

Position paper

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Priorities for Improved Flood Management in South Australia



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1 Introduction

The position paper for **Priorities for Improved Flood Management in South Australia** has been developed in response to issues raised following the floods in 2016 highlighting a number of long-standing challenges for effective flood management in South Australia. It builds on the draft position paper released for public consultation in February 2019.

The draft position paper explored priorities for improved flood management in South Australia as well as opportunities for alignment with strategies and initiatives currently under development. Stakeholder consultation provided valuable feedback to inform the scope and priorities of an improved approach to flood management.

The position paper highlights stakeholder feedback on priority outcomes and issues and proposes a framework for improved flood management. The position paper also identifies early actions to move towards addressing the priority issues, ahead of the development of an updated Flood Hazard Plan later in 2020. The Flood Hazard Plan will build on the proposed framework and identify priority issues and outcomes for improved flood management in South Australia. The position paper was endorsed by the State Emergency Management Committee and the framework and proposed actions noted by the Emergency Management Council of South Australia

This position paper is one of three papers finalised as a result of the consultation process. The other two are:

- **Improving Dam Management in South Australia**
- **Improving Levee Bank Management in South Australia**

2 Background

Flooding is one of the most costly natural disasters in South Australia. The average annual damages from flooding in the State exceed \$32 million according to *the Independent Review of the Extreme Weather Event South Australia 28 September-5 October 2016* (Independent Review). Floods can impact on people's safety and wellbeing, the economy, the environment, communities, private businesses and on public services. The 2016 flood caused an estimated \$51 million of damage to agriculture and greater than \$20 million damage to local government infrastructure. A changing climate and increased development on floodplains present ever increasing challenges to manage these risks.

Under the State Emergency Management Plan (SEMP), the Department for Environment and Water (DEW) is the designated hazard leader for flood. DEW therefore undertakes a leadership role for planning of emergency management activities pertaining to flood, and ensures that all activities across Prevention, Preparedness, Response and Recovery to do with that hazard are coordinated. The South Australian State Emergency Service (SASES) is the control agency for flood and will take charge of a flood or severe weather emergency and provide leadership to all other agencies responding to a flood.

The length of time between flood events and the fragmentation of responsibilities between local government, State Government, the Commonwealth Government, community and industry creates barriers to agreement on collective action to better manage flood risk and adapt to the changing risk profile.

3 Development of an improved state-wide approach to flood management in South Australia

The Independent Review focussed on a number of specific flood management issues, and built on lessons from previous flood events and inquiries, highlighting the need for more holistic and effective flood management in South Australia through an improved state-wide approach. Better flood management can reduce the economic, social and environmental costs of floods, through actions such as avoidance or mitigation of flood risks, better understanding of flood risk, better preparedness and response planning by government, community and businesses and better provision and understanding of flood warnings.

Development of an improved state-wide approach to flood management will require the following steps to be undertaken:

- identify strengths, weaknesses, opportunities and threats for flood management in South Australia;
- describe current initiatives and how they contribute to flood management.
- identify key gaps and strategies to address these gaps.
- consider all aspects of flood management in an integrated manner and outline priorities and principles.
- clarify the intersection with water resource management, emergency management, stormwater management and land use planning.
- create a clear business case for targeted investment in flood management, ensuring that foundational gaps are addressed first.
- clarify roles and responsibilities, to enable everyone to effectively contribute to flood management as it is clear where their role fits.

Victoria developed a comprehensive floodplain management strategy in 2016, which provided much needed clarity and cohesion to flood management. Such a strategic approach to flood management in South Australia could be developed as part of the Flood Hazard Plan that is required to be developed and reviewed biennially under the SEMP.

Other options include publication of a short statement of intent document and articulation of roles and responsibilities for flood management in South Australia. Strategies and actions for flood management could be included in other strategy documents, for example the Green Adelaide Strategy, the Climate Change Strategy, Coastal Management Strategy and Constraints Management Strategy for the River Murray.

