to flooding even if it has not yet been incorporated into a planning scheme. However, it is only invoked for development that requires a building permit, and has the design event limitation described below.

The VFR recommends that the government continue with its consideration of the merits of automatic updates to the planning schemes as new models and information about flood risk comes to hand.

Pressures not to update

The Australian Strategic Policy Institute notes that there may be hesitancy for local government to conduct and publish risk assessments as it will reveal that certain properties are more vulnerable, which may make insurance more costly and reduce a property's value.³¹⁴ Indeed, the City of Greater Geelong was recently criticised in the media for rejecting an application for two dwellings and a subdivision based on climate change modelling done by the Corangamite CMA, which the land owner claims reduced his property value by \$200,000.³¹⁵

Similarly, the NSDR acknowledges the pressure for urban development to extend into areas of higher risk from natural disasters.³¹⁶ Certainly, planning policy for Melbourne is concerned with urban infill and optimising the use of existing infrastructure. Although such objectives are understandable, problems arise where urban renewal is on flood prone land as it can lead to more people at risk on floodplains, can increase run off and worsen future flood problems.

The VFR's view is that land use planning will always involve balancing interests and policy concerns, and it supports the position expressed in the NSDR, which notes that "where there are competing policy objectives in land use planning and development design, an agreed methodology or guidance is critical".³¹⁷ However, to enable application of this methodology, the information of flood risk itself must still be incorporated into planning schemes.

If development is unavoidable, building controls (discussed below) may be able to mitigate the risks. In other areas, there may be need for buybacks or rezoning of undeveloped land (sometimes with compensation, depending on the extent to which a landowner's ability to develop their land is restricted by the new controls). The government should provide guidance and support to local government to implement such measures.

Indeed, the Victorian Government has offered a \$12 million voluntary buyback scheme to help irrigators in the Lower Loddon floodplain recover and protect the region from future flooding. Landholders are offered a voluntary acquisition package or compensation as a percentage of property value to establish covenants on land on active floodplains.³¹⁸ A taskforce is to define the floodplain boundaries and the buyback program managed by Rural Finance Corporation.³¹⁹

Existing permits

A related problem is that once new information comes to hand, a council cannot do anything about building or planning permits already granted, short of advising the owners of the risk reassessment. An example of this occurred in Carisbrook. The 14 January 2011 flood event in Carisbrook caused the whole town to experience inundation. However, since that time, two new homes have been built within the area that flooded (being land not zoned at the time of the flood, but which is to be included in the LSIO in the next planning scheme amendment). As the owners had existing building permits, the council had no avenues available to require floor levels to be raised. The council wrote to the owners and to the private building surveyor to alert them to this issue, but could not revoke the permits.³²⁰ The VFR hopes that improving flood mapping and incorporation of that mapping will prevent this issue reoccurring.

314 Australian Strategic Policy Institute, *Sharing risk: financing Australia's disaster resilience*, February 2011, p 9

315 The Echo, 4 August 2011, p 2

316 Council of Australian Governments, National Strategy for Disaster Resilience, National Emergency management Council, February 2011, p 2

317 *ibid*, p 12

318 Country News, 2 May 2011, p 4

319 Riverine Herald, 29 April 2011, p 5

320 Central Goldfields Shire Council submission to the VFR, 27 May 2011; Maryborough Advertiser, 29 March 2011, p 2

Mapping and floor levels

The effectiveness of minimum floor levels is limited to the 'design event'. Until about 30 years ago, it was common to use the largest historical flood in an area as the design event for planning purposes, and this approach is still used in some rural locations. Currently, however, the 1 in 100 year flood is seen as the acceptable risk for planning purposes, regardless of the potential consequences of the flood. The difference between this design level and that of the probable maximum flood measure can vary hugely.³²¹ Difficulty for existing buildings arise when the design event is exceeded, particularly when subsequent flooding leads to a revision of the design level.³²²

Again, Carisbrook is an example of when the 1 in 100 year flood level was not sufficient. The LSIO in the Central Goldfields Planning Scheme is based on the one per cent AEP flood levels as provided by the North Central CMA. However, the 14 January 2011 flood event in Carisbrook was greater than the one per cent AEP and most of the town was inundated, including properties that were not expected to flood and were not within the LSIO area. The Central Goldfields Shire Council suggested to the VFR that the most recent flood level should be used as the design event for setting flood levels. Indeed, the council decided in July 2011 to require floor heights for new buildings in Carisbrook to be 300mm above January's flood peak.³²³

The VFR notes that London is moving to a planning level above the one in 500 year flood for land adjoining the Thames estuary. Many parts of the Netherlands use planning levels above the 1 in 1000 year coastal flood event because inundation of large, low lying areas would have major adverse consequences.

The VFR notes that neither the building regulations nor Victorian planning schemes limit the floor level height in flood prone areas to 300mm above the 1 in 100 year event. However, the VFR suggests that the State Government consider the value in legislative amendment or a policy statement to encourage those issuing permits to consider whether in certain circumstances, higher floor levels are required (for example, for essential service or community facilities, if it is unavoidable for such developments to occur in flood prone areas).

Consideration of mandatory building materials

The VFR notes that Regulation 802 only allows the council to specify the minimum floor height and does not require the use of flood proof materials. This can be contrasted to the regulatory matrix for bushfire prone areas, in which Australian Standard AS 3959-2009 provides rules and guidelines for the construction of elements of buildings.

Houses built of more flood resilient materials can better withstand the effects of inundation and be readily cleaned after a flood. Houses can also be designed in ways that allow household contents to be quickly moved above flood levels before evacuation. It has been suggested that the Australian Building Code should focus on building durability, not just safety, and buildings should have durability ratings.³²⁴ This makes particular sense in the flood context, which tends to cause significant property damage.

To this end, the VFR notes that the Australian Building Code Board is currently developing a national standard for housing and other low rise residential buildings in flood prone areas.³²⁵ The VFR trusts that once developed, this standard is regularly reviewed to ensure it remains appropriate for its risk environment.

Recommendation 86:

The VFR recommends that:

the state:

- adopt a strategy to expedite incorporation of updated flood mapping or modelling into planning schemes
- reconsider in what circumstances the '1 in 100 year event' is the appropriate design event
- actively support the Australian Building Code Board in its development of a new national standard for residential buildings in flood prone areas. Until such time as any new standard is incorporated into Victorian law, provide advice to householders about appropriate building materials for flood prone areas and ways that houses can be designed or adapted to mitigate flood risk; and
- retain the ability of a Catchment Management Authority to require a council to refuse a planning permit or impose particular conditions when the Catchment Management Authority considers the flooding risk to be unacceptable.

321 Bureau of Infrastructure, Transport and Regional Economics, Report 106, *Benefits of flood mitigation in Australia*, May 2002, p 57

322 Ibid, p 27

323 ABC News, *New floor heights for flood-hit Carisbrook*, 27 July 2011

324 Australian Strategic Policy Institute, *King-hit: preparing for Australia's disaster future*, 16 June 2011, p 3

325 <http://www.abcb.gov.au/index.cfm?objectid=7384D703-28B9-11DE-835E001B2FB900AA>

Road closures and management

On a day to day basis, VicRoads is responsible for delivering social, economic and environmental benefits to communities throughout Victoria by managing Victoria's road system and its use as an integral part of the overall transport network. The functions and objectives of VicRoads are outlined in the *Transport Act 1983*, *Road Safety Act 1986* and *Road Management Act 2004*. These responsibilities relate to main and arterial roads, while local roads and streets are the responsibility of municipal councils.

The VFR during its community consultations, meetings with local councils and agency debriefs heard of a range of issues relating to roads, road closure information and advice.

The issues included:

- availability, timeliness and accuracy of road closure information
- difficulties by members of the community and emergency services in accessing road closure information
- exchange of road closure information and advice
- determining alternative routes due to road closures.

Similar to other agencies, VicRoads' role within the state's emergency management arrangements is outlined in Part 7 of the EMMV. VicRoads has advised the VFR that the role described in the EMMV accurately reflects their current functional arrangements. In addition, VicRoads is a member of a number of emergency management committees at state and regional level, including the State Emergency Recovery Planning Committee (SERPC).

Emergency management agency roles

VicRoads

Prevention/Mitigation/Risk Reduction Activities

- improve the safety level of country and city roads
- encourage vehicle manufacturers to provide occupant safety features and to maximise ongoing compliance with vehicle roadworthiness requirements
- coordinate road safety programs with community groups and other agencies
- plan for the management of incidents on major arterial roads with other agencies including diversion routes for the different classes of vehicles.

Response Activities

- assist with the management of road links during emergencies, which includes route selection, emergency traffic management, escorting, route conditions advice and control
- provide support advice on engineering and transport matters
- primary support agency for engineering and transport service for emergency response activities
- provide road closure and condition information to the public.

Recovery Activities

- restoration of VicRoads roads and bridges
- assist municipal councils with the restoration of their roads and bridges
- central contact point for the acquisition and use by others of transport and engineering expertise
- provide road closure and condition information to the public.

As with communities, municipalities, emergency services and government generally, the widespread and protracted nature of the 2010–11 floods presented many challenges for VicRoads during the response and recovery phases.

VicRoads operates a 24 hour, seven day per week Traffic Management Centre that provides:

- a manned telephone service
- initiation and coordination of their response to incidents and events
- management and operation of electronic traffic management systems (including variable message signs)
- coordination of receipt of incident and road closure information across the state.

VicRoads Traffic Management Centre has dedicated staff who provide validation and consolidation of road closure information and disseminates this to both the public and relevant organisations such as the emergency services. This activity normally operates from Monday to Friday from 7am to 7pm. During the flood events VicRoads had additional resources on duty, including rostering staff beyond the normal Monday to Friday services to manage the increased activity. Despite this the VFR has been advised that a significant number of calls, from both the public and emergency services, went unanswered.

VicRoads advised the VFR that a significant increase in call volumes was experienced during the flood events including 37,000 calls during the January floods alone, with the first week of January receiving over 15,000 calls – the equivalent of a months worth of calls in 10 days. The Traffic Management Centre is able to manage and respond to short term emergency events of up to around three days. Events of a protracted nature, such as the 2010–11 floods, create difficulties in providing sufficient experienced staff at all times.

The extent to which the public and others rely on information relating to road closures is demonstrated by the significant use of the VicRoads website during the floods. For example, following the significant rainfall on the afternoon and evening of 4 February, the VicRoads website had 200,000 visits over the weekend of 5–6 February; this compares to an average weekend of 12,000 visits.

The information used to populate the road closure information on the website is gathered by VicRoads from the public, emergency services, their own staff and via ICCs and MECCs. The website lists the roads that are closed, including the local roads and streets managed by municipalities. While acknowledging the value of the listed road closures, concerns were raised to the VFR and VicRoads directly regarding the usability of this information, particularly regarding the location of the closed road and the absence of any reference to alternative and detour routes.

Responding to these concerns, VicRoads initiated a review of how it provides information to the public, including a project to provide map based information for all emergencies, in addition to continuing to provide the written list of closed roads. VicRoads expects that this will assist people to find roads which are open rather than merely the ones that are closed, thus enabling people to determine an alternative route to get from A to B. VicRoads also believes this will reduce the number of calls to the Traffic Management Centre. This new technology is expected to enable the display of situation reports from VicRoads staff from any location, including automation of processes to enable 24/7 operation. The project to upgrade the website is expected to be completed by late 2011.

While the VFR welcomes this initiative and other potential improvements to VicRoads' ability to respond during emergencies, the VFR is concerned that VicRoads will not be contemplating any options to increase its ability to respond to potential surges in calls during large scale emergencies, particularly from key stakeholders. This appears to be due to VicRoads not previously experiencing difficulties to the extent encountered during the 2010–11 floods. The VFR considers an examination of the potential to increase this area of service delivery should be given some consideration by VicRoads, in addition to the other planned improvements.

VicRoads responds to emergencies in accordance with their regional emergency management plans. These plans provide for a VicRoads Regional Emergency Management Officer (REMO), in each region, whose role is to coordinate VicRoads response and recovery activities in relation to emergency events. The VFR notes that while VicRoads have advised that these plans undergo annual internal review, some of these plans are dated 2009 and would appear not to have been reviewed, putting into doubt the self audit process and raising the potential benefits of an independent audit regime. Accordingly, the VFR considers that an independent audit regime would be more appropriate for these VicRoads plans.

VicRoads, like many agencies, participates in regional emergency planning. They have advised the VFR, however, that it is only since the 2010–11 floods that more municipalities have invited VicRoads REMOs to MEMPC meetings.

