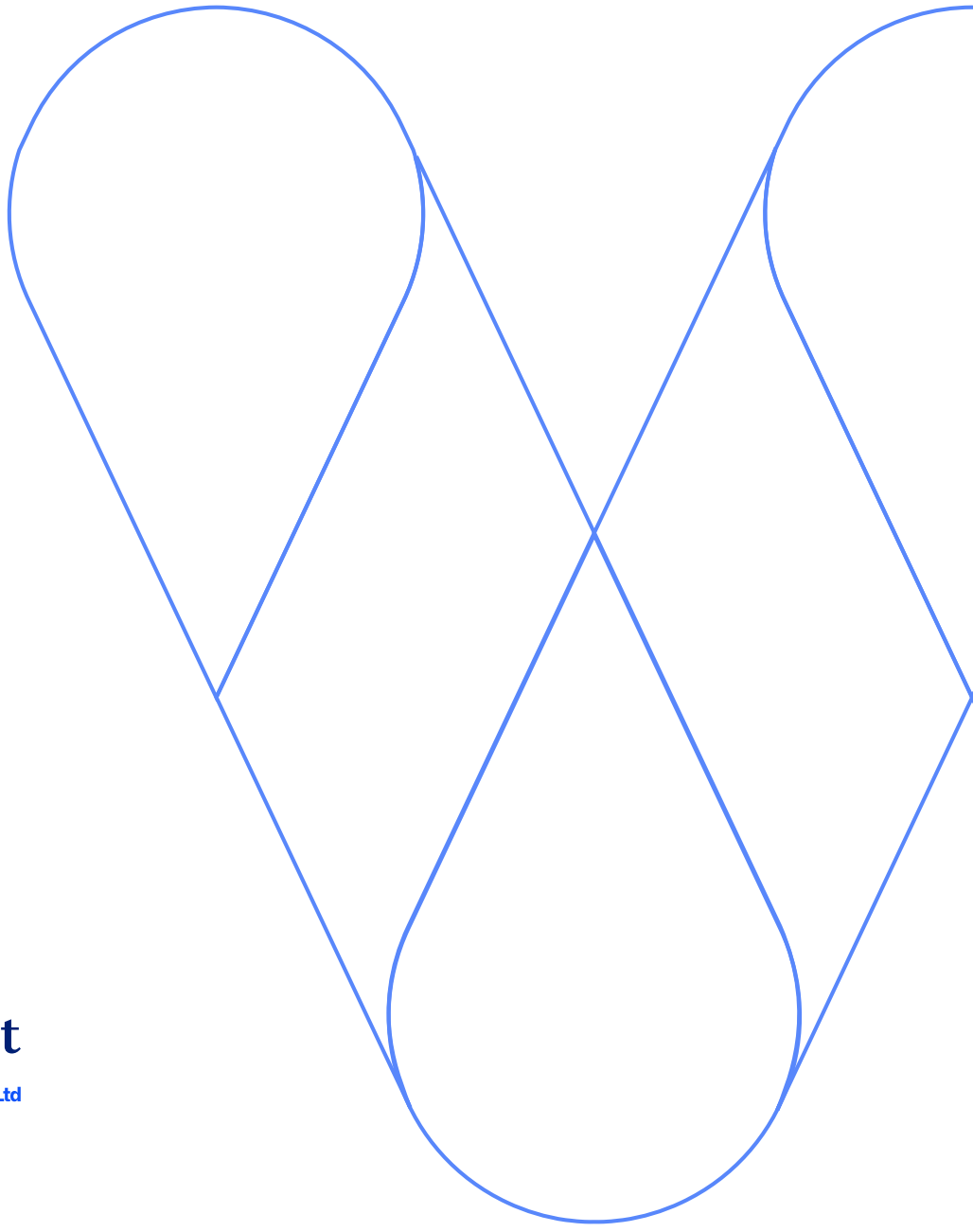
Future integrated water management governance arrangements for Greater Adelaide

A synthesis of a stakeholder participatory process

March 2025



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Contribution

Each listed author has made a significant intellectual contribution to the work: Rachel Barratt[1] – conception and design, contribution of knowledge, information collation, report drafting; Jeremy Cheesman[2] – information collation, contribution of knowledge, report drafting; Kane Aldridge[3] – conception and design, report drafting, report review.

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Watertrust Australia acknowledges the Traditional Owners of land, sea and waters throughout Australia and their continuing connection to culture and Country. We pay our respects to Elders past and present.

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Executive summary

Integrated water management (IWM) is widely regarded as the best-practice approach for tackling the challenges posed by population growth and climate change. This is particularly the case for Greater Adelaide, the driest capital city on the driest inhabited continent, where extreme climatic conditions have already tested the resilience of water services.

Despite strong support from the water sector, progress towards IWM has been limited, impeded by current water management governance arrangements. The South Australian Government has committed to addressing governance barriers. To help address this critical need, Watertrust Australia facilitated an independent, collaborative process with a broad array of stakeholders from Greater Adelaide to identify and assess potential future governance arrangements.

Stakeholders overwhelmingly supported IWM as the most effective, efficient and sustainable approach to supporting water-related community values and addressing the urgent challenges of urban population growth and climate change. Stakeholders also strongly supported major governance reform to deliver IWM. Out of four long-term options explored, they identified two preferred options for more detailed assessment:

- A Statutory IWM Authority responsible for IWM planning with regional subsidiaries (Figure 1)
- A centralisation arrangement with planning, assets and services consolidated under SA Water (Figure 2).

Many preferred the statutory authority as it would be more likely to be implemented and maintained and, therefore, progress IWM. Other stakeholders preferred the centralised arrangement as it would be more effective at progressing IWM due to its controlling powers and more sustainable funding source. These preferences need to be reconfirmed based on the more detailed information presented herein and further due diligence.

Broad support from stakeholders for a staged implementation (Figure 3) was provided to progress IWM and drive governance reform. This includes establishing a temporary Office of IWM Reform, which would be responsible for: coordinating existing IWM governance reform actions; convening an IWM forum; formalising partnerships with First Nations; conducting due diligence on the centralised and statutory authority governance options; and finalising the preferred arrangements.

These bold and ambitious short- and long-term options reflect the need for significant change, with ‘tinkering around the edges’ considered insufficient for achieving the desired outcomes. While the case for major IWM governance reform is strong, it has yet to be successfully articulated to the government and communities. A stronger case will need to articulate the broad social benefits with support built through:

- Engaging communities and broader stakeholders, particularly across the planning and housing sectors and water users
- Champions from across the sector advocating for IWM governance reform
- A business case or cost-benefit analysis of the short-listed governance arrangements, considering the full suite of societal costs and benefits.

To achieve this, stakeholders must continue to work together, recognising that even in the best of circumstances, it will take time, energy and commitment to navigate the complexities of the required change.

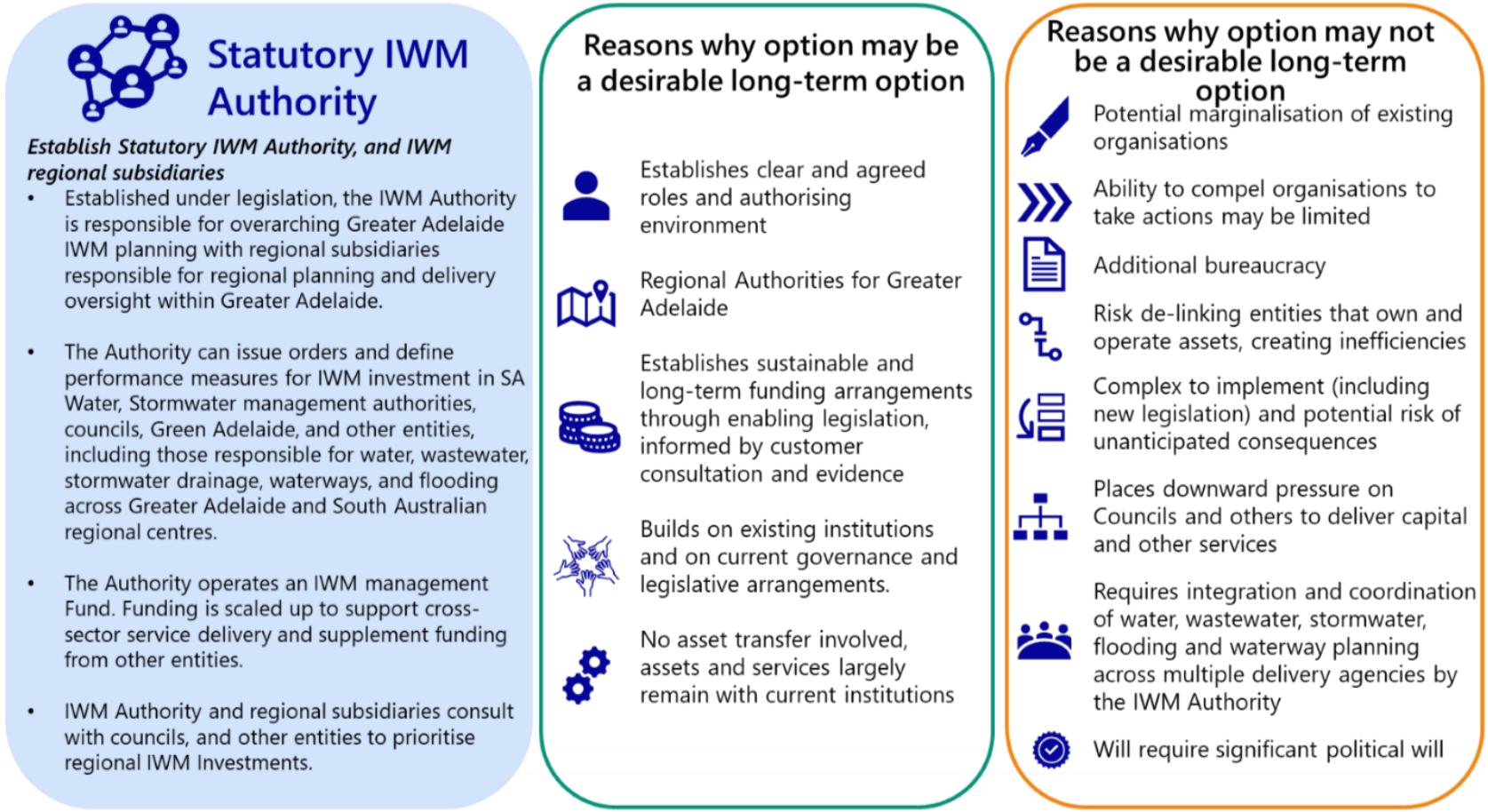

Figure 1: Overview of the Statutory IWM Authority arrangement.

