

Introduction

The Stormwater Management Authority (SMA) is a statutory authority established under the *Local Government Act 1999* as a partnership between the South Australian government and the Local Government Association (LGA). A key function of the SMA is to facilitate and coordinate stormwater management planning by councils, and the SMA has a statutory responsibility to identify priority catchments for which stormwater management plans (SMPs) should be prepared. This responsibility is fulfilled through the document *Stormwater Management Planning Priorities for South Australia 2016–2020*¹ (hereinafter referred to as the '2016 Priorities') published by the SMA.

The *Local Government Act 1999* requires that the SMA review and update its priorities for stormwater management planning at least every five years, however, a number of factors have prompted an earlier review of the 2016 Priorities. These factors include:

- The significant progress that has been made in delivery of the 2016 Priorities, either through SMPs that have been approved or projects that are underway
- The state government's reform of natural resources management legislation and the opportunity to prepare for and be aligned with the priorities of Green Adelaide
- The availability of more recent information on water quality risks, flood risks and stormwater reuse opportunities
- Constraints on the capacity of the Stormwater Management Fund and the need for careful and considered prioritisation.

This discussion paper has been prepared to seek stakeholder input for development of a methodology and criteria to prioritise catchments (or towns) for stormwater management planning. Ultimately this will lead to a revision of the *Stormwater Management Planning Priorities for South Australia* document.

Criteria used to set the 2016 Priorities

Identification of the 2016 Priorities relied heavily on expert opinion and comprised a qualitative assessment undertaken using the criteria outlined in Table 1 below. A number of SMP projects already underway at the time were also incorporated into the 2016 Priorities and notionally assigned a high priority.

Notably absent from the criteria used to set the 2016 Priorities was any serious consideration of stormwater quality or opportunities for stormwater reuse. This is acknowledged in the document, which states that "limited reference [was] given to other aspects such as stormwater quality concerns or stormwater harvest opportunities...". The decision to largely exclude stormwater quality and reuse opportunities was driven in part by a lack of suitable information on these aspects of stormwater management. Since that time significant bodies of work have been completed which can better inform these aspects of stormwater management, such as research by the Goyder Institute and the Environment Protection Authority's 2018 *State of the Environment* report.

Table 1: Criteria used to set the 2016 Priorities.

Metropolitan Adelaide	Regional Areas
<ul style="list-style-type: none">• Previous drainage/flood mitigation planning undertaken• Current development pressures• Likely extent and frequency of flooding	<ul style="list-style-type: none">• Size of the town• Previous drainage/flood mitigation planning undertaken• Current development pressures• Likely extent and frequency of flooding

¹ Available at http://www.sma.sa.gov.au/wp-content/uploads/SMAPriorities_WEB.pdf

Progress against the 2016 Priorities

As of April 2019 the SMA had approved 20 SMPs, with a further 23 in preparation (see Table 2). Figures 1 and 2 show the status and geographic distribution of SMPs that have been approved, are in preparation or are otherwise identified as a (high, medium or low) priority for metropolitan Adelaide and regional South Australia respectively.

Across metropolitan Adelaide almost all of the catchments identified in the 2016 Priorities as a high priority have an SMP approved or in preparation. Of those SMPs not approved at this time:

- Three SMPs were not endorsed by the relevant councils and subsequently have not been considered by the SMA
- Work on one SMP has been suspended while consideration is given to breaking the study area into smaller catchments
- Two SMPs has been subsumed into plans that cover larger catchment areas.

Across regional South Australia SMPs have been developed (or are in preparation) for all of the high priority catchments with the exception of Renmark and Port Augusta².

Table 2: SMPs identified in the 2016 Priorities that have been approved or are in preparation.