During the floods VicRoads deployed its own regional and corporate response teams, including liaison staff to various ICCs and MECCs. Like other agencies, the large scale and protracted nature of the floods, stretched VicRoads' ability to provide staff to all the centres in operation. VicRoads advised the VFR that:

*VicRoads do not necessarily have formal SOPs in place, regarding the supply of staff to ICCs or MECCs. Requests were assessed by the regions on an individual basis in consideration of available resources/location/likely benefit/other commitments, etcetera. Generally, VicRoads offers the services of liaison officers to ICCs. Coordination with MECCs was by telephone contact with MEROs or other MECC staff and worked well.*³²⁶

A significant function of VicRoads during the floods is physically checking and placing signage or manning closed roads. Like many local councils, VicRoads also experienced issues with the availability of signage, particularly 'road closed' and 'detour' signs due to the sheer number of roads needing to be closed because of inundation or resulting flood damage.

The ability of VicRoads to also undertake assessments, both for their own repair and restoration requirements, in addition to assessing claims for infrastructure repair by councils under the Natural Disaster Relief and Recovery Arrangements (NDRRA), stretched both internal and contracted VicRoads resources. It is worth noting, however, that many of the councils the VFR spoke to were very complimentary of the efforts and manner with which VicRoads assisted councils. The VFR notes that the extent of damage caused by the floods across the state, as outlined earlier, placed and continues to place, a heavy burden on resources, including material, plant and contractor availability and it is expected that it will be some considerable time before all repairs are fully completed.

Local government and emergency management

Municipal councils are the third level of government in Australia with elected councillors providing representative governance for a specific geographic area within a state. Victoria has 79 councils, each with between five to 12 elected councillors.

Municipalities provide services and facilities to their communities including:

- recreational and cultural services
- local roads and bridges
- community and family services
- traffic and street management
- waste management
- planning.

Forty-eight of Victoria's municipalities are considered rural (including 10 regional cities) and provide services to around one-quarter of the state's population. There are distinct differences between rural and metropolitan councils. Examples of these differences include:³²⁷

- land area; ranging from Queenscliff (8 sq km) to Mildura (22,000 sq km)
- road lengths; Buloke in the north west has 5,168 kms for 7,051 people, while Port Phillip in inner Melbourne has 211 kms for 93,752 people
- population size; ranging from 3,200 people (Queenscliff) to 238,000 (Casey)
- population change; ranging from small declines in some rural shires to annual growth of eight per cent in metropolitan fringe area of Melton.

In the context of emergency management, it is important to be cognisant that these differences also affect the capacity of councils to meet their obligations specified in emergency management legislation, policies and guidance.

³²⁶ VicRoads Response to VFR Schedule of Questions, May 2011, p 14

³²⁷ DPCD *Local Government in Victoria Report 2009* p 16 – Data from Victoria Grants Commission Annual report 2008-09

Following the Ash Wednesday bushfires in February 1983, the then government established a Bushfire Review Committee chaired by the then Chief Commissioner of Police Mr S I 'Mick' Miller. The Bushfire Review Committee released its report in April 1984.³²⁸ Among the review's many findings, it found that the lack of municipal disaster plans, especially in some disaster affected areas, proved to be a serious deficiency. The review recommended municipal disaster plans be made mandatory by legislation.

A significant outcome of the Bushfire Review Committee's findings and recommendations was the enacting of the EM Act, which received royal assent on 20 May 1986. The EM Act, among other things, legislated the requirement on all Victorian councils to have a MEMP.

Following passage of the EM Act in 1986, a working party on the role of municipalities under Part 4 was established by authority of the then Minister for Police and Emergency Services to develop appropriate guidance for municipalities.

In June 1987, the working party released *Managing Emergencies. A guide for local government in Victoria*. The guide covered local government's role in emergency management; planning for the emergency management role; responding in an emergency; and post emergency recovery. Consistent throughout the guide is the notion of provision of council resources to assist in supporting the emergency services in combating the emergency.

The current EM Act maintains the focus on the responsibilities of councils being related to resources. Part 4, section 20 of the EM Act specifies:

- (1) *A municipal council must prepare and maintain a MEMP.*
- (2) *A MEMP must contain provisions –*
 - (a) *identifying the municipal resources (being resources owned by or under the direct control of the municipal council) and other resources available for use in the municipal district for emergency prevention, response and recovery; and*
 - (b) *specifying how such resources are to be used for emergency prevention, response and recovery.*

Section 21 of the EM Act requires the council to appoint a MERO who is responsible to the council for ensuring the coordination of municipal resources during an emergency.

While to date the EM Act has had a number of amendments (the latest version is number 44) the fundamental requirements and role legislated in the EM Act of municipalities has not substantially changed. The original Part 4, section 19 of the EM Act clearly and succinctly stated the responsibility of municipal councils as being "... responsible for planning for the best use of municipal resources in emergency management".³²⁹ This requirement in the EM Act has not drastically changed since the role was first legislated in 1986. What has changed is local government in Victoria.

Up until around 1993, there were 210 municipalities in Victoria. Today, following council amalgamations in the 1990s, there are 79. In the mid 1990s, councils were also required to undertake competitive tendering for a range of services that had previously been provided by councils. This competitive tendering resulted in a significant transfer of council services and resources to the private sector, including council equipment used in emergencies.

This meant, and still means, many of the council resources previously available for use in support of emergency response and recovery, as envisaged in 1986, are no longer available from municipalities. In turn, this raises the question of the role of the MERO and indeed the real and contemporary purpose of the MECC.

The MECC is a facility where the function of coordination may be carried out in support of the response and recovery effort. A MECC is a facility for:

- acquiring, deploying and coordinating resources to support response, community support and recovery activities
- the relief and recovery activities in which council's roles require coordination
- providing accurate logging of information, communications and decisions (as they relate to activities associated with the coordination function) for recording, debriefing and planning purposes
- collating community information and where appropriate disseminating the information in consultation with the control or other relevant agencies.

328 Miller S.I , et al. *Report of the Bushfire Review Committee on Bushfire Disaster Preparedness and Response in Victoria, Australia following the Ash Wednesday Fires 16 February 1983*. State of Victoria, April 1984, p 156

329 *Emergency Management Act 1986* (Version 01) Part 4 s 19

The following tasks may also be undertaken at a MECC:

- registration of volunteer emergency workers
- contribution to the rapid impact assessment process, including maintaining and validating records relating to damage and loss assessment data.

Based on recent emergency events, many councils now believe that the logistics functions to support emergency response have been undertaken by both MECCs and ICCs, leading, in their view, to agencies seeing limited value in providing liaison staff to the MECCs. In some cases where liaison staff are supplied, they have limited experience or understanding of their role. The poor level of liaison means that councils are afforded limited knowledge of the emergency and its impacts which then adversely affects planning for recovery and the ability to provide information to the community – functions that, in the main, councils acknowledge are a key role for them.

In accordance with section 21(5) of the EM Act, a MEMP committee must give effect to any guidelines or directions issued by the Minister. The current version of the *Guidelines for Municipal Emergency Management Planning Arrangements – Guidelines for Committees* reflect interim outcomes of a review of the 2001 Guidelines for Municipal Emergency Management Planning, undertaken during 2010. The next stage of this review process commenced in early 2011.³³⁰ The guidelines form Part 6 of the EMMV.

Part 7 of EMMV details the roles within emergency management that departments and agencies undertake. A municipal council's role is also described here (see page 203). While some of the activities would fall to municipalities as part of their normal governance functions and some are directly related to the requirements within the EM Act, many of the activities have been added over time or by default been ascribed to councils.

Many of the councils the VFR met with and within local government submissions to the VFR, raised the issue of the statutory requirements of councils within the EM Act and the requirements placed on municipalities in the various parts of the EMMV.

The EMMV also details various functions to councils that overlap with other agencies, including relief centres, assessment of impacts and needs, clean-up, management of volunteers, using the same language for both agencies and councils.

For example, the words 'coordination' and 'provision' are used in relation to the functions of both councils and DHS regarding temporary accommodation. The provision of information and warnings to communities is another area where roles, particularly in the context of floods, seem to be duplicated. As the MAV noted in their submission to the VFR regarding the EM Act and EMMV '(t)he difference in the level of detail and emphasis between these two documents is significant...".

The MAV is currently undertaking a program comprising six interlinked projects aimed at establishing a policy position on the role of local government across all aspects of emergency management. The six projects within the program are:

- policy and role
- legislative change
- sustainable funding
- capacity building
- shared services
- performance measurement.

MAV have advised the VFR that so far there is a strong commitment across local government to their involvement in emergency management, but that this involvement should be an extension of their day to day service delivery responsibilities – fundamentally geared around community planning and engagement and health and community services. In the language of emergency management, this would be preparation, planning and recovery.

Local councils readily acknowledge that they have a unique understanding of the make up of their local communities. Councils are also uniquely placed to facilitate local decision making towards improving community safety. Councils in collaboration with other agencies and government have a responsibility to understand and mitigate risks across their municipality and communicating information about risk and emergencies to local communities.

It is the view of the VFR that there is a need to reconsider the role of municipalities in emergency management to better align with the skills, resources, strengths and core business of local councils. These include information provision, community strengthening and engagement, facilitation of planning and partnerships and risk mitigation.

330 State of Victoria, Emergency Management Manual Victoria, 2011, Part 6 Preface P6-iii

Municipal councils

This is an indicative list. Refer to Part 6 of the EMMV for a more detailed description. Most of the activities in the list below are carried out by councils in close conjunction with, or with direct support by, government departments and agencies.

Prevention/mitigation/risk reduction activities

- perform municipal functions under local government, fire, health, building and planning legislation e.g. planning, building, occupancy
- identification and assessment of hazards/risks
- provision of community awareness, information and warning system(s)
- identification and assessment of risks using a community emergency risk management framework
- implementation/coordination of specific risk treatments for identified risks and exposed elements in the community, including, flood/fire management, maintaining a register of at risk groups, fire risk reduction (private and council lands).

Response activities

- provision of available resources needed by the community and response agencies
- establishment of MECC facilities and staffing
- provision of facilities for emergency services' staging areas
- facilitate the delivery of warnings to the community
- provision of information to public and media
- coordination of the provision and operation of emergency relief (includes catering, emergency relief centres, emergency shelters and material needs)
- clearance of blocked drains and local roads, including tree removal
- support to VicRoads for partial/full road closures and determination of alternative routes.

Recovery activities

- provision of information services to affected communities, using e.g. information lines, newsletters, community meetings and websites
- provision and staffing of recovery/information centre(s)
- formation and leadership of municipal/community recovery committees
- post-impact assessment – gathering and processing of information
- survey and determination regarding occupancy of damaged buildings
- environmental health management – including food and sanitation safety, vector control, such as removing dead animals (domestic, native or feral) from waterways.
- oversight and inspection of rebuilding/redevelopment
- provision and management of community development services
- provision and/or coordination of volunteer helpers
- provision of personal support services, e.g. counselling, advocacy
- coordination of clean-up activities, including disposal of dead animals (domestic, native and feral)
- provision/coordination of temporary accommodation
- repair/restoration of infrastructure, e.g. roads, bridges, sporting facilities, public amenities
- organisation, management or assistance with public appeals.

Common services, such as roads maintenance and environmental health, are provided across a number of councils and are, in some cases undertaken in the form of clustering arrangements where municipalities are able to come together to obtain greater value and reduce costs associated with providing these common services.

Section 19 of the EM Act enables two or more councils to appoint one of the councils to be the principal municipal council for emergency management purposes and therefore have the MEMPs relate to and cover the combined council areas. However, the issues related to the current provision of planning for the use of council resources, the basis of municipal emergency planning, discussed earlier, detract from any benefits councils may obtain from undertaking this action.

A protocol for inter-council emergency management resource sharing developed by the MAV has been in place for a number of years. The voluntary protocol is intended to clarify operational, insurance and reimbursement issues that may arise through municipal resource sharing arrangements and establishes an agreed position between councils regarding the provision of council resources to assist other councils with response and recovery tasks during emergencies. The protocol is consistent with the current emergency management arrangements, but is still inhibited by the existing municipal emergency management roles and responsibilities ascribed to councils. Currently around 70 councils have opted in to this protocol.

Real benefit may come from municipalities with like and shared risks that cross municipal boundaries, coming together as a cluster to enable risk based emergency management planning and service delivery.

The widespread nature of the 2010–11 floods meant that many municipalities were simultaneously responding to and recovering from the events. VCOSS highlighted to the VFR that ‘due to the nature of flooding and the number of flood events over a relatively short period of time, a single local government area could be experiencing preparation for inundation, immediate crisis, relief and recovery phases simultaneously.