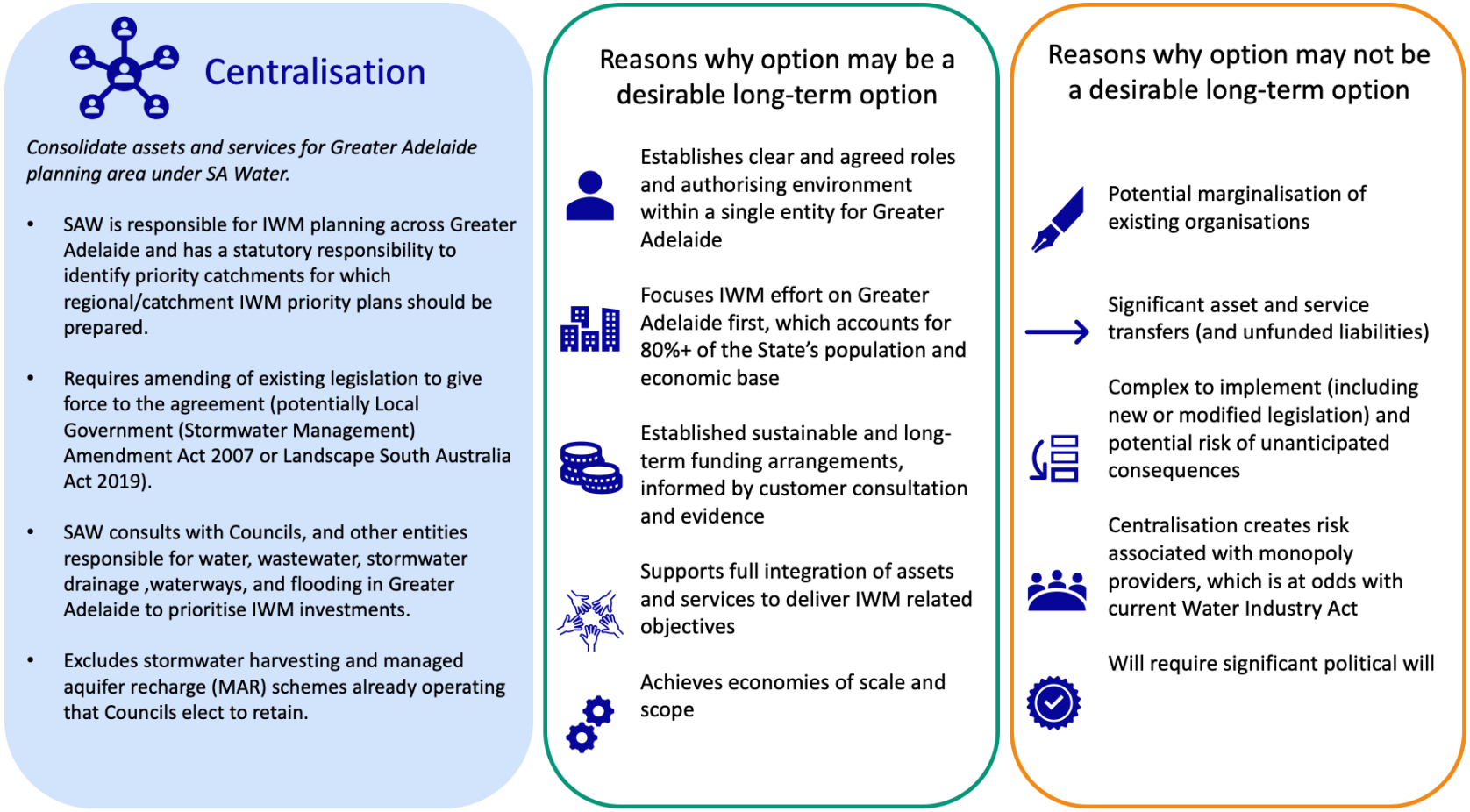

Figure 2: Overview of the centralisation arrangement.

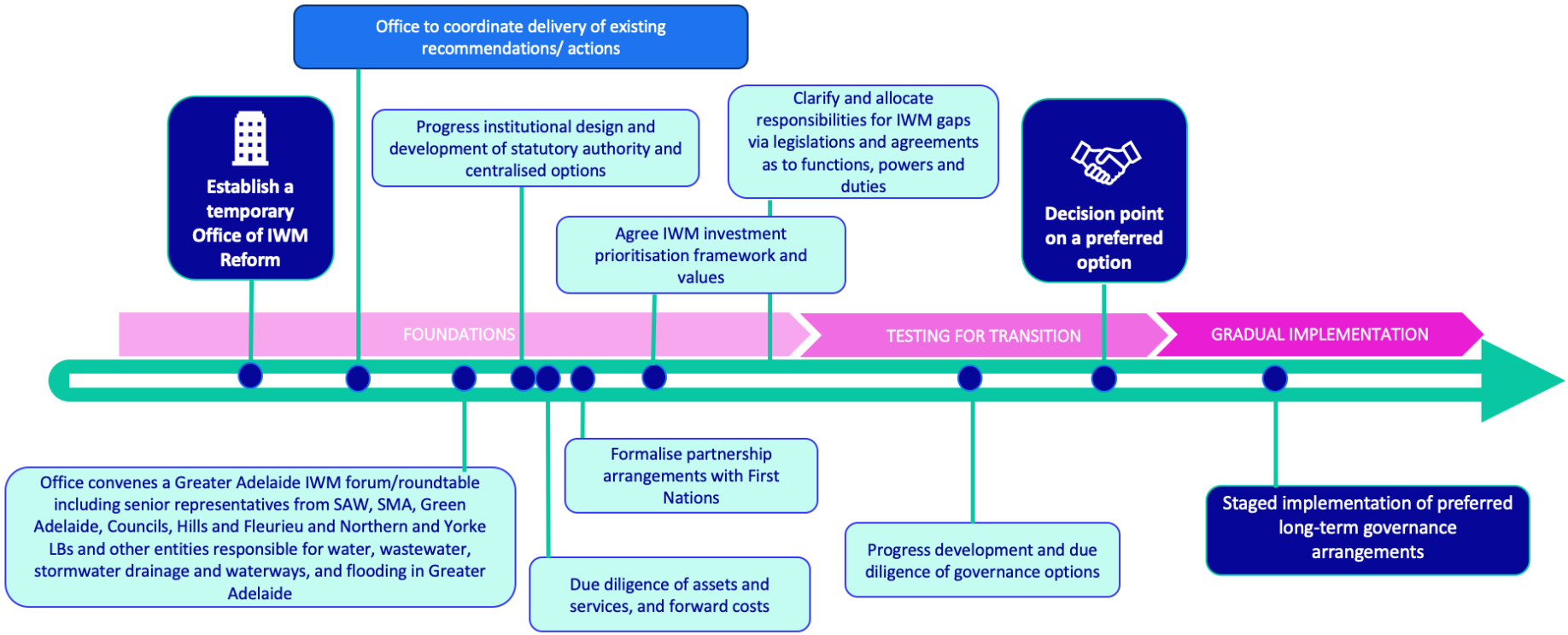

Figure 3: IWM governance reform roadmap.

1 Introduction

1.1 Emerging water management challenges necessitate change

Australia is recognised for its world-class water management, providing most of its population with safe, reliable, and affordable water and wastewater services. Significant challenges persist, including water shortages for essential needs, degradation of aquatic ecosystems, limited affordable water for industry, ageing wastewater infrastructure, and insufficient involvement of First Nations (Productivity Commission, 2017; 2024).

Climate change and population growth compound these challenges, leading to more frequent and severe droughts and floods, reduced water availability, and increased demand. Such pressures threaten community liveability, health, and wellbeing. At the same time, public expectations for water management are rising, with demands for improved waterway integrity and health, coastal water quality, and greater access to green, open spaces.

These issues are particularly evident in urban and peri-urban areas – and are perhaps nowhere more apparent than in Adelaide, Australia's driest capital city. Here, the capacity to provide critical water services during extreme climatic conditions has already been significantly challenged.

1.2 IWM as a solution

Integrated Water Management (IWM) is broadly considered by the water sector as an opportunity to overcome these critical and urgent challenges more efficiently and effectively (Productivity Commission, 2021). IWM is a whole-of-system, multidisciplinary approach of managing the entire water cycle by integrating the delivery of water, wastewater and stormwater services to contribute to water security, public health, environmental and urban amenity outcomes (Productivity Commission, 2021). It is a process that brings together all stakeholders involved in planning and management of the entire water cycle, to ensure that the liveability, resilience and sustainability outcomes that the community is seeking are maximised across our cities and regions (Skinner & Satur, 2020).

Despite strong support, implementing IWM across Australia has had limited success – mainly due to complex water management governance arrangements (Productivity Commission, 2021). The Productivity Commission (2017) has called for improved governance, including clearer roles and responsibilities for water supply planning, enhanced economic regulation, support for decentralised solutions, and more outcome-focused environmental regulation.

1.3 The context for this work

In 2022, the South Australian Government released the *Urban water directions statement*, which aimed to move towards IWM (Department for Environment and Water, 2022c). A key

action arising from the statement was an expert panel to provide independent advice to the government on future stormwater management.

The government subsequently committed to:

> [ensuring] governance structures are addressed to enable government, councils and other agencies and authorities to deliver true integrated water management and stop treating recycled, stormwater and mains water in isolation (Department for Environment and Water, 2024).

To fulfil this commitment, SA Water – the government-owned water utility delivering water and sewerage services across South Australia – was assigned the responsibility of leading the development of a long-term water strategy for Greater Adelaide. SA Water's subsequent work on a draft IWM strategy further emphasised the critical need for IWM to address the significant challenges facing Greater Adelaide, and for a governance framework to support the effective implementation of IWM.

1.4 A participatory process

Recognising stakeholders' complex and often competing interests in water management across Greater Adelaide, Watertrust Australia (Watertrust; Appendix A) initiated an independently convened process for stakeholders to collaboratively explore potential future governance arrangements for IWM.

The key objective was to identify a shortlist of potential institutional and funding options for detailed investigation. The process focused on the Greater Adelaide planning region in order to align with SA Water's long-term water strategy work (noting that governance in this area would likely have statewide impacts, see section 5.2.1).

Key stakeholder organisations involved in Greater Adelaide's water management were identified and invited to participate. A total of 156 individuals from 51 organisations were engaged in the process (see Appendix E for full list). New stakeholders identified during the process were invited to join subsequent activities.

Various participatory methods were employed, including surveys, interviews, workshops, and forums. This was designed to be a genuinely inclusive process, focusing on understanding each stakeholder's perspective and identifying areas of agreement and disagreement. The process did not weigh perspectives based on organisational responsibilities nor on representation from specific organisation types. Stakeholders received regular updates and reports, such as 'what we heard' summaries, capturing insights from each phase.

Independent expert input was provided as a foundation for stakeholder deliberations, including Rachel Barratt (BMCG), Jeremy Cheesman, and Kanchana Karunaratna (Marsden Jacob Associates). Experts Lee Failing and Graham Long (Compass Resource Management), Karlene Maywald, Rob Skinner, and Poh-Ling Tan advised Watertrust on the process and reviewed its outputs.

A brief engagement plan was developed to include the Kaurna, Ngarrindjeri, Ngadjuri and Peramangk nations in the process. Details of this work, and recommended future approaches for engaging with First Nations, are outlined in section 5.2.7.

The initiative was delivered over several phases, described in Figure 2 below. Further detail is available in Parts 3 and 4 and Appendix D.

1.5 About this report

This paper synthesises findings of the work, summarising the collective views of the broad range of stakeholders involved in the process, with input from independent experts. Where possible, the level of agreement and disagreement among stakeholders is indicated.

Consistent with the key objective of the work, this synthesis paper:

- provides a consolidated record of the findings, including possible future IWM governance arrangements
- provides the basis for more detailed investigation of preferred long-term governance arrangements identified by stakeholders
- outlines a pathway for stakeholders to progress improved IWM governance.

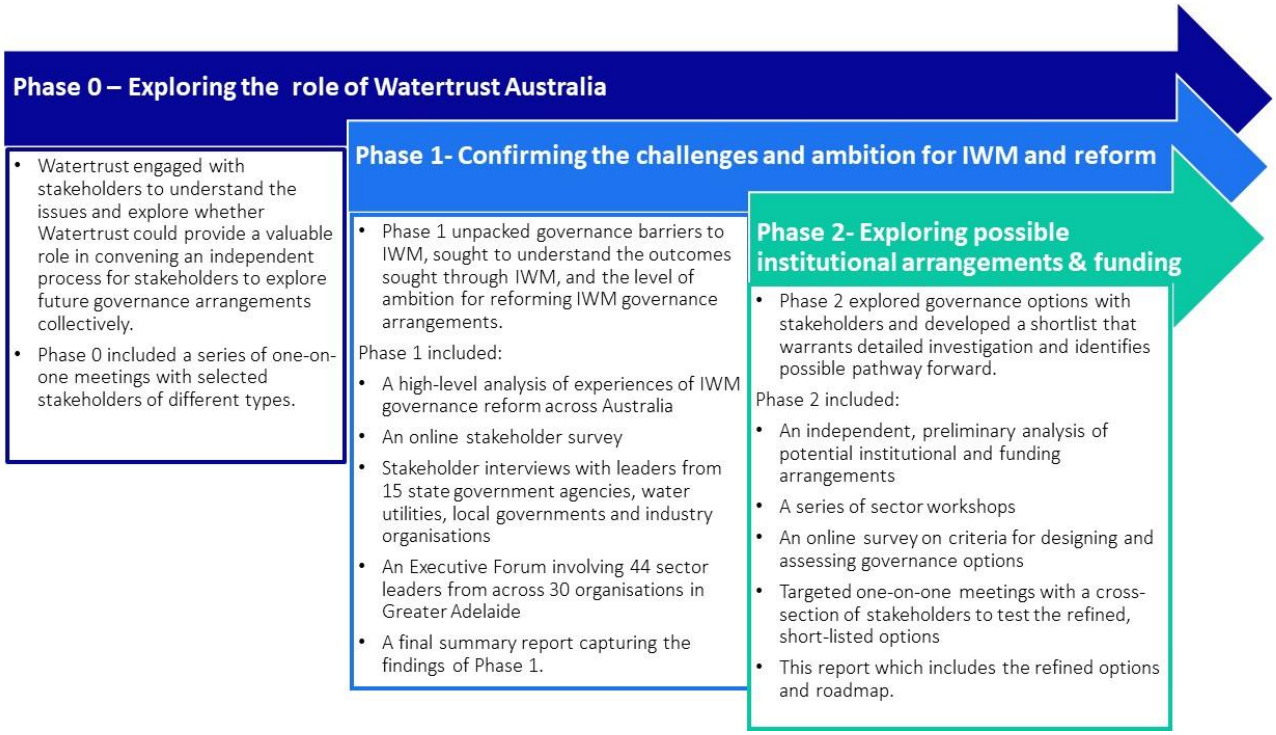

Figure 2: IWM governance exploration phases and activities.