	Metropolitan Adelaide	Regional Areas
Approved Plans	<ul style="list-style-type: none"> • Brown Hill and Keswick Creeks (main channel) • Glenelg to Marino • Hallett Cove Creeks • Lefevre Peninsula • North Arm East • Port Road Catchment • Torrens Road Catchment 	<ul style="list-style-type: none"> • Freeling • Greenock • Kapunda • Laura • Moonta-Moonta Bay-Port Hughes • Mount Barker-Totness-Littlehampton • Port Lincoln • Port Pirie • Streaky Bay • Truro • Tumby Bay • Two Wells • Wasleys
Plans in preparation	<ul style="list-style-type: none"> • Adams Creek and Helps Road Drain • Barker Inlet (Hindmarsh-Enfield-Prospect) • Gawler (town) • Greater Edinburgh Parks and St Kilda • Lower Sturt River • Port River East • Silver Sands • Smith Creek • West Lakes 	<ul style="list-style-type: none"> • Auburn • Burra • Clare • Jamestown • Kadina • Manoora • Mintaro • Rhynie • Riverton • Saddleworth • Stockport • Tarlee • Whyalla • Yankalilla-Normanville-Carrickalinga

² After the 2016 Priorities were issued, the town of Port Augusta was reappraised by the SMA Technical Adviser as a low priority.

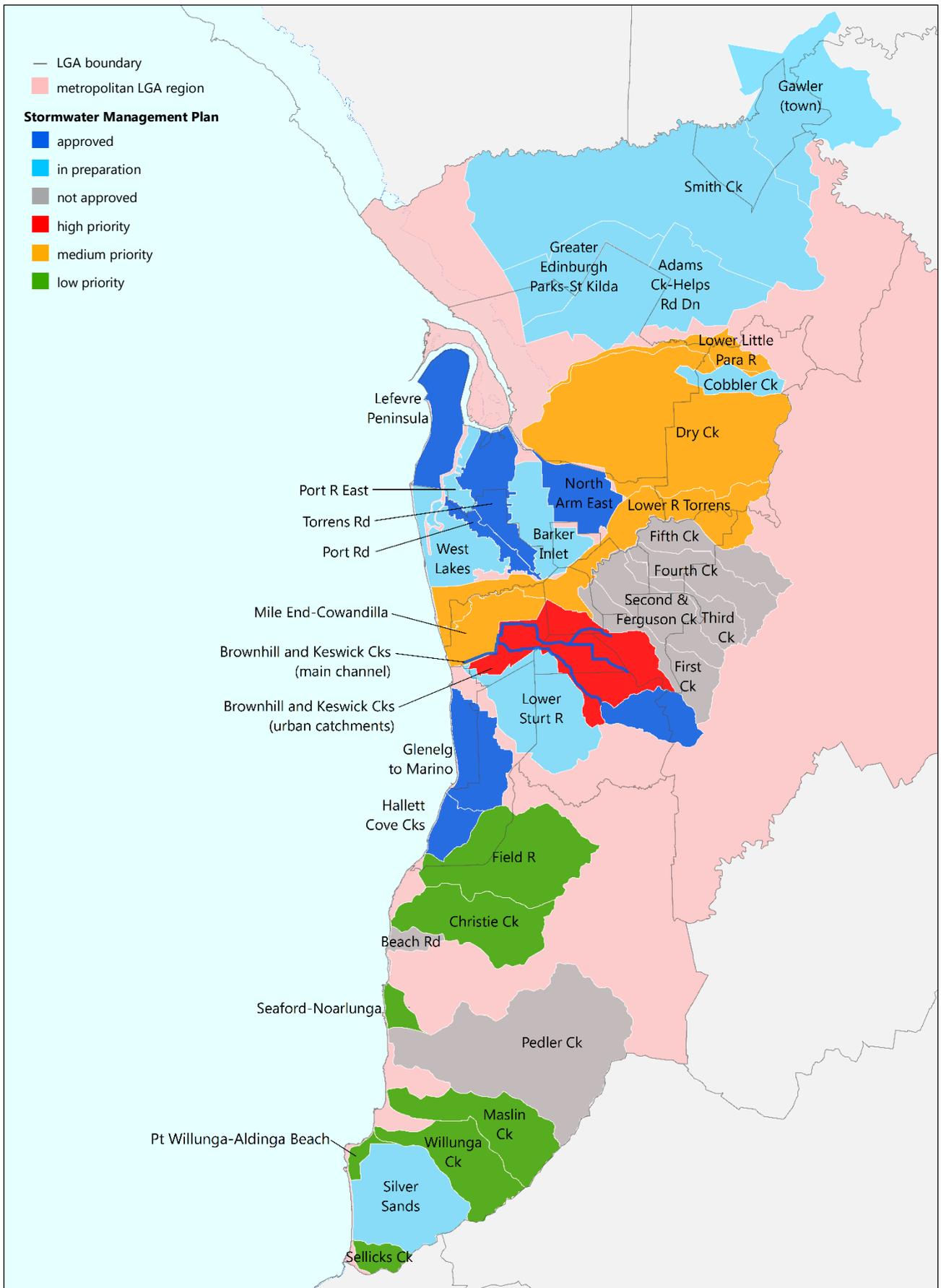


Figure 1: Status of SMPs by catchment in metropolitan Adelaide.