Recommendation 87:

The VFR recommends that:

the state, following the completion of the Municipal Association of Victoria Improving Emergency Management in Local Government program, work with municipalities to revise the role and responsibilities of local government in emergency management. The issue of capability and capacity of each local government should be addressed in all related emergency management arrangements.

Hazards and planning boundaries

The varying levels of plans described previously are based on artificial administrative boundaries that widespread natural hazards, such as floods, do not recognise. While many of the plans, such as the *State Flood Plan*, recognise the cross boundary nature of hazards, the planning still stops at the administrative boundaries of municipalities or regions. A comparison of water catchment boundaries and municipal boundaries show that in some cases a single council area crosses two, and in a few cases three, different CMA areas. The impact and consequences of these hazards are then realised at the community level.

Emergency management planning frameworks in Victoria are not well defined, nor are they sufficiently underpinned by comprehensive risk management frameworks. This has resulted in plans that restate information and processes detailed in guidance documents, such as the SERP and EMMV. Planning across each level needs to link into the plans above and below, enabling recognition of hazards and risks across planning hierarchies. Limiting planning to be confined to administrative regional boundaries that lack hazard recognition across these boundaries can lead to ineffective responses to emergencies. Such an example was highlighted to the VFR in relation to two ICCs in the west of the state, whereby crucial intelligence was not transferred across regional boundaries.

Glenelg Hopkins CMA advised:

During the flood events of September 2010 and January 2011 it was noticeable that there seemed to be a lack of information flow from the SES midwest ICC to either the Glenelg Hopkins CMA or the Barwon south west ICC regarding flooding in these townships and localities. Indeed in one case the Glenelg Hopkins CMA only became aware of flooding in Beaufort following a telephone call from a floodplain management consultant not directly working for Glenelg Hopkins CMA at the time. A similar observation was made for Creswick Creek, where the upper reaches of Creswick Creek at Creswick and Clunes falls into the SES Barwon south west SES region and downstream falls into the midwest SES region.

While the Glenelg Hopkins CMA understands that the lack of communications between SES operational regions may have been due to SES midwest resources being stretched with flooding north of the Great Dividing Range, it meant that crucial intelligence on what flooding was occurring in these areas was not available. It also meant that what might be expected to pass into the downstream reaches of the waterways and hence into the SES Barwon south west region was not conveyed to the Glenelg Hopkins CMA or SES Barwon south west in a timely manner.

Current emergency management planning regimes do not seem adequate to address these cross boundary hazards thus missing two important areas: the sub regional and local community levels. The focus on planning over the past 20 or so years based on municipal and regional boundaries needs to be reconsidered in light of recent wide scale emergencies and give consideration to planning across municipalities with like risk, such as flood.

Recommendation 88:

The VFR recommends that:

the state develop and incorporate into emergency management planning regimes plans based on geographic risk, such as sub-regional plans.

Chapter Seven

The adequacy of the funding provided by the state and federal governments in the form of emergency grants in their various categories



Relief and recovery payments in times of disaster

Responding and recovering from natural disasters often requires large scale expenditure by private individuals, businesses, primary producers and all levels of government.

Government financial assistance in Australia is provided through well established financial arrangements. The Natural Disaster Relief and Recovery Arrangements (NDRRA)³³¹ is the funding framework between the commonwealth and state and territory governments. Under these arrangements, some of the costs associated with response, relief and recovery are shared across local, state and the commonwealth governments. When the NDRRA is not activated, the Victorian Government provides funds for emergency events through the Natural Disaster Funding Arrangements (NDFA).

These arrangements are critical to local councils and agencies charged with responding to emergencies because they enable unforeseen costs associated with emergencies to be reimbursed. For individuals, businesses and primary producers, insurance is the main source of finance to fund their recovery. However, these financial assistance arrangements also provide grants to individuals and grants and loans to business.

During the community consultations and in submissions to the VFR, issues such as information on available funding and grants, restrictions on funding, variations in what assistance was available, the type of assistance and processes involved in obtaining financial assistance were raised.

The NDRRA is a complex agreement and in Victoria is only understood by a small group of state government officials. Various factors determine the nature and the level of funding provided under the NDRRA. Four categories describe the type of assistance that can be provided:

- **Category A:** Emergency assistance to individuals and families. This category includes assistance such as emergency accommodation, clothing, removal of debris and counselling
- **Category B:** Replacement of essential public assets; loans and grants to small business and not-for-profit organisations
- **Category C:** Community recovery funds; recovery grants to small business and primary producers, grants to restore social networks and community functioning
- **Category D:** Exceptional circumstances – other measures agreed by the Premier and the Prime Minister.

In addition to these categories are conditions and criteria that determine the level of assistance and the eligibility requirements. Overlaying these are processes which determine when the NDRRA can be activated and how much assistance can be provided.

By way of example, in the event of small flood, the state government would only be eligible for NDRRA assistance if claims for personal hardship grants (Category A) exceeded \$250,000. Expenditure would then be shared on a 50:50 basis between the commonwealth and the state government.

In 2010–11, to activate Category B, which provides for replacement of assets and loans and grants to business and non-government agencies, the Victorian Government had to have incurred expenditure of \$89 million on works that are deemed to be 'eligible' to receive funding under NDRRA. When this level was reached, the cost sharing is 50:50. When cost of replacement reached \$155 million, the cost share is commonwealth 75 per cent and Victoria 25 per cent.

Category C is triggered by a 'severe event' and requires the approval of the Prime Minister. Funding under Category D is to respond to 'exceptional circumstances' and also needs the approval of the Prime Minister.

While the NDFA bears many similarities to the NDRRA, it has a narrower scope of 'eligible items'. Activities outside the 'eligible items' have to be submitted for Ministerial approval on a case-by-case basis.

For example, under the NDFA, the Victorian Government routinely reimburses local government for protective works and restoring assets. On a case-by-case basis it also reimburses local government for the costs of establishing MECCs and relief and recovery centres. It appears that these latter costs have been reimbursed on such a regular basis that councils now believe these costs will be covered automatically and failure to do so becomes a point of contention and confusion.

In 2009, COAG agreed to adopt a whole of nation resilience based approach to disaster management. This approach emphasises a capacity to prepare for, withstand and recover from disasters. As part of this decision, in February 2011 COAG endorsed the *National Strategy for Disaster Resilience* (NSDR). One aspect of this decision was a review of commonwealth and state and territory relief and recovery payments.³³²

331 Natural Disaster Relief and Recovery Arrangements. Determination 2011, Version 1

332 The 2011 COAG/SCPEM Review of Commonwealth and State/Territory Relief and Recovery Payments

The expected outcomes of this review are:

- an assessment of the effectiveness of commonwealth and state and territory relief and recovery funding arrangements, including payments, in their current form
- recommendations of how these payments can better support the NSDR where appropriate, including the potential for national consistency.

According to the directions from COAG and the Standing Committee on Police and Emergency Management the review will:

- examine and report on the effectiveness of commonwealth and state and territory recovery payments
- review all funding arrangements associated with relief in the resilience context, including the delivery of individual grants, public appeals and insurance, in shaping recovery policy including provisions for betterment and mitigations
- review arrangements for relief and recovery payments, including the Australian Government Disaster Recovery Payments and payments pursuant to the NDRRA, to achieve greater consistency across jurisdictions in terms of activation, amounts paid and eligibility criteria.³³³

The observations and findings of the VFR should make a positive contribution to this national review by highlighting the experiences of affected communities in Victoria.

Financial assistance to individuals

A number of grants are available to flood affected individuals. While those affected by the floods welcomed the assistance, the issues raised with the VFR highlight the importance of providing clear, consolidated advice to people affected by disasters.

DHS administers the following grants:

- an emergency grant of up to \$427 per adult and \$213 per child up to a maximum of \$1,067 is provided to meet immediate needs. The grant is not means tested
- temporary living, structural repairs and re-establishment grants. The maximum level of each grant is \$8,650. The grants are intended as a contribution towards temporary living expenses and/or re-establishing individuals and families back into their homes. These grants are income tested.

The Commonwealth Government provides a disaster recovery payment and a disaster income recovery payment. These payments are administered by Centrelink and are only triggered

in response to serious events. For example, they were not available for people who were affected in the 2010 floods but were available for those affected by the floods that commenced on 12 January and continued into February 2011.

In response to the Black Saturday bushfires of February 2009, the Victorian Government and the Red Cross launched an appeal to assist those affected by the disaster. In light of the success of the bushfire appeal, the Australian Red Cross and the Victorian Government established the Victorian Floods Disaster Relief Appeal Fund. The fund has made available the Damage to House and Contents Gift for eligible people whose homes and household contents were damaged or destroyed in the January and February 2011 floods.

During the community consultations and in submissions to the VFR, there was no widespread dissatisfaction expressed with the adequacy of the monetary amounts of financial assistance provided to individuals.

There was, however, concern about the level of confusion as to what grants were available and given the different triggers for these grants this confusion is understandable. The complexity of the application forms were raised at some community consultations and in the submission from VCOSS. The VFR notes that in response to the confusion, staff from the Red Cross Disaster Relief Fund and DHS undertook a 'road show' in July to assist people to fill out forms for both government grants and assistance from the Disaster Relief Appeal Fund. This initiative resulted in a significant increase in the number of people making application for grants.

Dr Rob Gordon, a psychologist who worked with government agencies and communities after the bushfires and the floods to help prepare people to deal with the recovery process, confirmed to the VFR that people recently affected by trauma find dealing with applications for assistance a daunting task.³³⁴ The VFR suggests that DHS should consider a comprehensive strategy of providing people with information and assistance in regard to applying for grants. Such a strategy could examine the road show that was used in 2011 and how outreach services might be utilised.

One council raised concerns about the availability of DHS staff in some locations and the issuing of debit cards when power was not available, rendering the cards ineffective because ATMs were not functioning. The MAV also highlighted what they saw as inconsistency in the way the grants were allocated, with some families being offered services and others cash grants. DHS and DTF have advised the VFR that both these issues will be included in their review of personal hardship grants.

³³³ Ibid

³³⁴ Dr Rob Gordon, Clinical Psychologist and consultant to DHS

Financial assistance to local government

As the MAV noted in its submission to the VFR:

Large flood events have caused significant damage to public assets. Their duration and the length of the subsequent recovery period (often weeks and months), have resulted in substantial additional costs for municipalities. Many municipalities have found it difficult to claim relief and recovery related costs.³³⁵

Every submission from individual local councils and the submission from the MAV highlighted concerns with the current arrangements. The following selection of comments highlights some of the concerns:

- without upfront payment, councils felt they were left paying for essential works and waiting months for reimbursement with a consequent drain on their finances. The 50 per cent upfront payment put in place for the floods of 2011 was seen as a major improvement that should become normal practice³³⁶
- reimbursement for relief and recovery is not guaranteed. “Many municipalities found it difficult to claim relief and recovery related costs... and while the cost of many community and individual recovery services are significant, they are often not reimbursable”³³⁷
- confusion also exists around the process and who reimburses external contractors and council resources when they have been engaged as part of the emergency at the request of the combating agency. From the floods in January 2010–11, the Corangamite Shire Council had significant bills for response that have fallen back on the council³³⁸
- the NDRRA guidelines do not allow for betterment³³⁹ works to be included in costing and replacement of infrastructure. There does need to be some scope for betterment, particularly where replacement of existing infrastructure is inadequate or likely to be damaged again in future events³⁴⁰

- federal requirements to use external contractors need to be more flexible, to allow councils to undertake disaster related work, where this is most advantageous to the community³⁴¹
- under the current policy, councils cannot claim for the use of their own staff to undertake reinstatement of most community assets and provision of recovery related services
- under the EMMV, municipal councils are expected to lead community relief and recovery efforts, without any reimbursement available through NDFA for the associated costs incurred
- only works/services ordered through the MECC are covered and once the MECC is closed for response purposes, these costs are not covered.

Given the critical role played by local government in emergency management, the VFR believes there needs to be a concerted effort to devise strategies to address these issues. Possible strategies fall into three categories:

- improved information and support
- changes to the NDFA
- referral of issues to the current review of the NDRRA.

Improved information and support for councils

Confusion about financial assistance was a consistent theme. The VFR is of the view that the only way to reduce this confusion is by providing consolidated, clear, and authoritative information to those affected by emergency events. It is understandable that individual agencies and levels of government may wish to maintain control over provision of information via their own website. However, from the perspective of councils the sometimes subtle variations in wording and layout add to confusion.