This report is structured as follows:

- **Part 1** (this part) provides a brief introduction and outline of the report.
- **Part 2** provides background information about Greater Adelaide, current water management arrangements, and the associated challenges driving the need for IWM.
- **Part 3** provides an overview of the process and the key findings that emerged.
- **Part 4** summarises the potential institutional arrangements considered and the feedback from stakeholders.
- **Part 5** includes a proposed implementation roadmap for both preferred options outlined in Part 4.
- **Part 6** provides concluding remarks and recommendations for future work.

Additional supporting background information is provided in the appendices. In addition, summary reports for various stages of the work are available on the Watertrust website (Watertrust Australia, n.d.-a; n.d.-b; 2023; 2024).

2 Background

This part outlines the background information that formed a basis for discussions with stakeholders (Phase 1, Figure 2). Important context on Greater Adelaide, current water management arrangements, and increasing water-related issues illustrates the need for IWM.

Key messages

- The Greater Adelaide region is home to more than 1.5 million people, encompassing the land and waters of four First Nations groups and contributing 80% of South Australia's economic activity.
- It has diverse water sources, including rainwater, stormwater, seawater desalination, surface water, the River Murray, recycled water, and groundwater.
- Water is used for various purposes, including domestic, commercial, greening, environmental, and primary production. The latter uses more than 50% of the total water available, with demand for water for irrigation higher than what is available in some areas.
- Water demand is expected to increase due to anticipated population growth and climate change. This will be compounded by reduced water availability and reliability from climate-dependant sources (groundwater and surface water, including the River Murray).
- Population growth, climate change, rising costs, ageing infrastructure, and changing community expectations are collectively driving the need for a more integrated approach to water management.
- Current water management governance arrangements in Greater Adelaide are complex. More than 27 organisations play a role, and numerous pieces of legislation, policy, strategies, and plans involved.
- Water management governance arrangements are not static – the system has undergone and will continue to undergo adjustments.
- Water reform is difficult because of its complexity and because it must not disrupt short- and long-term service delivery.
- Successful governance reform requires having:
  - A sound understanding of the current governance arrangements, what works well, and what is challenging or limiting
  - A clear and agreed-upon definition of the problem to ensure that efforts focus on addressing the most critical issues
  - Clear, agreed and specific IWM goals and outcomes for what is being sought
  - Agreed governance outcomes, including principles and attributes of good governance

  - Consideration (or assessment) of possible governance arrangements against the above, including the complexity, difficulty, and costs associated with making associated changes.
- Governance is not an end but a means to achieve desired IWM outcomes.

2.1 Greater Adelaide

This work concentrated on the Greater Adelaide planning region (Figure 3), which includes metropolitan Adelaide, regional urban centres such as Murray Bridge and Victor Harbor, and regional areas such as the Barossa Valley, McLaren Vale, the Adelaide Hills, and the Adelaide Plains.

The region is almost 11,000 km^2 and is home to more than 1.5 million people. It encompasses the land and water of the Kaurna, Ngarrindjeri, Ngadjuri, and Peramangk people. It accounts for more than 80% of South Australia's economic activity (Department for Foreign Trade and Investment, 2023). The region holds significant environmental value with a network of water-dependent ecosystems, including rivers, creeks, wetlands and estuaries. The health and ecological value of these environments is crucial for providing habitat for animals, water for consumption, and amenities for people.

2.2 Water supply and demand in Greater Adelaide

Groundwater and surface water use comprise most of the water use in Greater Adelaide, with diversified sources such as desalination, recycled water, and stormwater helping to provide additional capacity (Figure 4; SA Water, 2023). Water uses include primary production, domestic, commercial, greening, and environmental.

Primary production is a significant water user, accounting for more than half the total water available (214 gigalitres (GL)). Demand for water from agriculture in some catchments is higher than what is available from surface and groundwater. In some of these catchments, recycled water is used to supplement supplies. The *Barossa water security strategy* (Department for Environment and Water, 2022a) and *McLaren Vale water security strategy* (to be published) are examples of strategies outlining how water demand could be met.

Demand for water across Greater Adelaide is expected to increase, driven by population growth. Economic conditions and a predicted drier climate – will also contribute to increased demand (further discussed in section 2.3).

Water demand-supply projections show that under a high population growth and high-end climate impact scenario, localised water shortfalls by 2032 and overall systems shortfalls by 2038 are possible (Department for Environment and Water, 2024).

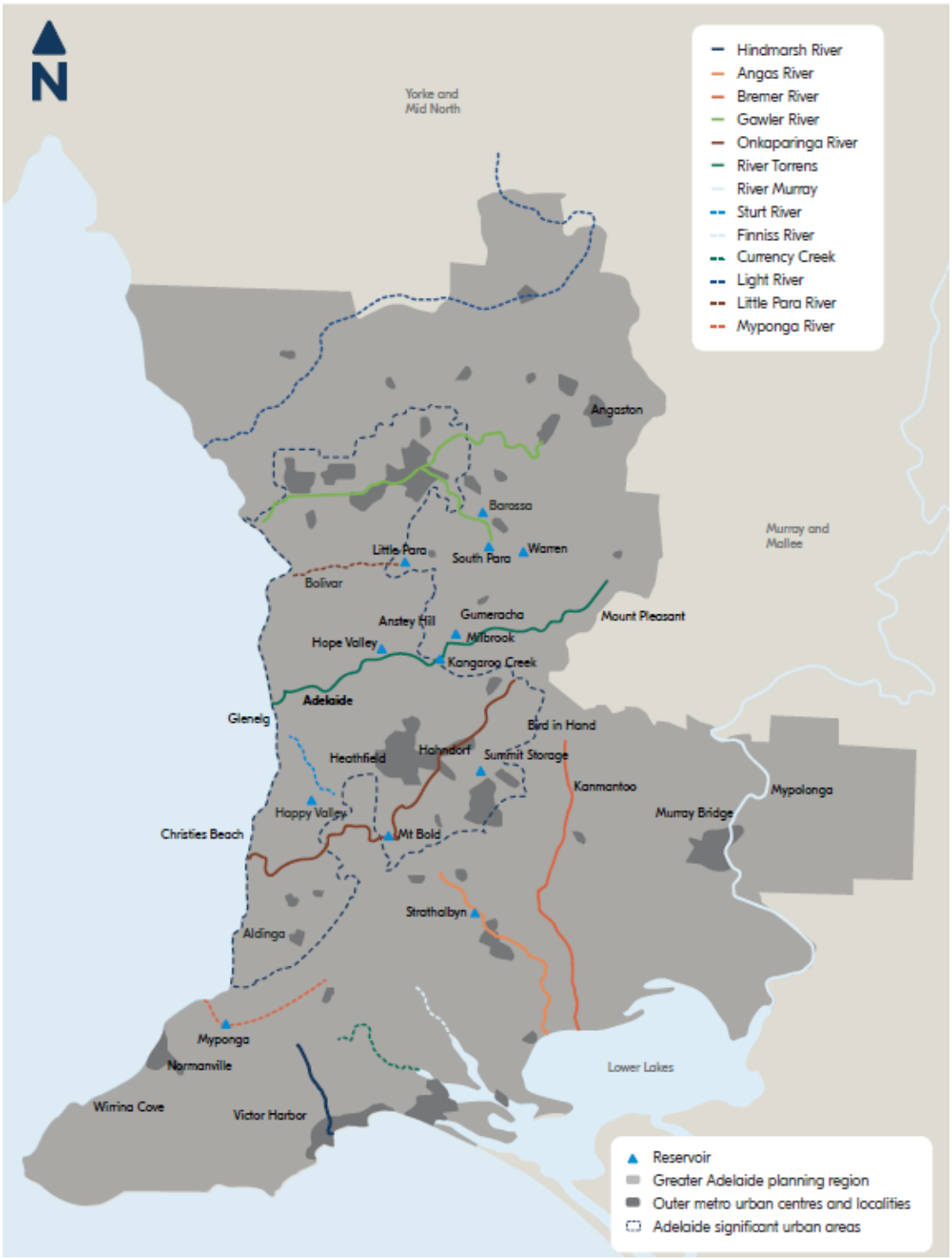

Figure 3: Greater Adelaide region – the focus of this work (Source: SA Water, 2023).

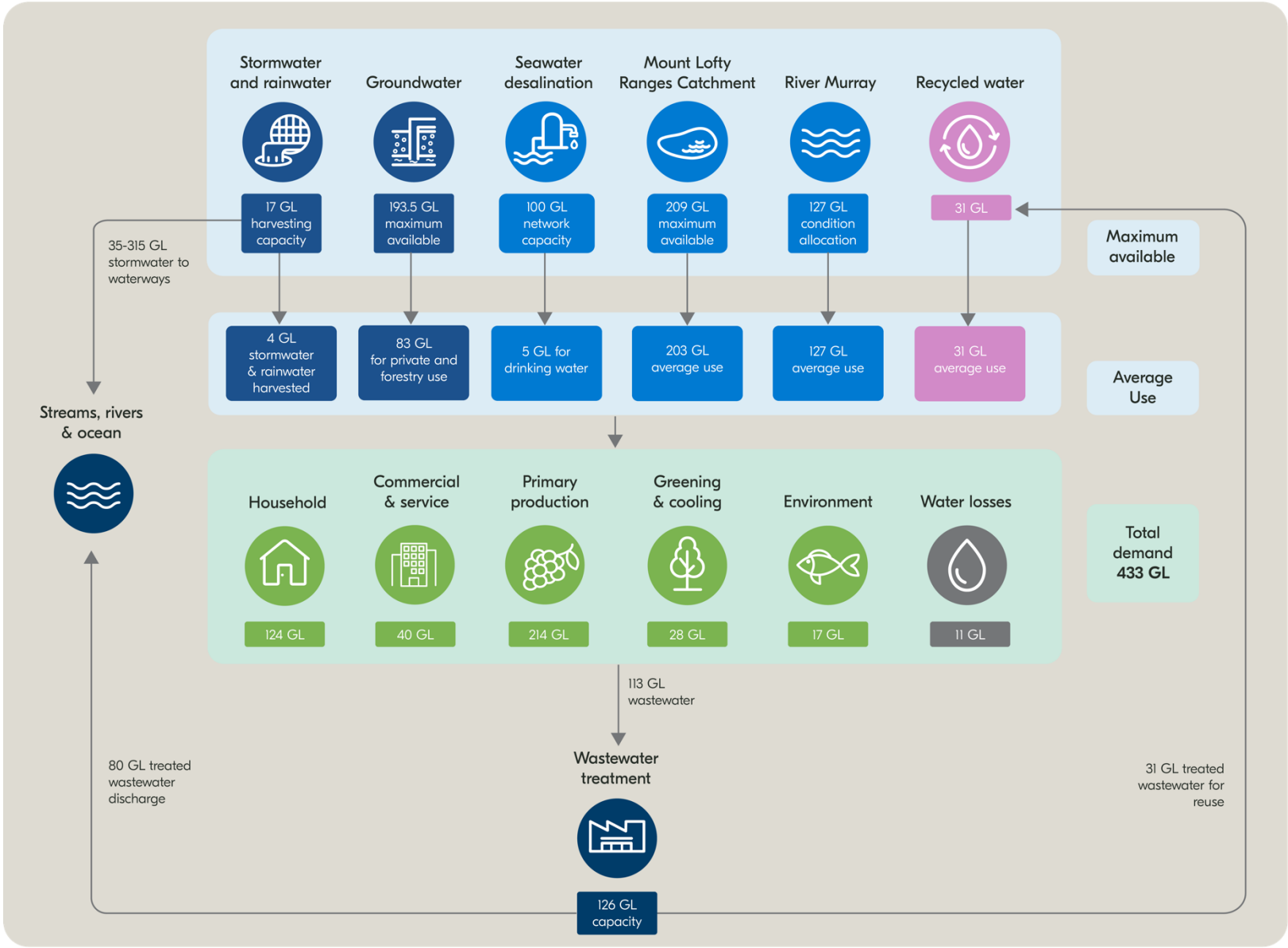

Figure 4: High-level average water balance for Greater Adelaide (Source: SA Water, 2023).