During consultation a wide range of parties were identified that would need to be involved in developing an improved South Australia-wide approach to flood management, including: DEW, SASES, Department for Planning Transport and Infrastructure (DPTI), Primary Industries and Regions SA (PIRSA), Local Government, industry representatives, Stormwater Management Authority (SMA), Insurance Council of Australia, Urban Development Institute of Australia, universities and research centres, land owners, peak business bodies, Department for Premier and Cabinet, Local Government Association (LGA), and the LGA's Mutual Liability Scheme (LGAMLS), SAicorp, Bureau of Meteorology, Emergency Management Australia and SA Police.

The need for alignment with stormwater, land use planning, infrastructure management, broader water resource management and floodplain restoration and management are apparent in the responses provided.

There was no clear preference for the approach to developing a strategic framework for improving flood management in South Australia. In the first instance, it is proposed to focus on a more strategic approach to developing the next Flood Hazard Plan taking on board feedback received on the priorities for improved flood management in SA and ensuring it is available to all stakeholders. Opportunities to consider priority flood issues in other strategies and initiatives will continue to be pursued.

4 Feedback on priority outcomes and issues for improved flood management

Feedback on the outcomes to be achieved by an improved state-wide approach to flood management and the priority issues to be addressed tended to blend outcomes and priority issues.

The outcomes suggested by respondents are outlined in Table 1 below.

Outcome	Priority
Clear roles and responsibilities for all parties involved	High
Better controls on development and building in flood prone areas (i.e. preventing development if required, setting clearly defined levels of service)	High
Reduced life loss, property damage and environment impacts of flooding.	High
Current and future predictive flood maps and models to be referenced to plan and prepare for major floods	Medium
Flood risk assessments: transparency about risk and acceptable risk	Medium
Management of flood mitigation infrastructure (levees, flood detention basins)	Medium
Management of stormwater and urban flooding (including urban watercourses) including recognition of alignment between watercourses in good condition and flood resilience	Medium
Set a clear state-wide framework that enables everyone to effectively contribute to flood management	Medium
Clarify the intersection with water resource management, emergency management, storm water management and land use planning.	Medium

Table 1: Suggested outcomes by respondents

The suggested priority issues to be addressed and number of responses are outlined in table 2 below.

Priority issue	Priority
Flood mitigation infrastructure (levees, flood detention basins)	High
Evaluation of flood risks through flood studies/flood risk assessments	High
Avoiding or minimizing risks through planning and building	High
Collecting and maintaining flood information including flood data, flood maps and flood intelligence and sharing of this information	Medium
Impact of climate change	Medium
Flood emergency management	Medium
Process of evaluating mitigation options applying nationally agreed approaches	Medium

Table 2: Priority issues identified by respondents

In terms of other suggestions and priorities to improve flood management, a wide range of issues and proposals were raised. The merits of proposals will be explored further as part of the Flood Hazard Plan development and/or implementation.

5 Framework for Improved Flood Management in South Australia

Priority issues and outcomes identified provide clear direction for actions to improve flood management. This information will inform the focus of the next iteration of the Flood Hazard Plan to be prepared by DEW by late 2020.

Figure 1 outlines an initial framework that takes into consideration the priority outcomes and issues and their interdependencies. The framework has sought alignment with the National Disaster Risk Reduction Framework priorities.

The suggested stakeholder list will inform engagement on the development and/or implementation of the Flood Hazard Plan. The actions in table 3 below are proposed to be progressed ahead of the development of the next Flood Hazard Plan.

	Action	Lead	Support	Timeframe	Will require
1	Develop a coordinated approach to address barriers to sharing of flood risk data and mapping.	DEW	LGA, LGAMLS DPC, DPTI, SAFECOM, SASES	December 2020	Can be delivered with existing resources
2	Further improve the consideration of flood risk in land use planning through the Flood Overlay and the Planning and Design Code	DEW	DPTI, Local Government, SAFECOM SASES	Aligned with timeframe for completion of the Planning and Design Code)	Further improvements for Generation 2 of the Planning and Design Code will require additional resources
3	Complete a state-wide flood risk assessment	DEW		October 2020	Can be delivered with existing resources

Table 3: Proposed actions to be commenced prior to development of the updated Flood Hazard Plan

Figure 1. Framework for Improved Flood Management in South Australia