In the case of councils, improved information needs to be supplemented by training and information on disaster funding arrangements before events and the provision of support to navigate the application process after an event. One suggestion put forward by the MAV is the use of standard ‘reimbursement templates’.

335 Municipal Association of Victoria submission to VFR, 26 May 2011

336 ibid

337 ibid

338 Corangamite Shire submission to VFR, 27 May 2011

339 ‘Betterment’ is explained in the pages following

340 Loddon Shire Council submission to VFR, 5 May 2011

341 Gannawarra Shire Council submission to VFR, 25 May 2011. Buloke Shire Council submission to VFR, 26 May 2011

While improved access to information and support will no doubt address many of these issues, the Victorian Government should also consider permanently consolidating its in-house expertise on disaster financial assistance. If this structural change proves to be too disruptive, a temporary team of these experts should be brought together immediately during or after each emergency event.

Given the extraordinary impact of the floods, the Commonwealth Government put in place new measures designed to “ensure value for money is delivered in the massive task of rebuilding flood-ravaged regions.”³⁴² As part of these measures, the Commonwealth Government established the Australian Government Reconstruction Inspectorate (AGRI). The AGRI is chaired by a former Premier of New South Wales and its role is to:

- scrutinise building contracts
- directly inspect projects to ensure they are meeting timelines
- work directly with state reconstruction agencies to develop contractual frameworks, tendering process and project management systems
- scrutinise requests for reimbursement by local government for projects completed for the purposes of reconstruction
- examine high value or complex projects prior to execution.

While the AGRI can review any project, they have a particular focus on high value, complex projects.

The Commonwealth National Disaster Recovery Taskforce (CNDRT) supports the AGRI. The CNDRT is located within the Department of Regional Australia, Regional Development and Local Government and the Taskforce works closely with the Secretaries Flood Recovery Group which has been set up to oversee flood recovery in Victoria. This is the first time the Commonwealth Government has put such arrangements in place.

With this increased level of administrative scrutiny by the Commonwealth Government, the Victorian Government will need to ensure there is an equal level of rigour and expertise within Victoria to enable timely access to funds under the NDRRA. While emergency events appear to occur on a regular basis, individual councils are likely to be affected infrequently. This makes the challenge of dealing with unfamiliar and complex arrangements more challenging, especially when many of the councils affected often have only modest administrative infrastructure to deal with the challenge.

The issue of ‘betterment’ provides a good case study both of the complexity of the financing arrangements and of the importance of having a focus on disaster funding arrangements. In their submission to the VFR, Loddon Shire stated:

*The NDRRA did not allow betterment works to be included in the costing and replacement of infrastructure. There does need to be some scope for betterment, particularly where replacement of existing infrastructure is inadequate or likely to be damaged again in future events.*³⁴³

This observation is one shared by many, if not all, affected councils and was repeated in submissions and discussions between councils and the VFR.

Victorian Government officials recognised that there was significant confusion and in June 2011, DTF issued new information to clarify the requirements for betterment. The following is an extract from this advice:

Replacement (without betterment)

As a basic principle, the replacement assets should be designed to provide the most cost effective solution that complies with relevant Australian building, design and engineering standards. Where this requires different materials or technology than the pre-existing assets, for example replacing a timber bridge with a concrete and steel bridge, this work will be eligible for reimbursement funding on a 50:50 basis between the Federal and Victorian Government.

342 Press Release by the Prime Minister Monday 07 2011. Australian Government Reconstruction Inspectorate

343 Loddon Shire Council submission to VFR, 5 May 2011

Replacement (with betterment)

*Cost sharing for upgrading **essential** damaged infrastructure to more resilient standards is also available and is known as betterment. The NDRRA guidelines define betterment as the replacement or restoration of an essential public asset to a more disaster resilient standard than its pre-disaster standard.*

All costs directly associated with a betterment project, including the cost of designing and analysing the betterment component of the project are regarded as eligible expenditure.

On the surface, it would appear that improved information would address concerns about betterment. However, DTF has advised the VFR that:

For a betterment project to be eligible for reimbursement under the NDRRA, that project must obtain pre-approval from the Commonwealth Government before works are commenced. An Essential Public Asset Betterment Application and cost-benefit analysis must be submitted for projects to gain approval...

To date, there has been no betterment projects approved by the commonwealth in Australia although DTF understands that there is one New South Wales project that has been considered by the Commonwealth ERC – it appears that the ERC has asked for more information including detail around the cost-benefit analysis, which has held up its approval.³⁴⁴

Whether this situation is the result of confusion, complexity, the absence of a policy framework or the lack of a precedent is not clear. The VFR is informed that DTF is working closely with councils and the commonwealth with a view to looking at cases where the replacement of infrastructure might be upgraded to be more resilient. Hopefully this work will provide a framework for future events. If not, this issue should be included in the upcoming national review of the NDRRA.

As indicated above, many of the councils most impacted by floods often had modest administrative resources and vast areas of affected land. Such lack of clarity in the policy settings adds to community concern and delays recovery.

The betterment issue also highlights the need to both improve the quality of the information and the support provided to councils to navigate the complex process required by the NDRRA. It also underscores the importance of maintaining a capacity for high quality expertise on disaster related funding in Victoria.

Another issue raised by many councils was the general belief that reimbursement of emergency protection works can only be arranged through the MECC and that if it ceased to operate, the costs of emergency protection works would not be reimbursed. In light of the level of concern regarding this issue, the VFR sought clarification from DTF who provided the following advice:

While the guidelines don't mention whether costs incurred by councils once a MECC is closed following the initial emergency response, the DTF practice is that costs incurred within a reasonable period of time (i.e. within the next couple of weeks following the closure) and at a reasonable amount can be claimed by councils.³⁴⁵

Here again the provision of a single authoritative information source, backed up by good quality advice and support to councils, should improve the efficiency and rigour of processing disaster funding.

344 Response provided to VFR by DTF, 25 August 2011

345 *ibid*

Recommendation 89:

The VFR recommends that:

the Department of Human Services develop proactive strategies to provide information and assistance for people applying for emergency grants.

Changes to the Natural Disaster Funding Arrangements

There are three areas where the Victorian Government can address the concern of councils:

- the upfront allocation of funds for recovery
- finalising the review of Victoria's municipal assistance
- reviewing the reimbursement systems associated with floods.

Until early 2011, councils were required to fund works and then claim the costs back from the Victorian Government. Following the 2011 floods, the Victorian Government approved an upfront allocation of around 50 per cent of the expected costs. This initiative was very well received by local government and was referred to in many submissions and in meetings with the VFR. Queensland has adopted a similar approach that allocates funds into a trust fund for each local council which is accessed when all the required accountability requirements are finalised. This approach provides the councils with surety of funds. It is recommended that the provision of 'upfront' funding be reviewed with a view to being adopted as the standard approach following emergencies.

In 2008, the OESC undertook the *Review of Victoria's Municipal Assistance*. This review examined the NDFA. The review found that while the NDFA had a narrow range of 'eligible items', these were more often than not supplemented by a standard range of initiatives which were then submitted for Ministerial approval. While such an approach might be seen as giving the Victorian Government a high degree of flexibility to decide what initiatives would be funded after each event, the approach left councils unsure of what support may be provided and at worst could influence what or when critical works are undertaken. The approach also creates an administrative burden that has the potential to delay activity.

The inclusion of some key packages around relief and early recovery for the NDFA would allow councils and agencies to respond quickly and still allow the Victorian Government time to consider what, if any, additional initiatives are required to deal with the particularities of each emergency event. These packages should also be used when the NDRRA is activated. If necessary, agreement to include these packages should be included as part of the review of commonwealth and state and territory relief and recovery payments. The VFR recommends that the Victorian Government reactivate and finalise the review of municipal assistance.

The final issue was raised in submissions by both Gannawarra Shire³⁴⁶ and Corangamite Shire.³⁴⁷ It would appear that there are different reimbursement systems for fire than flood. In the case of fire, the reimbursement for most emergency protection works is processed through the CFA, while for floods local councils must submit claims for reimbursement.

*Confusion also exists around the process and who reimburses external contractors and council resources when they have been engaged as part of an emergency at the request of the combating agency.*³⁴⁸

There is a natural reluctance by councils to be perceived as being responsible for works they do not authorise and for which they have no funding guarantee. This issue should also be examined as part of the review of Victoria's municipal assistance.

Recommendation 90:

The VFR recommends that:

the state implement arrangements to improve the support provided to local government on disaster financing before, during and after emergency events.

³⁴⁶ Gannawarra Shire Council submission to VFR, 25 May 2011

³⁴⁷ Corangamite Shire submission to VFR, 27 May 2011

³⁴⁸ Ibid

Recommendation 91:

The VFR recommends that:

the state finalise the 2008 review of Victoria's municipal assistance. This should include addressing:

- the provision of upfront funding for local councils for repair of community assets
- packages for early relief and recovery to be included in both the Natural Disaster Funding Arrangements and the Natural Disaster Relief and Recovery Arrangements, including outreach packages; and
- the process of reimbursement of local councils after floods.

The national arrangements

Not all financial assistance issues can be addressed by way of better information and support or by a review of Victoria's NDFA; some issues relate to the national arrangements set out in the NDRRA. This situation is the case with another issue which was of concern to councils; the constraint on using council staff to undertake clean-up and restoration works.

DTF has advised the VFR that under the NDRRA, councils cannot claim ordinary standard time that would have been incurred by employees in the ordinary course of business. However, DTF has advised that:

*Councils may claim any extraordinary salaries, wages or other expenditure which would not have been incurred had the emergency not occurred. Employment costs for temporary staff in the office, contractors or costs of staff seconded from other councils borne by the council can also be included where employees have been deployed to assist with the council response to the emergency (i.e. backfilling). Councils can also claim overtime undertaken by their staff when assisting council efforts during an emergency.*³⁴⁹

DTF also advised the VFR that it is aware that in some circumstances councils are able to obtain better value for money by using their own council employees. In these cases, councils have sought reimbursement, or at least flexibility, within the NDRRA guidelines to allow them to receive reimbursement for costs incurred by their normal council employees.

One example that highlights this situation involved the case of a contractor from Melbourne who used local materials with which they had little experience. The work undertaken by the contractor resulted in problems with the surface of the road requiring later rectification works. The council involved believes that in the end it would have been more cost effective for its employees to act as works supervisors, as they had built up a certain level of geotechnical experience and knowledge in using the local materials.³⁵⁰

While there are legitimate concerns to ensure that councils do not use disaster funding to subsidise their normal operations, this concern should be balanced against the risk of creating unintended consequences.

Given the above issues, the VFR was pleased to be advised that Emergency Management Australia (EMA) wrote to the Victorian Department of Treasury and Finance on 19 October 2011, confirming that "costs incurred by local government for the employment of temporary additional staff to undertake restoration works may be claimed under the NDRRA".³⁵¹ On the basis of this advice, the VFR anticipates that this approach will be applied to any future emergency events.

Financial assistance to business/primary producers

After any disaster, the recovery of business including primary production, is a key building block for the recovery of individuals and communities. While the primary source of financial support for private business remains insurance and commercial finance, targeted support is available under the NDFA and the NDRRA.

Throughout the VFR's community consultations, the concerns raised were remarkably consistent, and those voicing the concerns were not limited to the business community. For individuals there is an acute understanding that their recovery is inextricably linked to a vibrant, thriving local community. The issues raised with the VFR regarding financial assistance to business were:

- the 51 per cent income rule
- access to accurate information on grants and eligibility.

349 Response to VFR from DTF

350 ibid

351 ibid

The 51 per cent rule for primary producers

The key assistance provided to primary producers as part of the NDRRA are loans and subsidies under Category B and grants for primary producers under Category C. The type of assistance provided under these categories include clean-up grants and low interest loans. To be eligible for this assistance a primary producer is defined as someone who “derives at least 51 per cent of his, her or its income from the enterprise”.³⁵²

During consultations with the community and local government, there was concern that many primary producers were not receiving targeted assistance because they did not derive 51 per cent of their income from their farming enterprise. While most people understood the intent of the measure, many felt that after years of drought, it was not surprising that there was a drop in farm income and more families needed to supplement their income. For many in the community, it seemed unfair and counterproductive to local recovery that this now meant many primary producers were ineligible for assistance.

The agency with responsibility for administering assistance is Rural Finance. The VFR sought advice from Rural Finance on the impact of the 51 per cent rule. Rural Finance advised the VFR that there were three sets of circumstances where farmers can incur difficulties with the current rule.