2.3 Drivers for IWM in Greater Adelaide

Changing climate, population growth (with associated urban sprawl and density), increasing urbanisation, ageing infrastructure, rising costs, and community expectations for more liveable, sustainable cities are driving the need for improved water management throughout the region.

2.3.1 Population growth

Greater Adelaide is experiencing strong population growth, which is expected to continue. The population is expected to grow to more than 2 million by 2051 (State Planning Commission, 2023). This growth is already putting pressure on existing water services. Examples include:

- New housing (in the south and north of Adelaide) is putting pressure on existing water and wastewater systems.
- The densification of existing urban areas is increasing stormwater runoff, placing pressure on existing stormwater infrastructure, waterways, and coastal environments.
- The risks of flooding are increasing both in urban Adelaide and in some new growth areas (such as in the north).
- Population growth in the Adelaide Hills presents unique challenges, as this area is part of the Mt Lofty Ranges Watershed Protection area that is a primary water source for Adelaide.

A growing population also increases the demand for water for agriculture. Climate change (section 2.3.2) exacerbates these challenges.

2.3.2 Climate change

Climate change already impacts Australia and Greater Adelaide, with long-term temperature shifts and weather patterns becoming evident. In 2019, Australia experienced its hottest year on record, and each year from 2013 to 2020 ranked among the nation's top 10 warmest years (Cresswell et al., 2021).

In Adelaide, the number of days above 40˚C per year is projected to rise significantly to around 3 days by 2030 and more than 5 days by 2050. These projections have already been exceeded: between 2012 and 2021, Adelaide experienced an average of 5.1 days above 40˚C per year, compared to 1.2 days annually from 1986 to 2005 (Department for Environment and Water, 2022b).

In addition, average rainfall is expected to decrease, with Adelaide projected to see a 4% drop in rainfall by 2050, including a 12.2% reduction in spring. While overall average rainfall is expected to decrease, rainfall intensity will likely increase (Bureau of Meteorology & CSIRO, 2024). The region will likely experience more extreme events, including more

frequent and intense droughts, floods, and fire conditions (Department for Environment and Water, 2022b).

These changes will have widespread impacts on all water resources and the societal values they support. Of particular concern for Greater Adelaide is its heavy reliance on climate-dependent water sources, including the Mt Lofty Ranges catchment and River Murray. These sources are predicted to decrease in reliability due to climate change (Department for Environment and Water, 2021).

Box 1: Barossa Valley water security planning

The Barossa Valley region is home to approximately 170 wine companies and 450 independent grape growers. It accounts for almost 30% of the total economic value of the South Australian grape and wine sector. The region, however, is limited by its available water for irrigation, which is predominantly sourced from groundwater.

Climate projections show that with no intervention, water reliability in the region will decrease. Under a mid-range climate scenario for the 2050s, an estimated additional 5.7 GL will be needed on average, to ensure there is no irrigation shortfall for the existing planted area in the driest years. This risks the viability of current activity, sustainable economic growth, and the health of waterways.

Stakeholders and government within the Barossa have worked together to develop a water security plan to support current demand and future growth until 2050. This includes plans to:

- address the availability of imported water to improve system reliability and support economic growth
- establish a region-wide water distribution network
- implement policy to support sustainable and integrated management of groundwater, surface water, and imported water
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- establish a region-wide water distribution network
- implement policy to support sustainable and integrated management of groundwater, surface water, and imported water
- develop a healthy waterways plan to increase catchment health and flows through the system
- implement on-farm strategies that improve soil health and maximise economic returns per unit of water
- use planning tools to support healthy, cohesive water-secure communities
- support businesses by providing opportunities to diversify, embrace the circular economy and maximise the efficiency of water use (Department for Environment and Water, 2022a).

Despite a well-supported and collaborative process in developing the water security plan, stakeholders involved reported through this process that water security solutions continue to be hampered by existing governance arrangements. In particular, decision-making responsibilities and ways to assess the broader value of investments and associated trade-offs remain unclear.

2.3.3 Community values and expectations

The Greater Adelaide community is becoming more aware of the importance of water and the value of healthy ecosystems and open space. A 2023 survey by SA Water found that residents in Greater Adelaide were most concerned with 'maintaining high water quality, ensuring enough water for future populations and reducing the impacts of a warmer and drier climate' (SA Water, 2023).

The survey also found that communities were willing to support a range of alternative water sources and to change their behaviour to reduce the demand for water. However, alongside these increased expectations, respondents also indicated that they did not want to pay more for water usage unless there were clear value for climate resilience, higher quality water, or help for the environment or agricultural sector (SA Water, 2023).

2.3.4 Rising costs and ageing infrastructure

Increasing operational and maintenance costs of existing infrastructure and renewal requirements of ageing infrastructure, pose key challenges for water service providers.

Much of the existing hard infrastructure across Greater Adelaide (including stormwater, water supply infrastructure, and wastewater systems) is ageing. It requires costly repair, renewal or upgrades to accommodate climate change impacts (such as increased runoff) and population growth.

In 2024, the South Australian Government announced a $1.2 billion investment in drinking and wastewater infrastructure over the next four years as part of the SA Housing Roadmap (Planning and Land Use Services, 2024). This funding for SA Water aims to enable an extra 11,000 homes in new development areas in Greater Adelaide. This significant investment underscores the huge challenge of keeping up with the required maintenance and expansion of water infrastructure – especially while grappling with a growing population and climate change.

Sustainable funding for the maintenance and renewal of ageing stormwater infrastructure is also lacking. For example, the Stormwater Management Fund (SMF), which provides funding to assist local governments with stormwater infrastructure, is often oversubscribed. Between 2012–13 and 2016–17, the SMF contributed approximately $22 million of the total $54 million spent on strategic stormwater projects (Local Government Association of South Australia, 2018). The balance of this funding is sourced from local government and or grants.

Financial and logistical burdens also extend to soft or 'green' stormwater infrastructure (wetlands and detention basins). Community demand for such nature-positive solutions is increasing, but the current system does not plan for or cost this type of stormwater infrastructure well. Uptake by developers is limited in part due to a lack of incentives.

Approximately $4 billion worth of ageing stormwater infrastructure in Adelaide will need to be replaced in the next 50 years, according to a report from the Goyder Institute for Water

Research (Myers et al., 2022). However, the current state of stormwater infrastructure and the long-term costs required to maintain and upgrade it to meet required flood mitigation standards (i.e. 1-in-100-year flood events) are not well understood.

2.4 Current water management arrangements for Greater Adelaide

Water governance in Greater Adelaide is complicated. Various pieces of legislation relate to water management and collectively provide the overarching management framework (Figure 5). This complex legislative framework means that responsibilities are spread across many organisations, making it difficult to provide a consistent, integrated approach to decision-making. At least 45 organisations play a role, including:

- twenty-seven local government authorities (many local government authorities are also licenced water entities)
- two local government regional subsidiaries: Gawler River Floodplain Management Authority and Brownhill Keswick Creek Stormwater Board
- three state government agencies: Department of Environment and Water (DEW), Department of Housing and Urban Development (DHUD), and Environment Protection Authority (EPA)
- four Landscape Boards: Green Adelaide, Hills and Fleurieu, Northern and Yorke, and Murraylands and Riverland
- one State Government-owned water utility: SA Water
- several (at least 7) other private water utilities providing either water or wastewater services
- one statutory authority: Stormwater Management Authority (SMA).

Across these organisations, an array of legislation policies, strategies and plans collectively provide direction for water management (Figure 6).

In addition to formal roles and responsibilities, agencies from across the South Australian Government work together to manage the state's water resources. The heads of all relevant agencies participate in the State Water Policy Forum to discuss the River Murray and other water issues, and ensure matters are managed across all of government. However, no organisation has a dedicated role for leading or coordinating IWM.

Appendix B provides further information on the current roles of the various organisations within the existing arrangements for Greater Adelaide.

Part 3 discusses some of the challenges arising from having a wide array of organisations involved.

Box 2: Flooding in Greater Adelaide

Floods are one of the most economically damaging natural hazards in South Australia. Flash flooding from short-term, high-intensity rain events is the most common type in urban centres. Climate change scenarios are predicted to increase the frequency and intensity of extreme rainfall events, putting greater pressure on existing and ageing infrastructure. Population growth (and associated urbanisation and densification) in Adelaide and regional centres will also put a greater demand on existing stormwater infrastructure.

On 28 September 2016, South Australia experienced a 1-in-50-year storm. Approximately 73 mm of rain was recorded within 36 hours in catchment areas. As a result, many rivers broke out and levees overtopped, affecting many homes and businesses. As all dams (including farm dams) were at capacity, many poorly constructed or maintained dams also lost their structural integrity and caused flooding (Local Government Association of South Australia, 2018).

This extreme weather event significantly affected the northern Adelaide Plains, with the Gawler River flooding approximately 1,000 hectares of crops and causing an estimated $51 million in horticultural damage. Recovery assistance grants for primary producers of up to $10,000 were available to those who suffered direct damage due to the flood. Following significant flood events such as this one, debates about who is responsible are common, highlighting that the system is confusing and unclear.

SA Landscape Act 2019	Water resources within South Australia are managed under this Act that provides for the natural resources protection, including the management and allocation of water resources.
Water Industry Act 2012	Provides for the regulation of water retail services and sewerage retail services, including in relation to service pricing and technical and safety issues.
SA Water Corporation Act 1994	Sets out the functions of SA Water. Investment in water supply and the removal and treatment of wastewater
Environment Protection Act 1993	Aims for protection against environmental harm including harm to natural waters due to polluted water discharges. Including water and wastewater treatment.
SA Public Health Act 2011	Act provides head powers to respond to public health risks (including water related public health risks).
Safe Drinking Water Act 2011	Provides for the registration of drinking water providers and is based on the implementation of the Australian Drinking Water Guidelines (non-mandatory standard).
Schedule 1A, *Local Government Act 1999*	Includes general functions of local councils including providing infrastructure that helps to protect the community from any hazard. Schedule 1A includes general stormwater management functions of local councils, including providing infrastructure that helps to protect the community from any hazard.
Planning, Development and Infrastructure Act 2016	Regulates and effects development assessment and building rules.
State Emergency Management Act 2004	Establish an emergency management framework for the state for all hazards, including floods, droughts, bushfires and health emergencies.

Figure 5: Summary of key water-related legislation in Greater Adelaide.