Figure 2: Status of SMPs by town in regional South Australia.

Drivers for stormwater management planning

SMPs are intended to balance the risks and opportunities between stormwater flooding, stormwater quality and stormwater use (Figure 3). Individual SMPs set objectives to achieve this in an integrated, best and most cost-effective way within a catchment (or town). SMPs should identify and guide investments that achieve or contribute to achieving the objectives that have been set.

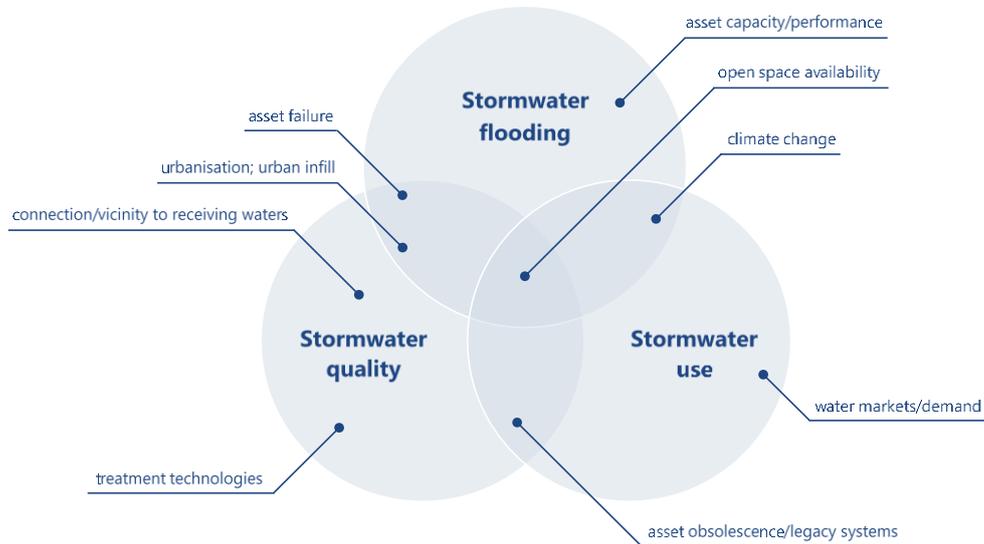


Figure 3: Stormwater management planning risks and opportunities—aggravating and mitigating factors.

Since the first *Stormwater Management Planning Guidelines* were issued in 2007 the context for stormwater management planning has evolved. Whereas flood mitigation (and avoidance of economic damages) was once the primary driver for stormwater management planning, there is a growing focus on managing stormwater to provide environmental and social outcomes as well as economic outcomes.

Figure 4 illustrates the varied drivers that influence why stormwater management plans are prepared. While the *Local Government Act 1999* provides a legislative basis for stormwater management planning, SMPs are not and should not be prepared in isolation. SMPs can help support the achievement of both state and local government strategic, financial, social and environmental objectives.

Environmental drivers for stormwater management planning will become critical as governments grapple with population growth, urbanisation and climate change. Increasingly there is a recognition that ‘natural assets’ such as aquifers, wetlands, streams and foreshores can provide services equivalent to those provided by many engineered assets. So called ‘green infrastructure’, comprising natural systems and enhanced natural systems can sometimes provide the same level of service as an engineered asset, at a comparative cost, and with additional benefits for amenity and community resilience. For example, restoring urban creeks and wetlands to provide flood storage, flood conveyance and water quality treatment services can provide a greater social and environmental benefits than constructed channels or pipes of equivalent capacity.