The first involves cases where farmers derive the majority of their income from farms in a normal year but due to some specific event have sought off-farm income. In these situations, Rural Finance advised the VFR that it takes a long term view and looks at historic trading evidence and the underlying productive capacity and potential of the business. If the farming business has a reasonable prospect of generating the majority of income on either of these measures, assistance can be approved.³⁵³

The second set of circumstances, involves cases where there is no history or reasonable likelihood of the farm generating the majority of income in a normal year and the farm is supported by work in the local area. In these circumstances, the applicants are not eligible for assistance. Rural Finance notes that this assessment can often appear harsh, particularly for those small scale farmers who are reliant on employment in the local community to obtain their off-farm income. In many circumstances, if the farm is experiencing a difficult trading period and the community is also struggling they will be experiencing a general downturn in income and yet they will not be eligible for any form of assistance.³⁵⁴

The third set of circumstances involve small scale farming operations where the intent of establishing the farm was never to support the family, service debts and be the majority source of income. The farm operations are usually supported by reliable sources of off-farm income. Operators in this position will not be eligible for assistance.³⁵⁵

Rural Finance believes that the circumstances of the latter two groups pose different risks to those affected. In rural Victoria there is obviously a gap between full scale commercial farming businesses and small scale farms which are not commercial. There are many reasons for this situation. Some may be caught in the process of rural readjustment; others may be scaling back activity due to age or changing family demographics. In some of these cases, the productive capacity of the farm may be intact, in others it may not. Many of these businesses play a critical role in maintaining environmental values and the integrity of communities. Most of these farmers will be confronted with damage but with little or no capacity to recover.

Governments always confront difficult choices in arriving at a reasonable balance when providing financial assistance. Assisting business is critical to general recovery, but for business, insurance and commercial financing will always be the primary source of financing. Financial assistance that is given to deal with disasters is not intended to prop up businesses that have no future. However, given the current review of relief and recovery payments and the issues raised during the VFR consultations, the VFR believes that it would be timely to examine whether the current guidelines have created some unintended gaps. It may be that these gaps could be addressed through other mechanisms, rather than through grants and loans but this will not be clear until it has been more fully examined.

The VFR has referred this issue to DPC requesting that this issue be included in the 2011 national review of commonwealth and state and territory relief and recovery payments.

352 Natural Disaster Relief and Recovery Arrangements, Determination, 2011, Version 1, p 17

353 Response to VFR from Rural Finance, 5 September 2011

354 *ibid*

355 *ibid*

Access to information on grants and assistance for individuals and businesses

The issue of easily accessible, authoritative information on available financial assistance was an issue for all groups, including businesses and primary producers. The multiple floods of 2010–11 no doubt added to the confusion for those seeking information on assistance. While the current review of the arrangements may lead to less complexity, whenever individuals need to access assistance infrequently they are not able to build up the experience required to make navigation easy.

Rural Finance advised the VFR that even with their expertise, providing timely and accurate advice about grants is a challenge and that confusion over the eligibility requirements causes distress. As can be seen from the earlier description of the disaster funding arrangements, achieving clarity in a timely way is always going to present a challenge. Creating a single portal that provides access to clear and authoritative information as early as possible could reduce some of the current confusion and concern.

While accurate, accessible and timely information will no doubt assist many individuals and businesses, governments should also consider measures that will enable them to provide this information as early as possible after an event. One such measure might be to develop a modest standard preliminary package based on pre-established criteria. This package could be followed up with more substantial assistance if required.

Red Cross Appeal Fund

Another issue raised during consultations and in the submission by the VFF was that farmers are unable to qualify for assistance provided from the Red Cross Appeal Fund. Eligibility for funding from the appeal is governed by the Income Tax Assessment Act 1997 and while farmers can receive assistance for their personal recovery, such as a destroyed house, business related assistance cannot be funded.

The VFR has been advised that the review of commonwealth and state/territory relief and recovery payments will include public appeals. This issue is best addressed within that review's broader framework.

Recommendation 92:

The VFR recommends that:

the state:

- ensure that the concerns raised by Victorians regarding the Natural Disaster Relief and Recovery Arrangements are provided to the national review including the issues of:
 - betterment (what it means and how it is applied); and
 - the 51 per cent income rule for eligibility of businesses for grants.
- establish a single point of information (such as the single web portal referred to in recommendation 33) on all emergency related financial assistance available to individuals, businesses and local government. The means of accessing this information should be widely circulated in the community.

Chapter Eight

Community resilience



Shared responsibility

The VBRC in its *Final Report*³⁵⁶ addressed the issue of shared responsibility and stated:

Pervading the Commission's report is the idea that responsibility for community safety during bushfires is shared by the state, municipal councils, individuals, household members and the broader community. A fundamental aspect of the Commission's recommendations is the notion that each of these groups must accept increased responsibility for bushfire safety in the future and that many of these responsibilities must be shared.

Communities that have a large number of informed individuals who work together will be safer and stronger. Individual members of these communities can make themselves safer by drawing on the support and resources of others.

The notion of community and individual involvement in matters of community safety and protection is not new. In 1829, Sir Robert Peel created the Metropolitan Police when he served as Home Secretary of England. According to Peel, the real key for policing is 'the police are the people and the people are the police'. Australian police forces have embraced this philosophy and for several decades have developed and fostered community policing strategies such as Neighbourhood Watch.

In Victoria, the CFA have introduced Community Fireguard (CFG), which is a community development program designed to help reduce the loss of lives and homes in bushfires. By planning and actively participating in a CFG group, residents are able to develop strategies for themselves – strategies that have local ownership. Groups make decisions about the best way to protect themselves that fits their bushfire risk, lifestyle and environment.³⁵⁷

Since the introduction of the VICSES 'FloodSafe' program in 2006 (originally under the title of 'FloodSmart'), the program has been delivered to communities within 14 municipalities. Delivery of each program has relied on joint funding and grants from businesses and local government. Previous research and the information gathered by the VFR clearly shows increased awareness of floods and flood risk in those communities that have taken part in the FloodSafe program.

In my *Delivery Report* of 31 March 2010³⁵⁸ to the VBRC and again in my *Progress Report* of 31 July 2011, I referred to a community initiative at Cann River in East Gippsland where that community had formed a committee which developed a local incident management plan to prepare for future emergencies. When a fire broke out east of Cann River on 18 December 2009 and threatened to impact upon the community, the incident management plan was put into action. Residents gathered in the nominated assembly area at the local school and the site was attended by emergency services and medical personnel in accordance with the plan. Thus, the community was protected from the risk of the bushfire and no persons were injured. This is an outstanding example of what communities can do to minimise the risk from natural disasters.

A constant theme that emerged during the VFR consultation meetings was that flood affected communities expressed the view that the response to the floods was hampered by inadequate use of available local knowledge. In many of these communities there were long time residents who had previously experienced floods and were familiar with water flows during these floods. Some of these residents lived on river banks where their families had farmed for generations. Many of them expressed the view that had their advice been sought in the process of planning for floods and during the preparation and response phases, then the impact of the floods may have been minimised.

The value of local knowledge in water management has also long been recognised through the establishment of a system of local flood wardens. This issue is discussed in more detail within chapters One and Two of this report.

At a number of community consultation meetings and in discussions with local governments, concern was expressed to the VFR about the approach taken to communicate with local communities. This concern related to the conduct of community meetings by the VICSES to advise communities of the potential impact of approaching floods and recommended actions to be taken by community members.

356 2009 Victorian Bushfires Royal Commission, Final Report Volume II, Part Two, pp 352-5

357 Country Fire Authority, Community Fireguard Brochure, www.cfa.vic.gov.au

358 Bushfire Royal Commission Implementation Monitor *Delivery Report*, 31 March 2010

It was put to the VFR that on a number of occasions VICSES officials with no knowledge or experience of local conditions made generic presentations to community meetings. The credibility of the messages being delivered by these officials was questioned because of their lack of local knowledge. It was suggested that these messages would have been more effectively delivered by the VICSES in conjunction with local officials, such as elected mayors, who have standing and credibility in their communities.

National Strategy for Disaster Resilience

In February 2011, COAG released the *National Strategy for Disaster Resilience*, developed by a working group under the auspices of the National Emergency Management Committee (NEMC). This strategy document includes the following important statements:

Role of individuals

Disaster resilience is based on individuals taking their share of responsibility for preventing, preparing for, responding to and recovering from disasters. They can do this by drawing on guidance, resources and policies of government and other sources such as community organisations. The disaster resilience of people and households is significantly increased by active planning and preparation for protecting life and property, based on an awareness of the threats relevant to their locality. It is also increased by knowing and being involved in local community disaster or emergency management arrangements, and for many being involved as a volunteer.

Role of non-government organisations and volunteers

Non-government and community organisations are at the forefront of strengthening disaster resilience in Australia. It is to them that Australians often turn for support or advice and the dedicated work of these agencies and organisations is critical to helping communities to cope with, and recover from, a disaster. Australian governments will continue to partner with these agencies and organisations to spread the disaster resilience message and to find practical ways to strengthen disaster resilience in the communities they serve.

A disaster resilient community is one where:

- People understand the risks that may affect them and others in their community. They understand the risks assessed around Australia, particularly those in their local area. They have comprehensive local information about hazards and risks, including who is exposed and who is most vulnerable. They take action to prepare for disasters and are adaptive and flexible to respond appropriately during emergencies.

- People have taken steps to anticipate disasters and to protect themselves, their assets and their livelihoods, including their homes and possessions, cultural heritage and economic capital, therefore minimising physical, economic and social losses. They have committed the necessary resources and are capable of organising themselves before, during and after disasters which helps to restore social, institutional and economic activity.
- People work together with local leaders using their knowledge and resources to prepare for and deal with disasters. They use personal and community strengths, and existing community networks and structures; a resilient community is enabled by strong social networks that offer support to individuals and families in a time of crisis.
- People work in partnership with emergency services, their local authorities and other relevant organisations before, during and after emergencies. These relationships ensure community resilience activities are informed by local knowledge, can be undertaken safely, and complement the work of emergency service agencies.
- Emergency management plans are resilience based, to build disaster resilience within communities over time. Communities, governments and other organisations take resilience outcomes into account when considering and developing core services, products and policies. They are adaptive and flexible to respond appropriately in disasters.
- The emergency management volunteer sector is strong.
- Businesses and other service providers undertake wide reaching business continuity planning that links with their security and emergency management arrangements.
- Land use planning systems and building control arrangements reduce, as far as is practicable, community exposure to unreasonable risks from known hazards, and suitable arrangements are implemented to protect life and property.
- Following a disaster, a satisfactory range of functioning is restored quickly. People understand the mechanisms and processes through which recovery assistance may be made available and they appreciate that support is designed to be offered, in the first instance, to the most vulnerable community members.

Priority outcomes

- Risk assessments are undertaken for priority hazards and widely shared among at risk communities, stakeholders and decision makers.
- Risk assessments consider risks and vulnerabilities and capabilities across the social, economic, built and natural environments.

- Consistent methodologies and data frameworks are applied in risk and disaster impact assessment to enable information sharing and accurate interpretation.
- Information on lessons learned – from local, national, and international sources – is accessible and available for use by governments, organisations and communities undertaking risk management planning and mitigation works.
- Partnerships are in place which support improved access to risk information and more effective collaboration in assessing and monitoring hazards and risks common across jurisdictional boundaries.
- Organisations, individuals and governments routinely share information and maps on risks, for the benefit of the community.
- Strong networks across sectors and regions fill information gaps, share information and build understanding at all levels.
- Risk reduction knowledge is included in relevant education and training programs, such as enterprise training programs, professional education packages, schools and institutions of higher education.
- Costs and benefits associated with hazard management inform risk reduction activities.
- Emergency messages are clear and, where appropriate, nationally consistent.
- Existing and, where necessary, improved data and tools for assessing hazards and risks, enable communities to better understand and act on their risks.

The recognition by government of the need for greater community involvement in the enhancement of community resilience to natural disasters is, on the evidence available to the VFR, matched by a strong desire in local communities for more involvement in this process. However, it is obvious that a great deal of work needs to be done to harmonise these desirable outcomes. The following comments are representative of a number of similar views expressed during community consultations; ‘government needs to shift the focus in emergency management from doing things to local communities to doing things with local communities’ and ‘the community has been disempowered and have been excluded in many ways’. Clearly, the effective input of local knowledge should be a critical component at all stages of any future emergency management arrangements in Victoria.