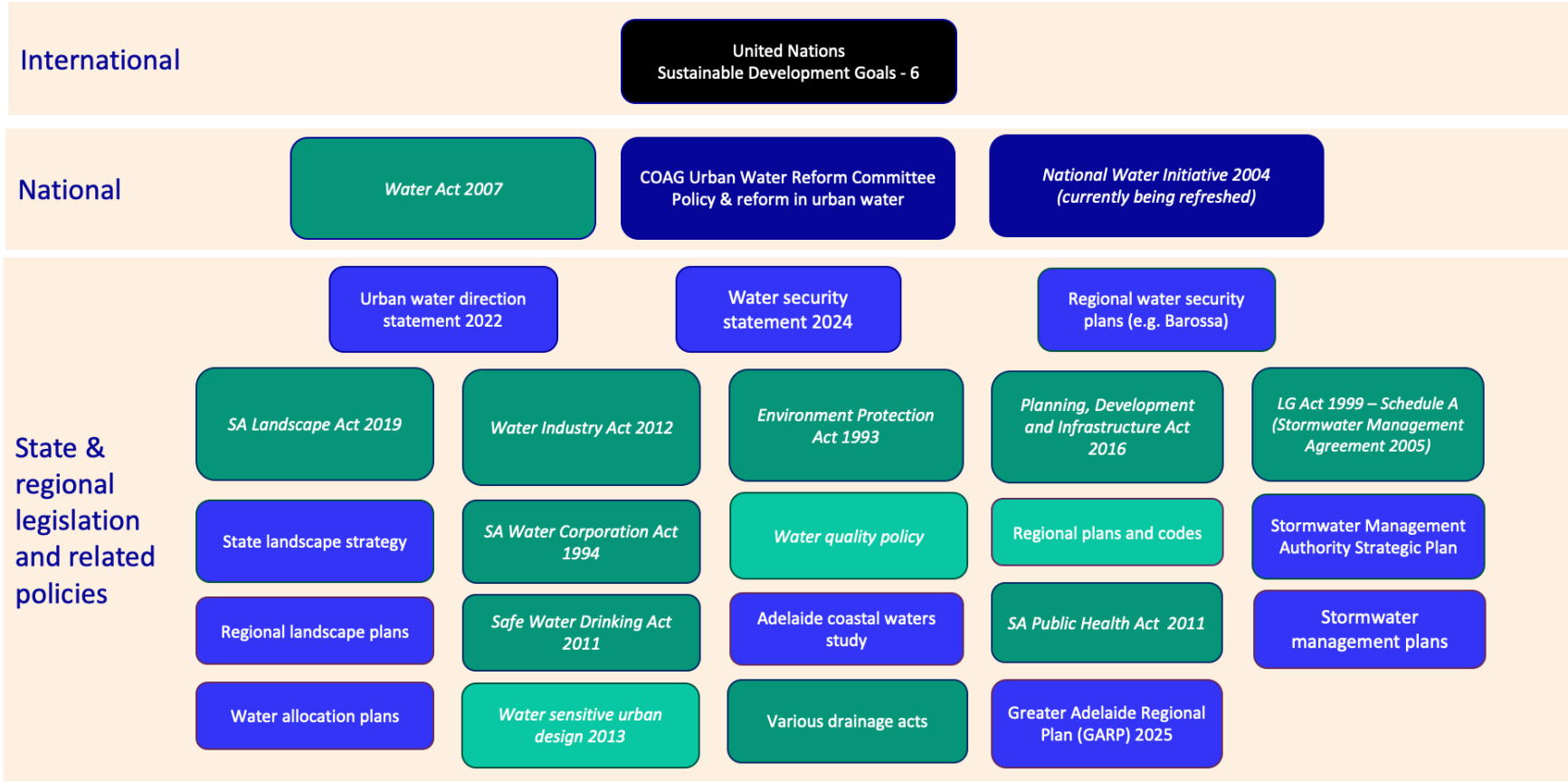


Figure 6: Overview of water-related legislation, strategies and plans for Greater Adelaide.

Note: this figure is for illustrative purposes only and is not exhaustive. Relationships between legislation, policies, and plans are indicative only.

2.5 Recent and current water reform efforts

Water governance is not static. All agencies described in section 2.4 are continually working to identify areas for improvement. Relevant (recent and current) examples include:

- a comprehensive review of the *Water Industry Act 2012* (WIA) (Department for Environment and Water, 2020)
- preparation of an updated statewide *Water security statement*, to be developed by the end of 2025 (Department for Environment and Water, 2022d), and *Urban water directions statement* (Department for Environment and Water, 2022c)
- an independent review of the *Landscape South Australia Act 2019* (Landscape SA Act) (Hill, J., 2024)
- investigation of stormwater management by the Goyder Institute for Water Research (Myers et al., 2022)
- a draft 50-year water strategy for Greater Adelaide using an IWM approach and adaptive planning process
- preparation of a draft strategy for urban greening (Green Adelaide, 2024)
- review of stormwater management and policy (Local Government Association of South Australia, 2018)
- upcoming work by DEW to develop a framework for First Nations' water interests
- an independent external review of the process used to make the SA Water regulatory determination 2024, in order to assist the Essential Services Commission of South Australia (ESCOSA) in their next determination in 2028 (Essential Services Commission of South Australia, 2024).

Some other state-based strategies and plans also include actions and recommendations relevant to IWM governance, such as the *Housing roadmap 2024* (Department for Housing and Urban Development, 2024). A plethora of council and landscape board actions and commitments also impact the direction of water management.

Some of these initiatives include recommended actions to improve water management and governance, and they will continue to influence and shape this space. However, as it stands, most of these strategies and reviews are prepared in isolation, without an overarching IWM framework or governance arrangements to ensure they complement and support agreed-upon long-term goals.

2.6 The challenge of governance reform

In a complex water management landscape, governance reform is challenging due to the number of stakeholders and interests involved, with the complexity itself becoming a barrier to change. It is also daunting to reform governance within an active operating environment in a way that does not disrupt short- and long-term service provision.

The challenge of governance reform has been highlighted nationally and internationally, with various organisations endeavouring to guide efforts – including the OECD (2016) and

Productivity Commission (2017; 2021; 2024). The dilemma is apparent locally, too, with limited progress despite enthusiasm among stakeholders, various plans and strategies, and the best efforts of those involved.

A review of the literature found a range of common requirements for identifying and developing any proposed governance changes, including having:

- a sound understanding of the current governance arrangements – what works well, and what is challenging or limiting
- a clear and agreed-upon definition of the problem to ensure that efforts focus on addressing the most important issues
- clear, agreed and specific IWM goals and outcomes
- agreed governance outcomes, including principles and attributes of good governance
- consideration (or assessment) of possible governance arrangements including the complexity, difficulty, and costs associated with making associated changes.

This was supported through phase 1 of the process, which highlighted that governance is not an end but a means to achieve desired outcomes (Figure 7).

These findings underpinned the approach used in the stakeholder exploration of governance options described below.

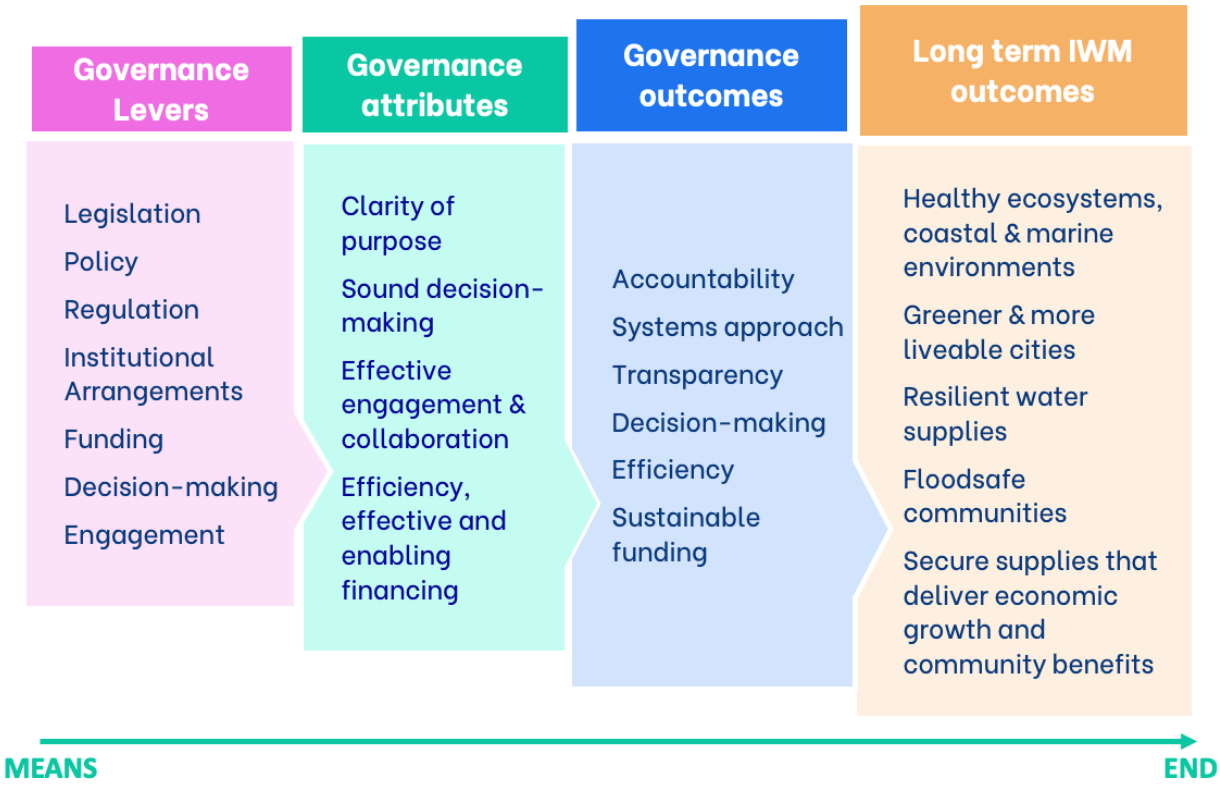


Figure 7: Governance is a means to an end.

Note: This figure is not meant to describe steps in the process but rather show that elements of governance inform each other and are ultimately about achieving end goals.

3 Stakeholder appetite for IWM governance reform

This part provides information on stakeholder perspectives related to IWM and existing governance arrangements. It outlines the outcomes stakeholders are seeking from IWM, including solutions for five key challenges.

Key messages

- Stakeholders that participated in Phase 1 expressed overwhelming support for IWM and reform of governance arrangements to deliver IWM for Greater Adelaide.
- IWM was seen as a key to tackling urgent challenges and supporting broad societal values connected to water.
- Phase 1 participants generally agreed that while individual organisations fulfil their core statutory water management roles well, the current arrangements are inadequate to address emerging challenges and achieve desired outcomes.
- Stakeholders agreed that IWM governance reform is not about fixing everything. Instead, it should focus on providing solutions that help address the following key challenges:
  - improving the use and integration of water sources
  - enabling outcomes around liveability and resilience that will not be achieved by business as usual
  - enabling more sustainable and sufficient funding
  - enabling a consistent approach for making trade-off decisions
  - delivering community values and expectations.

3.1 Common themes

Four recurring themes arose from Phase 1:

1. Organisations across the sector identified that they are good at delivering against their individual, legislated roles, but the current arrangements do not enable integrated decision-making or addressing whole-system challenges.
2. The challenges facing Greater Adelaide (as outlined in part 2) are making it more difficult for organisations to fulfil their current functions effectively, and this is expected to continue, reinforcing the need for IWM.
3. Across stakeholders involved in Phase 1, there was overwhelming support for IWM and a high level of ambition for governance reform.
4. Stakeholders acknowledged that while the need for reform was urgent, it would be difficult and complicated and would therefore take time.

Building on these themes, participants in Phase 1 developed a shared problem statement (Box 3) that summarises the sector's challenges and the importance of IWM in addressing them.

3.2 IWM to support water-related values

As outlined above, a critical step for IWM is agreeing on the desired outcomes. Experience from interstate also reinforces the importance of co-designing specific outcomes with stakeholders. This step is critical for progressing IWM and provides a basis for collaboration and accountability.

Stakeholders in Phase 1 developed a set of shared IWM outcomes (Figure 8). These outcomes informed the governance design and assessment criteria for exploring possible institutional and funding arrangements in Phase 2 (Part 4).

Stakeholders understandably held different individual priorities for IWM outcomes, but as a group agreed that the broad suite of values-based outcomes in Figure 8 represented their collective view. It was also noted that if further reform work were undertaken in future, these outcomes should be re-evaluated to assess what they mean for IWM governance.