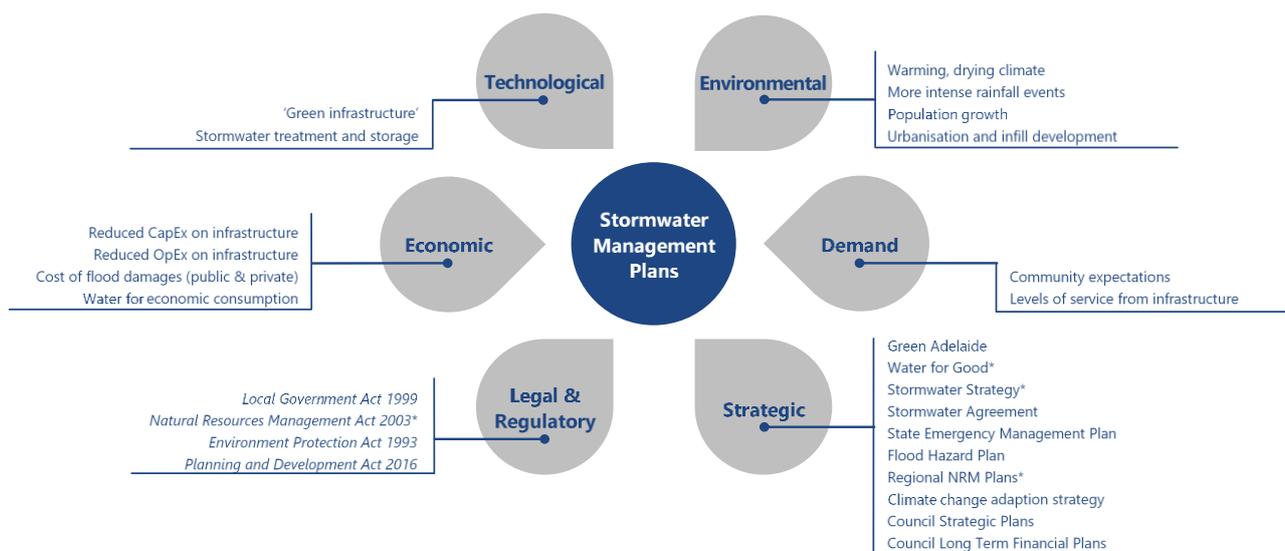


Figure 4: Drivers for stormwater management planning. (An asterisk (*) indicates where a driver may be superseded as a result of government reforms.)

Setting the new priorities—a risk and opportunity-based approach

While the 2016 Priorities serve as a useful baseline, future criteria need to be extended to adequately address water quality, stormwater reuse, and asset management issues. A more robust measure of both current and emerging development pressure is also desirable.

Congruent with the way that SMPs are intended to work, the SMA intends to pursue a risk and opportunity-based approach for revising its priorities for stormwater management in South Australia for the next five years. The inherent challenge in doing this is the selection of suitable risk assessment criteria. While there will always be a place for objective judgement, the SMA seeks to, where practical, adopt quantitative and semi-quantitative assessment metrics. To this end, the SMA seeks:

- Views on quantitative and qualitative criteria that could or should be a consideration in determining priorities for stormwater management planning in South Australia
- Information on data sources that could inform the prioritisation of stormwater management planning, especially recent information that was not available in 2016
- Suggestions of suitable metrics and thresholds that would assist with assessment and prioritisation.

Feedback can be provided by answering the discussion questions below. General feedback is also welcome. Feedback will be used by the SMA to inform the development of a methodology for prioritising catchments for stormwater management planning and may be provided to a third party for this purpose. (Feedback can be made anonymous on request).

Discussion questions

1. *Are the criteria used to assess the 2016 Priorities adequate? What alternative or additional criteria would be useful for assessing stormwater management planning priorities?*
2. *What documents, databases, programs or initiatives can or should guide and inform the assessment of the stormwater management planning priorities (with respect to flood risk, water quality and stormwater reuse)?*
3. *Should stormwater asset age and condition be a determinant in whether to prepare an SMP? How could SMPs integrate more closely with council asset management planning?*
4. *How can 'development pressure' be measured? How could SMPs integrate better with council land use planning and development controls?*
5. *Should the SMA focus efforts only on preparing SMPs for new catchments or should it also consider revising existing SMPs now greater than 10 years old?*
6. *How could the prioritisation of SMPs help to facilitate broader uptake of stormwater reuse?*
7. *Do you have any further comments in relation to the preparation or prioritisation of SMPs?*

How to provide feedback?

Email: sma@sa.gov.au

Telephone: (08) 8124 4787

Write to:

Stormwater Management Authority
c/-GPO Box 1047
Adelaide SA 5001