In the view of the VFR, two levels of emergency management require significant development and strengthening. The natural hierarchy of responsibility for emergency management flows from local and municipal arrangements through to regional and state arrangements. Until recently, the focus for these arrangements has been at the municipal and state levels and this situation was clearly illustrated during the state’s response to the 2010–11 floods. Local and regional responses to these floods were not nearly as significant or structured as should be expected for such major emergencies. (Issues relating to regional arrangements are more fully discussed at Chapter Three of this report relating to command and control).

In my role as the BRCIM, I raised concerns about inadequate consultation and involvement of local communities in TPPs. Remedial action to address these concerns is currently underway, but this action is at this time confined to addressing fire hazards. In the interests of achieving increased community resilience, it is critical that ‘all hazards’, including floods, are addressed in these TPPs (or in similar emergency planning arrangements).

Local communities need to understand the risks they face from all likely hazards and prepare themselves to deal with these risks. In the view of the VFR, it makes little sense to approach this task from the perspective of fires alone. Seasonal changes may mean that a fire prone community is at other times at risk of floods. While the response to these hazards may be different, the planning and preparation for this response will require the same fundamental issues to be addressed. (The same approach is critical at the municipal level where MEMPs should also be based on ‘all hazards’ risk assessment. This issue is further discussed in Chapter Six of this report).

Victorian communities invariably have a significant relevant asset – community spirit – as evidenced by the volunteer groups that serve their communities on an ongoing basis. Most communities in Victoria have CFA, VICSES, Rotary, Lions, Country Women’s Association, Probus and similar organisations made up of community minded individuals who perform a wide range of voluntary services. When combined with local business leaders and government officials such as police, schoolteachers and health professionals, there is a significant resource of talented and committed people who can confidently be relied upon to take a lead role in developing community resilience to natural disasters. With a limited degree of support from the state, Victorian communities are very capable of addressing the necessary measures to play their role in a ‘shared responsibility’ for their own wellbeing.

Local planning and resilience building

The VFR notes with interest the recent launch of a website sponsored by the Commonwealth and Queensland governments and several other government and commercial organisations. Titled “Harden up Queensland” and located at hardenup.org/. This website addresses the issue of community resilience in a most direct manner. The front page of the website includes the following statement:

Weather events are getting more severe and when a major weather event hits, you cannot rely on government and volunteer organisations to help. You need to harden up by preparation, awareness and helping others.

This provocative but highly relevant communication initiative should be an important reference point for future strategy development in Victoria to improve community resilience to natural disasters.

Internationally, countries such as New Zealand, Canada and the United States have developed community resilience models that enable the public to understand and manage the hazards they may face. These models inform the community that immediate assistance by emergency services may not be readily and immediately available and they should be prepared to cope on their own for three to four days. All the models include information on understanding risks in their community, making an emergency plan and assembling an emergency supply kit.

The VFR has discussed with VicPol the concept of forming community committees tasked with the responsibility of developing locally based emergency management plans that include the building of community resilience to natural hazards. The Chief Commissioner has agreed that VicPol is the most appropriate organisation to take a lead role in facilitating this proposal. This agreement is based on the rationale that VicPol has a statutory obligation of coordination in Victoria’s emergency management arrangements and further, that VicPol is the only agency with permanent, statewide coverage with paid, fulltime emergency service professionals who have close contact with local communities.

In these discussions, a senior VicPol officer suggested that these local committees could be appropriately named as ‘community resilience committees.’ The VFR agrees with this very positive suggestion.

In the event that VicPol does take on this lead role with regard to initiating development of community resilience committees, it will be imperative that other relevant government departments and agencies also make an ongoing commitment to this initiative. The VFR is aware that previous attempts to implement a proposal of this nature lost momentum because of the lack of ongoing commitment from some government departments/agencies.

During consultation with councils in my role as the BRCIM, I have become aware of diverse examples of communities working with councils and agencies to develop resilience to adverse events, including but not limited to emergencies. This work has developed organically and in many cases, the desire to build resilience has developed during the recovery phase following an emergency or other event that has affected the community. A key factor in the success of these resilience building initiatives is the ability of agencies and councils to support and facilitate the process, sharing expertise, and providing access to resources. Should the process become too prescriptive, the initiatives may experience poor engagement or participation from both community and agency participants.

Councils, as the closest level of government to the community, already have strong relationships with individuals in local areas. In the view of the VFR, should VicPol take the lead in local planning and resilience building, it is imperative that they collaborate with councils to utilise the knowledge of, and links with, communities already established by community development staff in local government.

The VFR is aware of an ongoing project that is designed to build community resilience and empower communities to prepare for, respond to and recover from emergencies. This project exists under the banner of a fire learning network of ‘strategic conversations’ and is being undertaken by the Knowledge and Learning Unit of the Office of Land and Fire at the DSE. The conversations “value local knowledge and experience and strengthen the existing networks through which people support each other, share knowledge and make sense of the things that place stress on community life. They are enabling government to participate meaningfully in dialogue with communities about things that matter to the local people, and to deliver its services more effectively”.³⁵⁹

Should the following recommendation be accepted, the VFR suggests that VicPol engage with the Knowledge and Learning Unit at DSE to draw on their experience of engaging with communities to inform the proposed strategy for the development of community resilience committees.

359 DSE Knowledge and Learning Unit, Office of Land and Fire – email of 18 October 2011

Recommendation 93:

The VFR recommends that:

the state comprehensively pursue the objective of achieving (where possible) the priority outcomes of the *National Strategy for Disaster Resilience* and the imperative of shared responsibility, in particular by:

- requiring that local knowledge is considered as a critical component of all phases of emergency management
- involving local communities in the development and ownership of community resilience plans based on an 'all hazards' approach and tailored for the specific needs of each community
- encouraging local communities to form resilience committees to develop and administer community resilience plans
- nominating Victoria Police as the lead agency in initiating the strategy to develop community resilience committees; and
- requiring emergency service agencies to consult and engage with local community resilience committees in the preparation, planning, response and recovery phases of emergency management.

Conclusion

This report has addressed the many issues arising from the Terms of Reference for the VFR. In examining these issues, the VFR has concluded that there are significant shortcomings in Victoria's emergency management arrangements. As required, this report also details a number of recommendations that, if implemented, will support necessary reform of these arrangements.

In response to the release of the VFR *Interim Report* of 30 June 2011, the Premier, Ted Baillieu MP and Deputy Premier, Peter Ryan MP, on 12 September 2011 released a green paper titled *Towards a More Disaster Resilient and Safer Victoria*. This paper is the commencement of a major reform program of "the state's crisis and emergency management arrangements to create a more disaster resilient and safer Victoria".³⁶⁰ As the response time for submissions on this paper was 14 November 2011, the government will by now have received feedback on the options and issues discussed in this green paper.

In a companion document to the green paper titled, *Victoria Prepared: An Action Plan*, the government advises that the green paper process and this *Final Report* of the VFR will "inform the development of policy proposals on how to reform Victoria's emergency management arrangements."³⁶¹ These proposals will be released in the form of a white paper in the first half of 2012. The white paper "will lead to major amendments to Victoria's laws and policies governing emergency management".³⁶²

The VFR notes these positive developments but due to the timelines for the production of the final VFR report, no further observations can be made about the progress of this reform program, other than to encourage that the recommendations in this report, where relevant, be considered in this context.

The VFR was not tasked with an examination of general funding issues associated with the cost of Victoria's emergency management arrangements. However, as a general observation, the VFR is aware of many duplications and inefficiencies that flow from the current siloed emergency services structural arrangements. On this basis, it would be reasonable to assume that significant cost savings could be achieved through improved coordination and the sharing of administrative services by these organisations. These savings, over time, should free up funds to invest in improved service delivery to the community which in turn should deliver a safer and more resilient Victoria. Further, the initial investment required to support some of the reforms detailed in this report should be amortised over time by a significant reduction in the current ongoing financial drain that results from the necessity to support disparate and duplicated systems, processes and activities.

The program of reform required to address the recommendations in this report is of major proportions. It is critical that this reform is undertaken in a cohesive and strategic manner and this approach will, of necessity, take time. The VFR urges the government to undertake this reform program in a phased manner that will allow a small number of critical operational matters to be addressed quickly. The VFR recognises that the green paper process, to be followed by a white paper in 2012 are the first, but very important steps, in this major reform program.

³⁶⁰ Government of Victoria, Green Paper *Towards a More Disaster Resilient and Safer Victoria*, September 2011

³⁶¹ Government of Victoria, *Victoria Prepared: An Action Plan*, 12 September 2011

³⁶² *ibid*

Appendices

Appendix 1 – The impact of the 2010–11 floods

Metric	Unit	Source	State
Insurance claims reported	Count	ICA	56791
Insurance claims reported	Dollars	ICA	836100000
Cropping – Grazing pasture (properties)	Count	DPI	67747
Cropping – Grazing pasture (loss total)	Hectares	DPI	123077
Cropping – Field Crop (properties)	Count	DPI	547
Cropping – Field Crop (loss total)	Hectares	DPI	79249
Horticulture – Olives (properties)	Count	DPI	1
Horticulture – Olives (loss total)	Hectares	DPI	1
Horticulture – Orchards (properties)	Count	DPI	2
Horticulture – Orchards (loss total)	Hectares	DPI	2
Horticulture – Vines (properties)	Count	DPI	2
Horticulture – Vines (loss total)	Hectares	DPI	34
Horticulture – Other horticulture (properties)	Count	DPI	13
Horticulture – Other horticulture (loss total)	Hectares	DPI	616
Horticulture – Other horticulture (loss value)	Dollars	DPI	5141400
Livestock – Beef (properties)	Count	DPI	45
Livestock – Beef (deceased)	Count	DPI	97
Livestock – Beef (injured/missing)	Count	DPI	34
Livestock – Dairy (properties)	Count	DPI	22
Livestock – Dairy (deceased)	Count	DPI	392
Livestock – Dairy (injured/missing)	Count	DPI	89
Livestock – Deer (properties)	Count	DPI	1
Livestock – Deer (deceased)	Count	DPI	50
Livestock – Goats (properties)	Count	DPI	8
Livestock – Goats (deceased)	Count	DPI	182
Livestock – Goats (injured/missing)	Count	DPI	201
Livestock – Horses (properties)	Count	DPI	4
Livestock – Horses (deceased)	Count	DPI	1
Livestock – Horses (injured/missing)	Count	DPI	16
Livestock – Pigs (properties)	Count	DPI	4
Livestock – Pigs (deceased)	Count	DPI	364
Livestock – Pigs (injured/missing)	Count	DPI	5

Metric	Unit	Source	State
Livestock – Poultry (properties)	Count	DPI	9
Livestock – Poultry (deceased)	Count	DPI	330184
Livestock – Sheep (deceased)	Count	DPI	11321
Livestock – Sheep (injured/missing)	Count	DPI	14375
Other – Dairies (properties)	Count	DPI	6
Other – Dairies (loss summary)	Count	DPI	6
Other – Fencing (properties)	Count	DPI	791
Other – Fencing (loss summary)	km	DPI	4255
Other – Hay Sheds (properties)	Count	DPI	32
Other – Hay Sheds (loss summary)	Count	DPI	41
Other – Hay/Silage (properties)	Count	DPI	427
Other – Hay/Silage (loss summary)	Tonnes	DPI	127646
Other – Machinery Sheds (properties)	Count	DPI	47
Other – Machinery Sheds (loss summary)	Count	DPI	65
Other – Stored grain (properties)	Count	DPI	108
Other – Stored grain (loss summary)	Tonnes	DPI	8226
Other – Woolsheds (properties)	Count	DPI	17
Other – Woolsheds (loss summary)	Count	DPI	19
Other – Other buildings (properties)	Count	DPI	84
Other – Other buildings (loss summary)	Count	DPI	137
Plantation/Specialty – Beehives (properties)	Count	DPI	6
Plantation/Specialty – Beehives (loss summary)	Hectares	DPI	258
Plantation/Specialty – Hardwood (properties)	Count	DPI	4
Plantation/Specialty – Hardwood (loss summary)	Hectares	DPI	6
Plantation/Specialty – Private Bushland (properties)	Count	DPI	19
Plantation/Specialty – Private Bushland (loss summary)	Hectares	DPI	439
Plantation/Specialty – Softwood (properties)	Count	DPI	2
Plantation/Specialty – Softwood (loss summary)	Hectares	DPI	8
Recovery centres operated by Council	Count	DHS	28
Relief centres operated by Council	Count	DHS	50
Registrations received by Red Cross at relief centres	Count	DHS	9714
Public Housing Properties damaged	Count	DHS	189