Box 3: Problem statement

Current water management governance arrangements are the primary barrier to effective IWM

IWM is critical for managing water resources, providing water-related services efficiently and effectively, and meeting community expectations and broad societal values underpinned by water. However, the current governance arrangements across Greater Adelaide are limiting progress towards IWM. While agencies and authorities have a good understanding of their respective roles in water management and, for the most part, deliver their functions well, the current governance is limiting their ability to progress IWM due to the:

- lack of a fit-for-purpose, coordinated, and system-wide approach for making IWM-related decisions
- disconnect between agencies and services
- insufficient ongoing funding and resources to deliver services
- growing gap between community values and expectations and the services that agencies are delivering
- legislative framework and associated regulation that does not encourage IWM.

This challenge and the consequences of inadequate governance arrangements are expected to exacerbate as demand for water increases, the drying climate continues to deplete available water resources, the population continues to grow, infrastructure ages and funding limitations become more evident. Appropriate and effective governance is required to enable government agencies and stakeholders to work together to deliver IWM and meet and address the current and emerging water-related challenges.

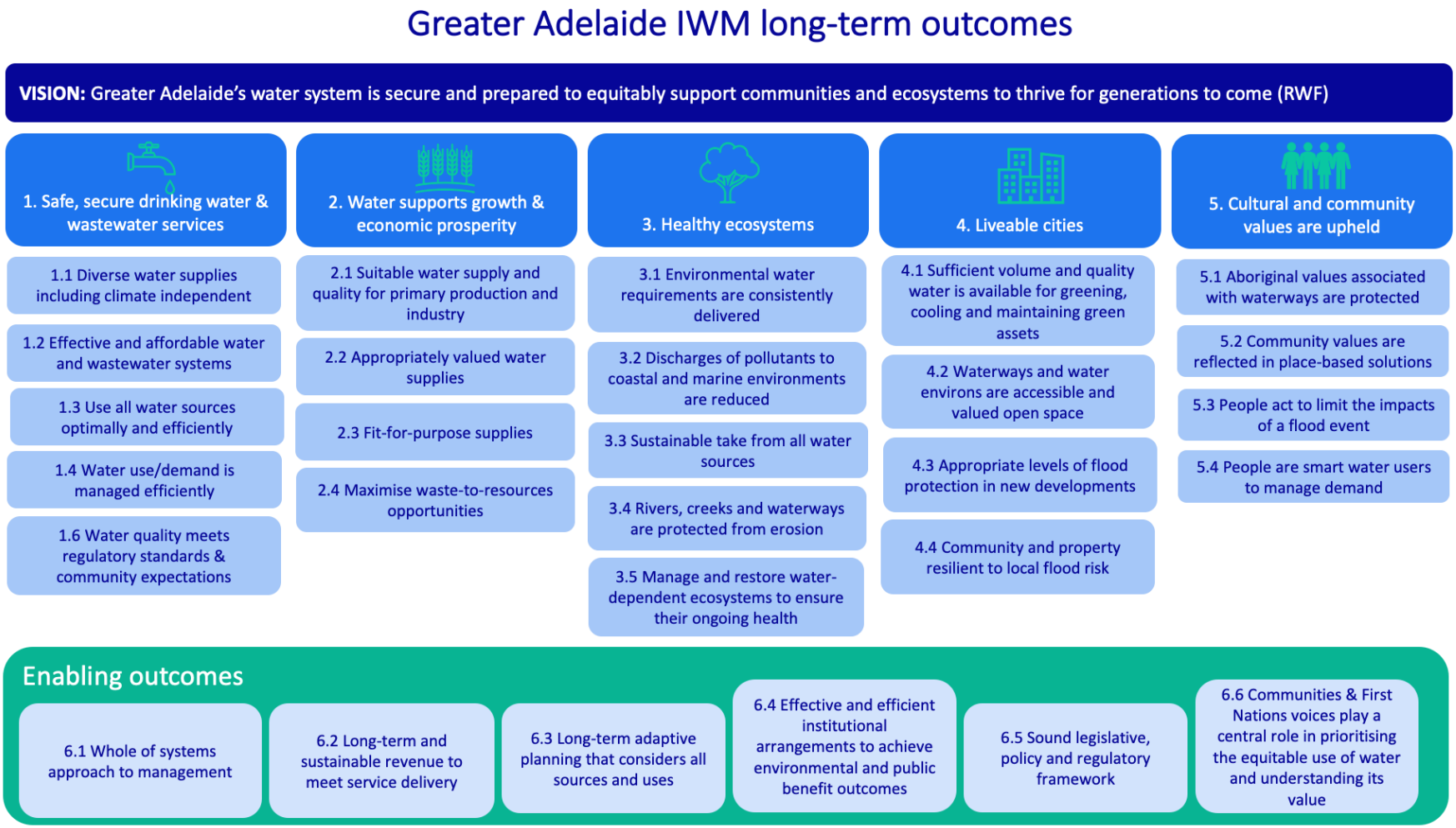
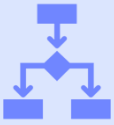


Figure 8: Desired long-term outcomes of IWM for Greater Adelaide.

3.3 IWM to address challenges

Stakeholders agreed that individual organisations across the sector are good at delivering against their individual, legislated roles. However, progress on IWM is impeded by the siloed nature of the sector. While all the individual components may be present, the system is lacking a formal framework to connect each part up and enable IWM. Stakeholders considered IWM to be a powerful way to tackle escalating challenges. However, they also agreed that IWM governance reform is not about fixing everything, with 5 priority challenges that IWM should focus on identified (Table 3.1).

Table 3.1: Challenges and barriers that IWM should focus on addressing.

Challenge/barrier	Description
 Improving the use and integration of water sources	To meet future water demands, all water sources must be used efficiently and effectively. Current governance arrangements limit the ability of water service providers and resource managers to efficiently access, allocate, manage and integrate these water sources. This is in part because different sources of water are managed, planned and used under separate legislative and organisational arrangements.
 Enabling more sustainable and sufficient funding	The costs of infrastructure provision, maintenance, and resource management are rising. There is a gap between revenue and service/function delivery. Many bodies rely on grants and other short-term funding solutions to deliver functions and services and meet community expectations. Stormwater is a good example of this, where local government relies on a mix of funding to upgrade and manage stormwater assets, including funding from rates, the Stormwater Management Authority (SMA), and grant programs.
 Enabling a consistent approach for trade-offs	There is no agreed-upon and consistent approach to making complex decisions that involve trade-offs, such as who should pay for services and who should deliver particular services. For example, where groundwater or surface water is used for irrigation but is increasingly constrained, and costs for alternative water are higher, it is often difficult to find a clear pathway to identify responsibilities and cost-sharing arrangements.
 Whole-of-system management	There is a lack of coordinated whole-of-system planning and decision-making. This applies to natural systems, and across services or sources. This results in sub-optimal outcomes and inefficiencies. An example was water catchment management. Often there are multiple plans with different priorities, such as stormwater management plans with a focus on flood mitigation and landscape plans seeking to improve waterway health. Furthermore, boundaries often don't align with catchments and therefore don't incentivise integrated management.

Challenge/barrier	Description
 Delivering community values and expectations	Water is critical to achieving community values and expectations, such as green and liveable cities. However, current governance arrangements do not consistently consider these values, nor do they enable active community participation in decision-making. The community increasingly expect water to be available for greening and ecosystem health, but the current form of regulation and oversight does not enable nor support investment in this space.

4 Assessing institutional arrangements

This part describes the outcomes of the process of identifying and assessing possible IWM governance arrangements.

Key messages

- An initial review of institutional arrangements around Australia and beyond revealed four potential long-term institutional arrangements for Greater Adelaide warranting exploration.
- Through the iterative stakeholder-led evaluation process, two long-term institutional arrangements were broadly supported by stakeholders:
  - **statutory IWM authority**
  - **centralisation**.
- While there was broad support for both options, most preferred the statutory IWM authority based on the summary information provided to inform the deliberations.
- Further detailed due diligence is required on both arrangements before a preferred option can be confirmed.

4.1 Developing a process to design and assess options

Having affirmed stakeholders' appetite for IWM reform in phase 1, phase 2 focused on identifying plausible and durable institutional arrangements that deliver the desired outcomes of IWM. This included an iterative process of identification and exploration with stakeholders (Figure 9). Step 1 is covered in sections 2.4 and 2.5.

For step 3, stakeholders developed an agreed set of attributes of what 'good' governance involved in the context of IWM. This process revealed 30 attributes across 5 themes:

- the purpose of structure
- decision-making
- funding and resources
- stakeholders and community
- culture.

Stakeholders also identified the importance of having a common set of criteria for designing and assessing IWM governance arrangements and options. In order to develop criteria, the 5 identified themes were combined with best-practice principles for good governance – including OECD (2016) and Australian National Audit Office (Barrett, 2003) guidelines principles of good water governance (Figure 10). The design and assessment criteria were sorted into 7 groups (Table 4.1), each with additional sub-criteria (Appendix C).

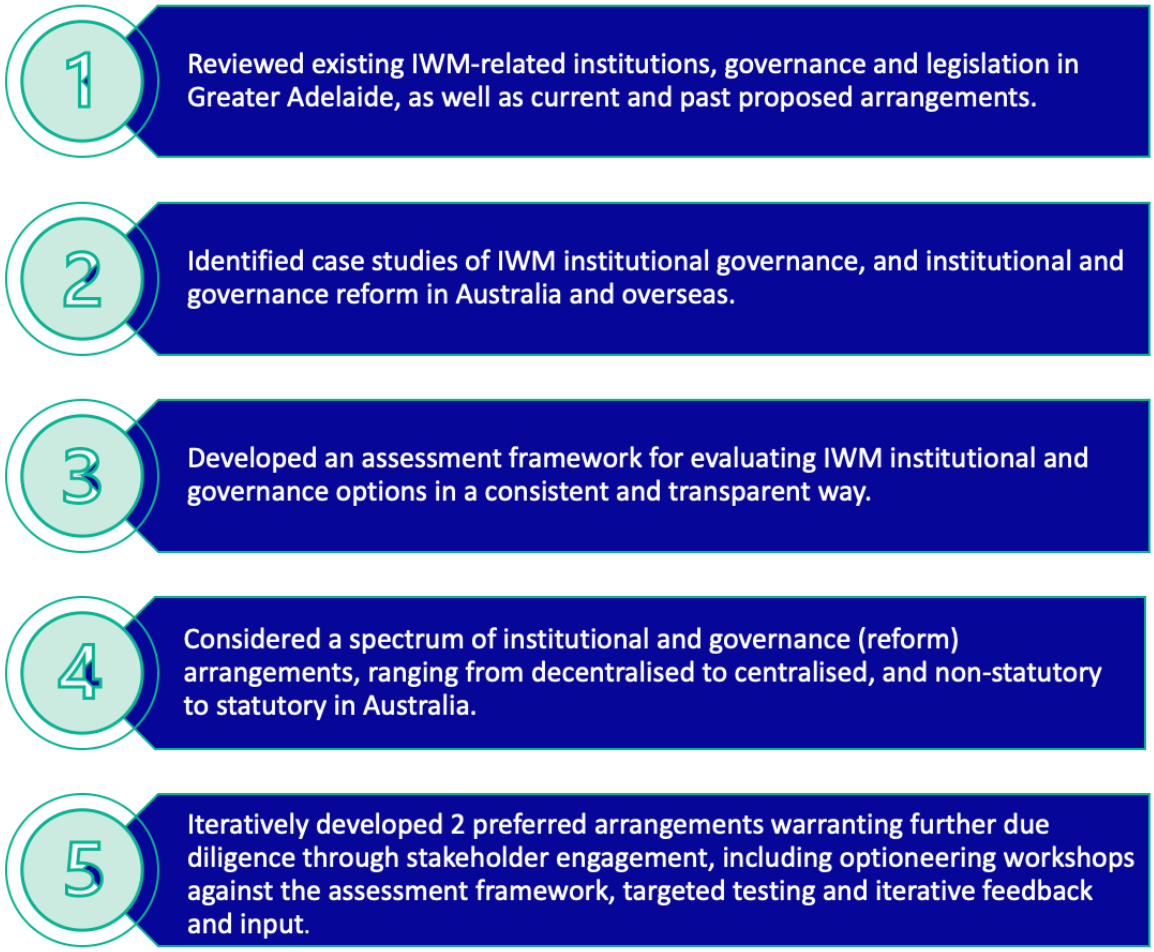


Figure 9: Steps to identify institutional and governance arrangements for Greater Adelaide.

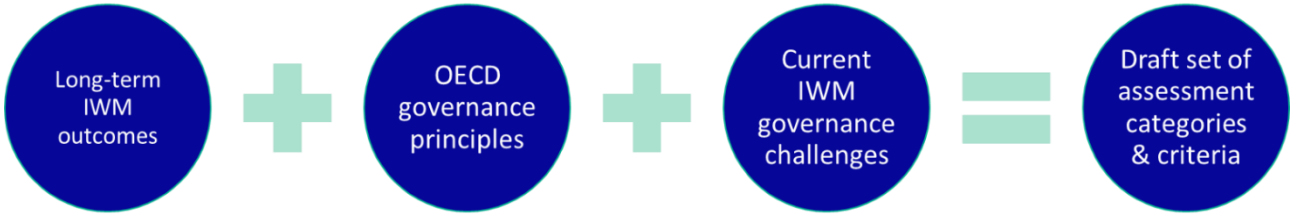


Figure 10: Developing assessment criteria.

Table 4.1: Design and assessment criteria developed based on agreed attributes of 'good' governance.

Criteria group	Description
1 – Effectiveness	Are the governance arrangements effective?
2 – Efficiency	Are the governance arrangements efficient?
3 – Longevity	Can the arrangement adapt as required and last into the future without wholesale reform?
4 – Collaboration	Does the arrangement sufficiently engage with and account for insights from customers and key stakeholders?
5 – Whole-of-system approach	Does the arrangement enable or reflect a whole-of-system approach to IWM?
6 – Financial arrangements	Will the financial arrangements support the delivery of the desired IWM long-term outcomes?
7 – Complexity	Can the arrangement be implemented with a reasonable level of effort and in a reasonable timeframe?

4.2 Identifying potential options

There was a broad agreement among stakeholders that significant governance reforms would be required to deliver IWM outcomes, ranging from relatively simple changes and improvements to more complex legislative and structural changes. On that basis, there was support for exploring more ambitious levels of reform, such as those that include structural changes.

As stakeholders had not previously considered, discussed or interrogated potential structural arrangements in detail, there was initially no clear or strong view on preferred arrangements. Initial discussions revealed that stakeholders generally agreed:

- A leading IWM authority should be considered because of its potential to drive significant change through its authorising authority and revenue-raising capacity, although the complexity and challenges of establishing a new organisation were acknowledged.
- Stakeholder forums could provide an important vehicle to facilitate collaboration. They would be relatively easy to establish, but appropriate resourcing would be required to ensure continuity.
- Holding an annual conference or developing an overarching governance framework and strategy were less likely to drive the necessary change without associated structural changes.

- Future arrangements should also build on existing institutional arrangements, legislation, and resources.

By applying the criteria developed in step 3 and reviewing institutional arrangements around Australia and beyond, four potential governance options emerged. These are summarised in Table 4.2 below and further outlined in Appendix F.

Table 4.2: Summary of institutional arrangements initially identified.

Institutional arrangement	Key elements
Business as usual, plus	• Current arrangements with adjustments to processes and coordination of IWM activities • Establishment of an office within DEW to oversee the delivery of reform activities • Roles and responsibilities largely remain unchanged • Funding arrangements remain largely unchanged
Coordination	• Establishment of stakeholder forum/s • Focus on improved coordination across stakeholders for IWM activities • Reflects some of the Victorian arrangements
Statutory authority	• A new authority or authorities with its/their own staff and resources • Responsible for all IWM planning
Centralisation	• All assets, services and functions from existing institutions are transferred to one body or bodies • All functions and funding are centralised

4.3 Preferred options

In consultation with stakeholders, the criteria were further used to refine options in an iterative process of design and assessment. Key strengths and weaknesses of each governance option were summarised, with two long-term institutional arrangements emerging as the most likely to progress IWM and warranting further due diligence:

- statutory IWM authority
- centralisation.

These options are summarised below, including a qualitative assessment against the design assessment criteria. The stakeholder views summarised below were based on summary information of the options provided to support deliberations. It should not be assumed that all stakeholders agree to the specific details of each option. Preferences would need to be reconfirmed based on the more detailed information presented herein and further due diligence.

4.4 Statutory authority

4.4.1 How a statutory authority might work

The statutory authority model outlined here is designed to be applicable to Greater Adelaide. In this model, an IWM Authority and IWM regional subsidiaries are established. The Authority is responsible for overarching IWM planning, while regional subsidiaries are responsible for regional planning and delivery oversight. The Stormwater Management Authority (SMA) will subsequently be dissolved.

There is a structural separation of IWM policymaking. Under these arrangements, DEW sets well-specified policy objectives for IWM in a timely manner. The Authority and existing entities providing water, wastewater, stormwater, managed aquifer recharge (MAR), waterway and flood mitigation services enact these policy objectives when planning, coordinating, and delivering services and infrastructure.

The Authority and each subsidiary have their own resourcing/staff independent of SA Water, local government, Green Adelaide, landscape boards, and other entities responsible for water, wastewater, stormwater drainage and waterways, and flooding. All corporate services (including finance, human resources, and information technology) are internalised.

The IWM Authority is responsible for IWM planning and implementation. The Authority has a statutory responsibility to identify priority regions and sub-regions for which regional or catchment IWM priority plans should be prepared (similar to s 14 of the *Local Government (Stormwater Management) Amendment Act 2007*).

Under the Act, the IWM Authority can negotiate/arbitrate and issue orders and define performance measures for IWM investment on SA Water, local government, Green Adelaide, landscape boards and other entities responsible for water, wastewater, stormwater drainage and waterways, and flood mitigation.

The Authority can also negotiate/arbitrate and issue orders so that relevant entities cooperate in an appropriate fashion in relation to IWM planning and the construction, maintenance and operation of IWM-related management works.

The Authority can also negotiate/arbitrate and issue orders that require financial contributions beyond those included in plans (such as *Strategic asset management plans* and the *Long-term financial plan* of local government). Regional subsidiaries are charged with oversight of these orders. The Authority also operates an IWM Management Fund, similar in operation to Div 5, s 17 of the Local Government (Stormwater Management) Amendment Act.

Regional subsidiaries are responsible to the Authority and the Authority reports directly to the Minister for Climate, Environment and Water. This responsibility may include producing an annual report that is published publicly and outlines how regional subsidiaries have delivered against agreed IWM performance measures. Regional subsidiaries convene

regional IWM forums/roundtables with senior representatives (with decision-making powers) from SA Water, relevant local government, Green Adelaide, landscape boards and other entities responsible for water, wastewater, stormwater drainage and waterways, and flood mitigation.

4.4.2 Customer and community engagement

IWM requires an authorising environment where customers and the community can partner with planning agencies to articulate their needs and priorities. Under the proposed arrangements, the IWM Authority and regional subsidiaries consult with local government, and other entities responsible for water, wastewater, stormwater drainage and waterways, and flooding to progress subregional plans and IWM investments.

Existing entities such as SA Water, Green Adelaide, landscape boards and local government are responsible for stakeholder and community engagement, with IWM regional implementation planning developed partly through consultation with their stakeholder base. Customer and community needs and views are shared through the regional subsidiaries and to the Authority for consideration as part of investment and action prioritisation. The Authority would not be directly involved in community and stakeholder engagement.

4.4.3 Financing and funding

Funding for IWM activities and investments must be predictable, transparent, able to meet customer and community needs, and robust to changing governments.

Under the proposed arrangements, funding for regulated infrastructure for water, wastewater, stormwater, waterways, and flooding would be recovered through regulated fees and charges under the agreed allocation of responsibility and expanded legislative remit.

Entities could enter partnership arrangements to access and use assets belonging to others (Woolston et al., 2018). For example, SA Water could enter special purpose joint venture or build manage operate to access waterbodies on local government area land.

Funding for the Authority would be through one or more of: state budget appropriations, a SA Water levy, or a local government levy on rates notice.

4.4.4 Key enablers

Key enablers are foundational changes that need to happen to ensure the long-term success of the statutory authority. Many of these are no- or low-regret actions that would support better IWM outcomes irrespective of the long-term governance model adopted.

Key enablers for the Statutory IWM Authority include addressing gaps in responsibility in the current water governance framework. This includes allocating clear responsibility for private local, public local, and regional (major) drainage and waterways.

The IWM Authority with regional subsidiaries may be established through an amendment to the Landscape SA Act or *Local Government Act 1999* (LGA) and potential modifications to the Local Government (Stormwater Management) Amendment Act.

Allocation of responsibility would need to be formally passed into relevant legislation and agreements as functions, powers and duties to avoid contravening existing laws. This may include changes to the WIA and LGA, *Stormwater management agreement*, and Landscape SA Act. Modification of legislation may require:

- broadening the definition of the water industry in the WIA to include the provision of any stormwater services, waterway services, or flood mitigation services
- changes to the definitions of 'regulated infrastructure' and 'regulated infrastructure services', and therefore an expansion of the licencing under Part 4 of the WIA to encompass these new definitions
- possible amendment of LGA Schedule 1 (1A Stormwater Management Agreement 2013) to include provisions relating to authorities and responsibilities allocated to local government and SMA
- possible amendment of the Landscape SA Act, including potentially and not limited to s 3, 7, 100–108, 125, 128, 170–73, and 223.

Another key enabler irrespective of the final governance arrangements is the development of an evaluation framework for valuing and prioritising long-term investments in water, wastewater, stormwater, flooding, and waterways. Regional 5-year IWM plans may also need to be developed, extending on the framework used for SMA planning priorities (Stormwater Management Authority, 2022; 2023), Green Adelaide prioritisation (Green Adelaide, 2021), or Victorian approaches for identifying IWM priorities (Department of Energy, Environment and Climate Action, 2024)

4.4.5 Summary of stakeholder perspectives

Overall, the statutory authority was preferred by the majority of stakeholders as it was considered to be less risky, and would have more support from stakeholders, and, therefore, would be more likely to be implemented and maintained to progress IWM.

The separation of strategy from delivery was highlighted as an important attribute of the statutory authority, with stakeholders suggesting that its role should include a coordination function and that it should act as the decision-maker for infrastructure investments.

Including regional subsidiaries in the statutory authority option was strongly supported, with the potential to apply the arrangements across the state. Significant risks identified for the statutory authority included susceptibility to changes in government and inadequate funding, with sustainable and adequate funding considered the most critical enabler for ensuring its success.

Box 4: Water Industry Act 2012 – Definitions

'**water infrastructure**' means–

(a) any infrastructure that is, or is to be, used for–
  (i) the collection or storage of water, including a dam or reservoir, a water production plant or a wetland; or
  (ii) the treatment of water; or
  (iii) the conveyance or reticulation of water and includes the connection point; or
(b) any other infrastructure used in connection with water and brought within the ambit of this definition by the regulations...

'**water**' includes rainwater, stormwater, desalinated water, recycled water and water that may include any material or impurities, but does not include sewage.

'**infrastructure**' includes–

(a) pipes, conduits and associated fittings and apparatus;
(b) pumping stations;
(c) storage tanks;
(d) bores and wells;
(e) dams, reservoirs and wetlands;
(f) embankments, walls, channels, drains, drainage holes or other forms of works or earthworks;
(g) treatment facilities;
(h) testing or monitoring equipment;
(i) roads and other works to provide for the movement of vehicles or equipment or to provide access to land, works or other forms of infrastructure;
(j) bridges and culverts;
(k) buildings and structures;
(l) components of any infrastructure;
(m) other items brought within the ambit of this definition by the regulations.