Metric	Unit	Source	State
Health/Medical facilities impacted	Count	DH	50
Schools affected	Count	DEECD	239
Schools affected	Dollars	DEECD	10380024
Residential properties damaged (PIS)	Count	OESC	3179
Water schemes affected	Count	DSE	5
Decrease in Tourism visitation numbers	Count	TV	617000
Lost revenue based on reduced tourist visitation numbers	Dollars	TV	176000000
Interim accommodation referrals	Count	DHS	809
State-controlled bridges damaged	Count	DOT	68
State-controlled (arterial) roads damaged	Count	DOT	647
State-controlled (arterial) roads damaged	Dollars	DOT	133000000
Railway bridges damaged	Count	DOT	49
Railway bridges damaged	Dollars	DOT	4000000
Railway track damaged (washaways)	Count	DOT	66
Railway track damaged (washaways)	Dollars	DOT	10000000
Wilsons Promontory NP bridges damaged**	Count	DOT	1
Wilsons Promontory NP roads damaged**	Count	DOT	1
Wilsons Promontory NP roads damaged**	km	DOT	10
Wilsons Promontory NP roads damaged**	Dollars	DOT	3000000
Community facilities (Freehold land, Council owned & operated asset) damaged	Count	LGAs	91
Community facilities (Freehold land, Council owned & operated asset) damaged	Dollars	LGAs	16200000
Length of Morwell Main Drain Damaged	Metres	DPI	2,000
Public land bridges damaged	Count	DSE	30
Public land bridges damaged	Dollars	DSE	4850000
Public land buildings damaged	Count	DSE	148
Public land recreation sites damaged	Count	DSE	15
Public land roads damaged (V numbers)	Count	DSE	295
Public land roads damaged (V numbers)	km	DSE	704
Public land roads damaged (V numbers)	Dollars	DSE	18200000
Public land trails damaged	Count	DSE	19

Metric	Unit	Source	State
Stream flow gauges affected	Count	DSE	132
Ground water monitoring bores damaged	Count	DSE	371
Levee Breaches	Count	DSE	114
State & National Parks damaged (partially or fully closed)	Count	DSE	56
State & National Parks bridges damaged	Count	DSE	72
State & National Parks buildings damaged	Count	DSE	44
State & National Parks recreation sites damaged	Count	DSE	445
State & National Parks roads damaged	Count	DSE	1,434
State & National Parks trails damaged	Count	DSE	673
Local-controlled bridges damaged	Dollars	LGAs	1250100
Local-controlled roads damaged	km	LGAs	2,876
Local-controlled roads damaged	Dollars	LGAs	116755000

* Please note this does not include LGA specific impact information.

** Wilsons Promontory NP storm/flood damage March 2011

Appendix 2 – List of written submissions

The VFR received more than 150 written submissions including from the following organisations and agencies:

Ararat Rural City Council	Mildura Rural City Council
Australasian Fire and Emergency Service Authorities Council	Moorabool Shire Council
Australian Library and Information Association and Public Libraries Victoria Network Inc	Municipal Association of Victoria
Benalla Rural City Council	Murray River Group of Councils
Beulah Flood Recovery Committee	North Central Catchment Management Authority
Boort Development Inc	North East Catchment Management Authority
Boort District Health	Rochester and Elmore District Health Service
Buloke Shire Council	Rural Finance
Cardinia Shire Council	Shire of Campaspe
Carisbrook (CFA) Fire Brigade	Shire of Gannawarra Flood Wardens
Carisbrook Disaster Recovery Committee Inc	Southern Rural Water
Central Goldfields Shire	Swan Hill Rural City Council
Charlton Community Recovery Committee	Victoria Flood Warning Consultative Committee
City of Casey	Victorian Council of Social Service
Committee for Creswick	Victorian Farmers Federation
Community and Public Sector Union/VICSES	Volunteers of Victoria State Emergency Service – Rochester Unit
Corangamite Catchment Management Authority	VRFish
Corangamite Shire	West Gippsland Catchment Management Authority
Creswick & District Residents Association (CADRA) via Clunes Creswick Flood Management Think Tank Action Group (FMTTAG)	Wickliffe Flood Action Group
East Gippsland Catchment Management Authority	Wimmera Catchment Management Authority
East Wimmera Health Service (Donald)	Yarriambiack Shire Council
East Wimmera Health Service (St Arnaud)	Yellowbird Alert System
Gannawarra Shire Council	
Glenelg Hopkins Catchment Management Authority	
Goulburn Broken Catchment Management Authority	
Goulburn Murray Water	
GWM Water	
Hepburn Shire Council	
Kerang Lakes Land and Water Action Group	
Lake Goldsmith Steam Preservation Assoc	
Loddon Shire Council	
Mallee Catchment Management Authority	
Melbourne Water	
Metropolitan Fire Brigade	

Appendix 3 – Building blocks of a flood warning system

Derived from: Victorian Flood Warning Consultative Committee, *Flood Warning Service Development Plan for Victoria*, October 2005.

Building Blocks of a Flood Warning System	Entities Involved in Victoria	Basic Tools
Data collection & collation	<p>The Bureau provides real time data for flood warning from the national rain gauge network and provides technical assistance for improved data collection networks to support flood warning systems.</p> <p>MW provides real time river and additional rain data for flood warning for the Port Phillip and Westernport region.</p> <p>River and other rain data availability assured through the DSE-managed Regional Surface Water Monitoring Partnerships (involve The Bureau, DSE, RWAs, CMAs, LG, etc).</p> <p>LG (as the prime beneficiary) has O&M funding responsibilities for upgraded flood warning networks if gauges have been installed primarily for flood warning purposes (VFWCC, 2001).</p> <p>RWA's provide The Bureau with information on storage status and releases.</p>	<p>Data collection network (eg. rain & stream gauges, weather radar, satellite images).</p> <p>System to convey data from field to forecast centre (eg. radio or phone telemetry).</p> <p>Data management system to check, correct, store, display data.</p> <p>Information on water storage levels, inflows and operations.</p> <p>Arrangements and facilities for system/equipment maintenance and calibration. For example, the Regional Surface Water Monitoring Partnerships, data warehousing, etc.</p>
Flood detection & prediction (ie. Forecasting)	<p>The Bureau prepares flood forecasts for rural areas and provincial centres. Murray forecasts determined in conjunction with River Murray Operations.</p> <p>MW prepares flood forecasts for the main streams in the Port Phillip and Westernport region.</p> <p>The Bureau provides predictions of weather conditions likely to lead to flash flooding for the whole State.</p> <p>LG is primarily responsible for flash flood forecasting but likely to be assisted by MW in the Port Phillip and Westernport region.</p>	<p>Information on critical levels/effects at key and other locations.</p> <p>Appropriately representative flood class levels at key locations.</p> <p>Flood forecast techniques (ie. hydrologic and rainfall-runoff models, stream flow and height correlations, simple nomograms based on rainfall). URBS models developed for most of the larger Victorian catchments.</p> <p>Meteorological analyses and data.</p>
Message construction	<p>Warning messages are prepared by:</p> <ul style="list-style-type: none"> • The Bureau for weather conditions likely to lead to flash flooding for the whole State; • The Bureau for flooding in rural areas and provincial centres; • MW for flooding in the Port Phillip and Westernport region but disseminated through The Bureau system; • LG for flash flooding in municipal areas. • Opportunity exists for enhancement of messages by VICSES/LG through inclusion of local impacts and related information. 	<p>Warning messages/products and message dissemination system.</p>

Building Blocks of a Flood Warning System	Entities Involved in Victoria	Basic Tools
<p>Message dissemination (ie. Flood alerting and notification: communicating the warning message and information)</p>	<p>The Bureau to VICSES, LG, VicPol, CMAs and media.</p> <p>VICSES alerts relevant agencies and organisations when The Bureau issues flood warning(s) and may enhance flood warning(s) by issuing community safety information and action statements. VICSES may refer relevant agencies and organisations to The Bureau website or to VICSES website and/or Flood and Storm Information Line (when activated) for key messages and action statements. VICSES is not required to disseminate flood watches or warnings.</p> <p>LG disseminate information further. Not clear that messages are disseminated sufficiently to at-risk communities.</p> <p>The Bureau provides ALERT system co-operators with ENVIROMON software to collate and display data and initiate flood alerts that are based on exceedance of criteria such as rainfall volumes or rates and/or river levels or rates of rise.</p>	<p>Formal media channels – TV, radio and print.</p> <p>Internet (eg. email, The Bureau website, VICSES website, social media).</p> <p>Tape message services (eg. VICSES' Flood and Storm Information Line for key messages and action statements).</p> <p>Other channels – fax/faxstream, phone/pager (eg. SMS such as offered by StreetData, voice, local communication 'trees'), voice messaging systems (eg. Xpedite is in use for Maribyrnong, Shepparton-Mooroopna, Euroa, Benalla, Traralgon and Moolap in Geelong and being considered for other communities, the national Emergency Alert), community radio (eg. FM-88).</p> <p>Doorknocking.</p> <p>Flood wardens and local telephone trees (eg. Macalister Irrigation District).</p> <p>Other opportunities for at-risk communities to confirm warning details.</p>
<p>Interpretation (ie. what does the forecast height mean for me or you)</p>	<p>LG and community but is spread across LG, VICSES and CMAs, none of whom consider it core business, although VICSES adopted a lead role in 2010/11 events and employed specialist expertise to assist.</p> <p>Opportunity for MW and CMAs to assist LG/VICSES through provision of flood related expertise and experience re impacts, etc – both during planning for and responding to flood.</p>	<p>Interpretative tools (ie. flood inundation maps from experience, studies, VFD and related databases; flood information cards; flood histories; local knowledge; flood emergency plans that have tapped community knowledge and experience as well as flood related studies and other sources; etc).</p>

Building Blocks of a Flood Warning System	Entities Involved in Victoria	Basic Tools
Response	<p>VICSES is the Control Agency for flood response. Strong involvement from LG, VicPol and community. Should be driven by Flood Emergency Plans (MEMP Sub-Plans) that include local flood intelligence gained from experience and extracted from flood study deliverables. Should also be driven by personal and business Flood Response Plans.</p> <p>Ideally Flood Emergency Plans would be “owned” and maintained by LG but would be a joint VICSES/LG document that captures CMA input.</p>	<p>Flood management tools (eg. MEMP Flood Emergency Plans complete with inundation maps and past ‘intelligence’, effective public dissemination of flood information, local flood awareness, individual and business flood action plans, etc).</p> <p>Standard operating procedures.</p> <p>Community flood education and flood awareness raising, flood response guidelines and related information – all those tools that together work to build flood resilient communities (see the Awareness building block below).</p> <p>Personal and business flood action plans (see EMA website, VICSES tool kit, etc).</p> <p>Comprehensive use of available experience, knowledge and information.</p>
Review	<p>All stakeholder entities including the VFWCC and communities potentially have opportunity to provide review comments.</p> <p>LG, MW, CMAs and VICSES have a role in collecting post-flood data (hydrologic, flood extent, impacts, damages, etc).</p>	<p>Post-event debriefs (agency, community), etc</p> <p>Review and update of personal, business and other flood action plans.</p> <p>Collection of flood ‘intelligence’ and flood damage data during and after the event (eg. rapid impact assessments, CMA, DPI and LG activities, etc).</p>
Awareness	<p>VICSES has adopted a lead role with the roll-out of the FloodSafe program. Involvement from LG, MW and CMAs (and RWAs in some instances).</p> <p>Evidence that VICSES is taking a lead role.</p>	<p>Identification of vulnerable communities and properties (ie. flood inundation maps, information on flood levels/depths and extents, property-specific flood depths, etc).</p> <p>Activities and tools (eg. participative community flood education, flood awareness raising, flood risk communication) that aim to build flood resilient communities (ie. communities that can anticipate, prepare for, respond to and recover quickly from floods while also learning from and improving after flood events).</p> <p>VICSES’ FloodSafe and StormSafe (flash/ stormwater flooding) programs.</p> <p>Local flood education plans – developed, implemented and evaluated locally (eg Cities of Maroondah, Whitehorse, Wodonga, Benalla and Greater Geelong).</p> <p>Flood response guidelines, residents’ kits, flood level information, flood inundation maps, flood markers, property-specific flood charts (eg. Glenorchy, Horsham, Dimboola, Warracknabeal), flood levels in meter boxes (eg. Benalla, Traralgon) and on rate notices, etc.</p>

Appendix 4 – Terms of Reference – Review of the Bureau of Meteorology 2011

Background

The Bureau of Meteorology (the Bureau) plays a vital role in the protection of life and property during extreme and natural disaster events. Its expertise and services assist Australians in dealing with extreme events such as drought, floods, fires, storms, tsunami and tropical cyclones.

The Bureau contributes to all aspects of disaster management including planning, preparation, response and recovery. It works with state disaster managers and state and local government agencies in order to provide the best possible meteorological and hydrological advice on which decisions are made.

The recent increased frequency of extreme events has seen increased demands placed on the Bureau for information and advice, including from state and local authorities, communities and the media. These demands can occur across multiple states and over long periods. These trends have been highlighted most recently during the 2010–11 summer, which has seen unprecedented flood events in Queensland and Victoria, Tropical Cyclone Yasi, and severe bushfires in Western Australia. Climate change modelling indicates the incidence and severity of extreme weather and natural disaster events may increase in the future. This review will assess the Bureau's ongoing capacity to respond to such events in the future.

Definitions

future extreme weather: *expected future increase in frequency and intensity of weather patterns leading to severe phenomena such as high winds, tropical cyclones, coastal storm surges, hail, intense rainfall and flash flooding.*

natural disaster events: *a natural phenomenon leading to a serious disruption to the functioning of a community causing widespread human, material, economic or environmental losses, including events such as drought, flood, bushfire, earthquake and severe coastal erosion and mud slips.*

seasonal forecasting: *forecasting to provide guidance on the likelihood of weather patterns over a timescale of several months. This could include guidance on extended periods of below or above average temperatures or rainfall.*

Objective and Scope

The Review will:

1. Undertake a thorough assessment of the Bureau's capacity to (a) respond to future extreme weather and natural disaster events, and (b) provide accurate and timely seasonal forecasting services.
2. Include assessments of:
 - (a) the practices, capabilities and resources of the Bureau to respond effectively and efficiently to future extreme weather and natural disaster events;

- (b) the Bureau's workforce capability, including areas of technical expertise such as forecasting and hydrology, and its current and ongoing capacity to deal with periods of peak demand;
- (c) the systems and infrastructure required to meet demand during extreme events;
- (d) the Bureau's capability to conduct seasonal forecasting;
- (e) the balance of the Bureau's other priorities in the context of delivery of the above services.

3. Investigate how the Bureau interacts with key stakeholders, including state, territory and federal government agencies and examine the role of the Bureau in communicating warnings and other information to the general public and government agencies, as well as the protocols for this communication.
4. Take into consideration the interim report of the Queensland Floods Commission of Inquiry due on 1 August 2011.
5. Based on the above assessments, and having regard to the recommendations of previous Bureau reviews, recommend actions required to ensure that the Bureau can meet its responsibilities in relation to future extreme events and seasonal forecasting, including (but not limited to) consideration of:
 - (a) opportunities to reinvest or reprioritise existing resources to meet current and expected future demands, without compromising ability to deliver on all Bureau responsibilities.
 - (b) opportunities to deliver functions more effectively and efficiently, including through more effective interactions with relevant agencies.

Governance Arrangements

The Review will be led by Chloe Munro with support from a technical expert or experts with expertise in hydrology, meteorology and technical systems. Secretariat support will be provided by the Department of Sustainability, Environment, Water, Population and Communities. The review is expected to present its findings to the government by the end of November 2011.

Steering Committee

A Government Steering Committee will monitor progress of the review and provide guidance and direction as needed to ensure delivery against the Terms of Reference. The Committee will comprise representatives from the Department of Sustainability, Environment, Water, Population and Communities, the Department of Prime Minister and Cabinet, the Attorney General's Department, the Department of Agriculture, Fisheries and Forestry and the Bureau.

Appendix 5 – State level councils, committees and working groups

State level councils, committees and working groups identified (in no particular order)

- Security and Emergencies Committee
- Central Government Response Committee
- Victoria Emergency Management Council
- Victoria Emergency Management Council Coordination Group
- State Coordination and Management Council Bushfires Sub-Committee
- Emergency Services Heads of Agencies Committee
- Continuity of Essential Services (Influenza Pandemic) Inter-Departmental Committee
- State Influenza Pandemic Planning Coordinators Group
- State Emergency Mitigation Committee
- State Emergency Response Planning Committee
- State Emergency Recovery Planning Committee
- Municipal Emergency Management Enhancement Group
- State Fire Management Planning Committee
- Emergency Management Training and Exercising Strategy Committee
- State Flood Policy Committee
- Victorian Flood Warning Consultative Committee
- Emergency Management Manual Victoria Strategy Group
- Emergency Management Manual Victoria Part 3 Review Working Group
- Catering Sub-Committee
- Registration Sub-Committee
- Urban Search and Rescue Sub-Committee
- Emergency Management Joint Public Information Committee
- Transport Engineering and Services Support Sub-Committee
- State Health and Medical Sub-Committee
- Communications Sub-Committee
- Emergency Management GIS User Group
- Nuclear Powered Warships Visits Committee
- Road Rescue Committee
- Mine and Cave Rescue Committee
- Earthquake Planning Committee
- Tsunami Planning Committee
- Chemical Biological and Radiological Sub-Committee
- Detection Analysis and Air Monitoring Committee
- Field Emergency Medical Officer Program
- Emergency Markers Committee
- State Emergency Relief Planning Sub Committee
- State Natural and Built Recovery Planning Sub-Committee
- State Social Health and Community Recovery Planning Sub-Committee
- State Economic Recovery Planning Sub-Committee
- Animal Relief Working Group
- State Chemical, Biological and Radiological Working Group
- State Emergency Management Training Steering Committee
- State Emergency Management Exercising Steering Committee
- Metropolitan Flood Warning Arrangements Committee
- Fire Safety in Public Buildings Steering Committee
- Heads of Water Safety Agencies Committee

Appendix 6 – List of acronyms

ACASA	Aged Care Accreditation and Standards Agency	DPI	Department of Primary Industries
ACHS	Australian Council on Healthcare Standards	DSE	Department of Sustainability and Environment
ADF	Australian Defence Force	DTF	Department of Treasury and Finance
AEMO	Australian Energy Market Operator	EA	Emergency Alert – telephone based warning system
AEP	Annual Exceedence Probability	EM Act	<i>Emergency Management Act 1986</i>
AFAC	Australasian Fire and Emergency Service Authorities Council	EMLO	Emergency Management Liaison Officer
AGD	Attorney-General's Department	EMMV	Emergency Management Manual Victoria
AGRI	Australian Government Reconstruction Inspectorate	EMT	Emergency Management Team
AHD	Australian Height Datum	EMTESC	Emergency Management Training and Exercising Strategy Committee
AIIMS	Australasian Inter-service Incident Management System	ENRC	Environment and Natural Resources Committee
ARI	Average Recurrence Interval	ERLAF	Emergency Response Legal Advisers Forum
AV	Ambulance Victoria	ERTS	Event Reporting Telemetry System
BoM	Bureau of Meteorology	ESC	Emergency Services Commissioner
BRCIM	Bushfires Royal Commission Implementation Monitor	FERC	Field Emergency Response Coordinator
CALD	Culturally and Linguistically Diverse	FO	Floodway Overlay
CFA	Country Fire Authority	GIS	Geographic Information Systems
CFG	Community Fireguard	G-MW	Goulburn-Murray Water
CGRC	Central Government Response Unit	IAP	Incident Action Plan
CMA	Catchment Management Authority	ICC	Incident Control Centre
CNDRT	Commonwealth National Disaster Recovery Taskforce	IESF	Integrated Emergency Services Framework
COAG	Council of Australian Governments	IMS	Incident Management System
COMDISPLAN	Australian Government Disaster Response Plan	IMT	Incident Management Team
CPSU	Community and Public Sector Union	IPP	Information Privacy Principle
DACC	Defence Assistance to Civil Communities	LBS	Location Based Solution
DH	Department of Health	LGLO	Local Government Liaison Officer
DHS	Department of Human Services	LiDAR	Light Detection and Ranging
DOHA	Department of Health and Ageing	LMW	Lower Murray Water
DOJ	Department of Justice	LSIO	Land Subject to Inundation Overlay
DPC	Department of Premier and Cabinet	MAV	Municipal Association of Victoria
DPCD	Department of Planning and Community Development	MECC	Municipal Emergency Coordination Centre
		MEMP	Municipal Emergency Management Plan
		MERC	Municipal Emergency Response Coordinator

MERO	Municipal Emergency Resource Officer	SFMS	State Flood Management Strategy
MFB	Metropolitan Fire Brigade	SHERP	State Health Emergency Response Plan
ML/d	Megalitres per day	SLA	Service Level Agreement
MOU	Memorandum of Understanding	SME	Subject Matter Experts
MM	millimetres	SOP	Standard Operating Procedures
NDFA	Natural Disaster Funding Arrangements	SPSAT	Seasonal Preparedness Self Assessment Tool
NDRGS	Natural Disaster Resilience Grants Scheme	SRC	State Recovery Coordinator
NDRRA	Natural Disaster Relief and Recovery Arrangements	SREP	Strategic Radar Enhancement Project
NEM	National Electricity Market	SRP	State Recovery Plan
NEMC	National Emergency Management Committee	SRW	Southern Rural Water
NRIS	National Registration and Inquiry System	TFWS	Total Flood Warning System
NSDR	National Strategy for Disaster Resilience	TPP	Township Protection Plan
OESC	Office of the Emergency Services Commissioner	UFZ	Urban Floodway Zone
OSOM	One Source One Message	VBRC	Victorian Bushfires Royal Commission
PMF	Probable Maximum Flood	VCOSS	Victorian Council of Social Service
QPS	Queensland Police Service	VEMC	Victorian Emergency Management Council
RACS	Residential Aged Care Services	VEMC-CG	Victorian Emergency Management Council-Coordination Group
REDHS	Rochester and Elmore District Health Service	VFD	Victorian Flood Database
REMO	Regional Emergency Management Officer	VFF	Victorian Farmers Federation
RERC	Regional Emergency Response Coordinator	VFMS	Victorian Flood Management Strategy
RIA	Rapid Impact Assessment	VFR	Victorian Floods Review
RSS	Really Simple Syndication	VFWCC	Victorian Flood Warning Consultative Committee
SBO	Special Building Overlay	VHEC	Victorian Health Emergency Coordination
SC&MC	State Coordination and Management Council	VicPol	Victoria Police
SCC	State Control Centre	VICSES	Victoria State Emergency Service
SEC	Security and Emergencies Committee	VICSES Act	<i>Victoria State Emergency Service Act 2005</i>
SEMAT	Strategic Emergency Management Assurance Team	VPPs	Victoria Planning Provisions
SEMT	State Emergency Management Team	VWP	Victorian Warning Protocol
SERC	State Emergency Response Coordinator	WCMA	Wimmera Catchment Management Authority
SERP	State Emergency Response Plan		
SFPC	State Flood Policy Committee		

Acknowledgements

Cover

Image © Australian Red Cross/Rodney Dekker
Signs of the flooding that passed through the region between Pyramid Hill and Cohuna.

Inside front cover

Image © Melanie Faith Dove
15 January 2011. Glenelg Highway near the corner of Bolte Street, Skipton just a few hours before the Mount Emu Creek reached its flood peak.

Page 30, Chapter 1

Image © Shire of Campaspe
Rochester gauge at the bridge.

Page 74, Chapter 2

Image © Shepparton News
14 January 2011. Community meeting in the Shire of Campaspe.

Page 106, Chapter 3

Image © Riverine Herald
15 January 2011. Two water police stride across Rochester's Victoria Street to the VICSES command headquarters which, although dry, was surrounded by water. A sandbagging operation was relocated from the nature strip earlier in the day as the flooding increased.

Page 150, Chapter 4

Image © Newspix/News Ltd/Andrew Brownbill
5 February 2011. Elderly residents at Koo Wee Rup nursing home being evacuated due to major flooding threat.

Page 162, Chapter 5

Image courtesy of the Member for Wannon, Mr Dan Tehan MP
January 2011. Skipton inundated by floodwaters.

Page 180, Chapter 6

Image © CFA Strategic Communications/Keith Pakenham
January 2011. Roads flooded throughout north west Victoria during January.

Page 206, Chapter 7

Image © Newspix/News Ltd/Ian Currie
5 September 2010. Aerial view of a property isolated by floodwaters in Wangaratta.

Page 216, Chapter 8

Image © Newspix/News Ltd/Tony Gough
22 January 2011. 96 year old George Day prepares to ride out the Jeparit flood with his dog Rusty.



Photo above

Image courtesy Victoria Police
Victoria's high level of community spirit recognises the commitment and professionalism of the state's emergency services volunteers.