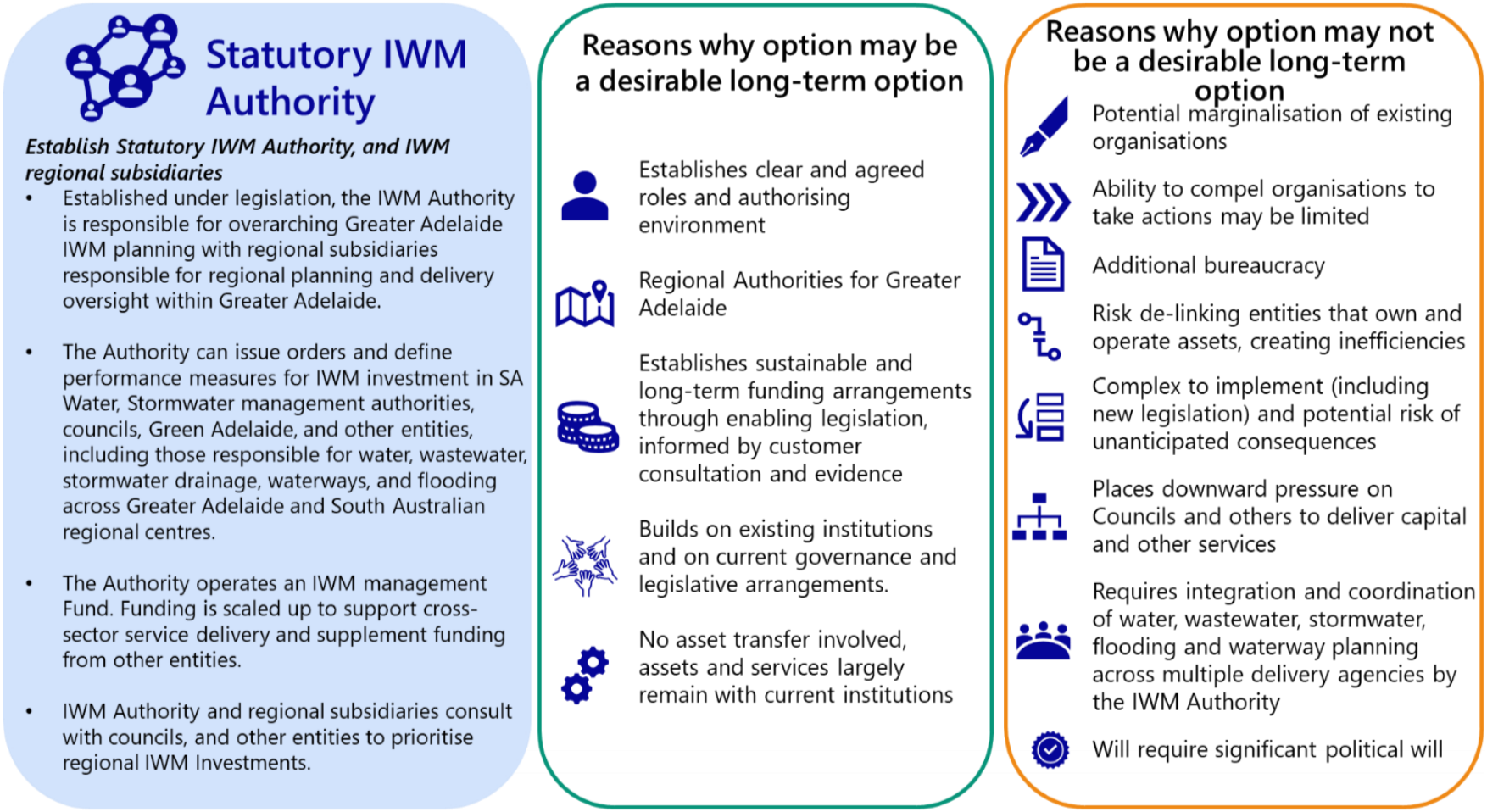


Figure 11: Overview of the Statutory IWM Authority arrangement.

4.4.6 Assessment against criteria

Table 4.3 assesses the statutory authority governance option against the criteria established by stakeholders and outlined in section 4.1.

Table 4.3: Statutory IWM authority – option assessment against criteria.

Key

Yes, option meets sub criteria
Option potentially meets criteria
Unclear if option meets criteria
See note in Italic

Criteria	Description	Sub-criteria
1 - Effectiveness	Are the governance arrangements effective?	1.1 The option supports and enables service delivery partners and stakeholders to have clear and agreed roles, responsibilities, and funding arrangements to achieve objectives and agreed service standards.
		1.2 The option supports and enables a process for resolving disputes and uncertainties around objectives, authority, decision-making and delivery.
		1.3 Clear objectives and service standards underpin the option.
		1.4 Strategic and policy decision-making roles and responsibilities are sufficiently separate from operations and maintenance decision-making (i.e. decisions about what to do are separate from decisions around how to operate and maintain assets and services). The option supports and enables roles, responsibilities and funding arrangements to be assigned to those best placed to manage them.
		1.5 The option allows policies and regulations to be enforced.
2 - Efficiency	Are the governance arrangements efficient?	2.1 The option supports/enables achieving IWM outcomes at the lowest economic cost (and/or highest social, economic and environmental benefit). The option does not have gaps or duplication of effort related to roles and responsibilities, and shared resourcing is encouraged where appropriate.
		2.2 The option includes clear mandates and processes that enable agencies and organisations to make IWM decisions in a timely manner (including clear cascading direction from legislation to enabling policies into strategy and then planning and investment).
3 – Longevity	Can the arrangement	3.1 The option supports long-term adaptive planning based on evidence and trigger points to support decision-making.

	adapt as required and last into the future, without the need for wholesale reform?	3.2	The option can be modified in response to any major shifts in policy and regulation, or results of the monitoring and evaluation.
		3.3	The option ensures there are sufficient resources (people, skills, operating resources) available to sustain activities and investment to meet objective.
		3.4	The option is durable, such that the model will not collapse at the first (internal or external) challenge (e.g. developers through administrative appeals).
4 – Collaboration	Does the arrangement sufficiently engage with and account for insights from customers and key stakeholders?	4.1	The option provides the opportunity for key stakeholders, including First Nations groups, to provide input and expertise into decision-making processes at appropriate times and points. The option supports decision-making that is informed by customer and community preferences.
		4.2	The option encourages effective cross-sectoral coordination, especially between policies for water and the environment, people, agriculture, industry, and land use planning.
5 – Whole of system approach	Does the arrangement enable or reflect a whole-of-system approach to IWM?	5.1	The option supports an integrated approach to water management across functions, e.g. service providers, policymakers, etc. The option supports managing water at the appropriate scale(s): whole of system, catchment and local.
		5.2	The option enables investment prioritisation and trade-off decisions to be made.
6 – Financial arrangements	Will the financial arrangements support the delivery of the desired IWM long-term outcomes?	6.1	The option enables a sustainable, reliable, and secure long-term funding stream to be sourced, and funding decisions to be based on clear evidence of customer and citizens willingness to pay for outcomes provided.
		6.2	The option allows for legacy issues and upstream impacts to be addressed, i.e. it is consistent with an 'impactor-pays' approach.
		6.3	The option allows for broader public costs and benefits to be considered in financing decisions (i.e. not just pricing and efficiency), and for costs to be shared accordingly. The option also supports equitable outcomes, including intergenerational.
7 – Complexity	Can the arrangement be implemented with a reasonable level of effort and in a reasonable timeframe?	7.1	The option includes elements/characteristics that will be/are difficult to implement.
		7.2	The option aligns with current stakeholder ambition for IWM governance reform.
		7.3	The option has a clear pathway for implementation. *See next chapter.*
		7.4	There are possible unintended major consequences for other sectors associated with the option that would inhibit implementation. *None identified.*

4.5 Centralised

4.5.1 How a centralised approach might work

Under a centralised approach, the governance arrangements are ringfenced to the Greater Adelaide planning area (Figure 3). All planning, assets, and services are consolidated under the control of SA Water – except stormwater harvesting and MAR schemes already operating that local government elects to retain. For clarity, assets include water, wastewater, all stormwater and flood mitigation infrastructure, including local drainage networks.

There is a structural separation of policymaking for IWM between DEW and the centralised entity. Under these arrangements, DEW sets well-specified policy objectives for IWM in a timely manner, and the centralised entity has regard to these policy objectives when planning, coordinating, and delivering services and infrastructure across Greater Adelaide planning area.

SA Water becomes responsible for overall IWM planning across Greater Adelaide, taking into account DEW policy directions, and directions from the Minister for Housing and Urban Development. SA Water is given a statutory responsibility to identify priority catchments for which regional/catchment IWM priority plans (IWMPs) are prepared. All assets and services (including planning and the operation of existing recycled water schemes (including MAR schemes) unless a local government nominates to retain them) are transferred to SA Water. Existing functions and entities (such as SMA) would be discontinued in Greater Adelaide, and resources reallocated. Assets that may not be able to be transferred (e.g. land and water bodies) would need to have access rights controlled through long term leases. Land where future assets may be required for service would also need to be transferred, or a framework in place that allows the central operator priority right to access the land.

Water security and IWM planning teams in SA Water would operate as a single group with a single governance structure. Water resource planning, and asset and service development would be conducted through one governance framework and process, not parallel processes for water, wastewater, stormwater, waterways and flood mitigation.

The centralised entity would need to be regulated as a monopoly provider. Related actions from the ESCOSA are outlined in section 5.1.6.

4.5.2 Customer and community engagement

All businesses, households, and other institutions would become customers for water, wastewater, stormwater, waterway, and flood mitigation infrastructure and service delivery by SA Water, except for those using water from stormwater harvesting and MAR schemes operated by local governments. Existing entities such as Green Adelaide, landscape boards, and local governments would become key stakeholders.

IWM requires an authorising environment where customers and the community can partner with planning agencies to articulate their needs and priorities. Infrastructure and service decisions regarding input across the customer base would need to be made. To support this, enacting legislation should require that SA Water actively and meaningfully consult with the community and key stakeholders and demonstrate how community and key stakeholders' views have been incorporated into infrastructure and service planning and investment.

SA Water would need to engage with customers to identify their long-term decentralised and centralised urban water preferences in terms that reflect the outcomes they will need to deliver. There should be a clear 'golden thread' between what the centralised entity proposes as priority investments and services and evidence that customers prioritise these investments and services in this order across water, wastewater, stormwater, and flood mitigation in Greater Adelaide.

4.5.3 Financing and funding

Funding for expanded capital, operating and maintenance requirements for regulated infrastructure for water, wastewater, stormwater, waterways, and flood mitigation would be recovered through regulated fees and charges by SA Water. All fees and charges would be levied through SA Water; there would be minimal requirement for co-contributions. Regulated charges would include general charges, special area charges, and developer contributions covering water, wastewater, stormwater, waterways, and flood mitigation. Special area and developer charges should recover the whole-of-life costs of the asset or service being provided by SA Water.

Rates and fees for assets and services transferred from other entities, such as local government and landscape boards, would need to be reduced to account for the transfer of these assets and services.

4.5.4 Key enablers

As discussed above, many key enablers are actions that will be beneficial regardless of the governance model chosen. This includes the development of an evaluation framework for prioritising and valuing long-term investments.

The centralised arrangement would require amendments to legislation – which could involve the Local Government (Stormwater Management) Amendment Act, or the Landscape SA Act.

Further possible legislative amendments may include (but are not limited to) the following:

- widening the definition of the water industry in the WIA to include the provision of water services, sewerage services, stormwater services, waterway services, MAR scheme, or flood mitigation services

- amending the definitions for regulated infrastructure and regulated infrastructure services, and licencing made under Pt 4 of the WIA
- delegating management for waterways and related natural assets to SA Water through the Landscape SA Act
- removing provisions from the LGA Schedule 1 (1A Stormwater Management Agreement 2013) and Landscape SA Act previously allocated to local government and SMA.

4.5.5 Summary of stakeholder perspectives

Some stakeholders considered that the centralised option would be more effective at progressing IWM due to its controlling powers and more sustainable funding source. Others raised concerns that the centralised option could move IWM backwards due to its:

- focus on water supply and drainage
- vulnerability to government changes
- need to prioritise profitability over public good outcomes as a commercial organisation
- reduced integration with landscape management and catchment-level decisions.

While it was recognised that transferring assets by negotiation might help build support among stakeholders for a new centralised arrangement, there was a strong view that negotiations would likely be complex, drawn-out and, in many cases, unsuccessful. Ultimately this could limit IWM.

However, it was identified that many of these risks could be addressed through appropriate changes to legislation, the regulatory environment, and SA Water's charter.

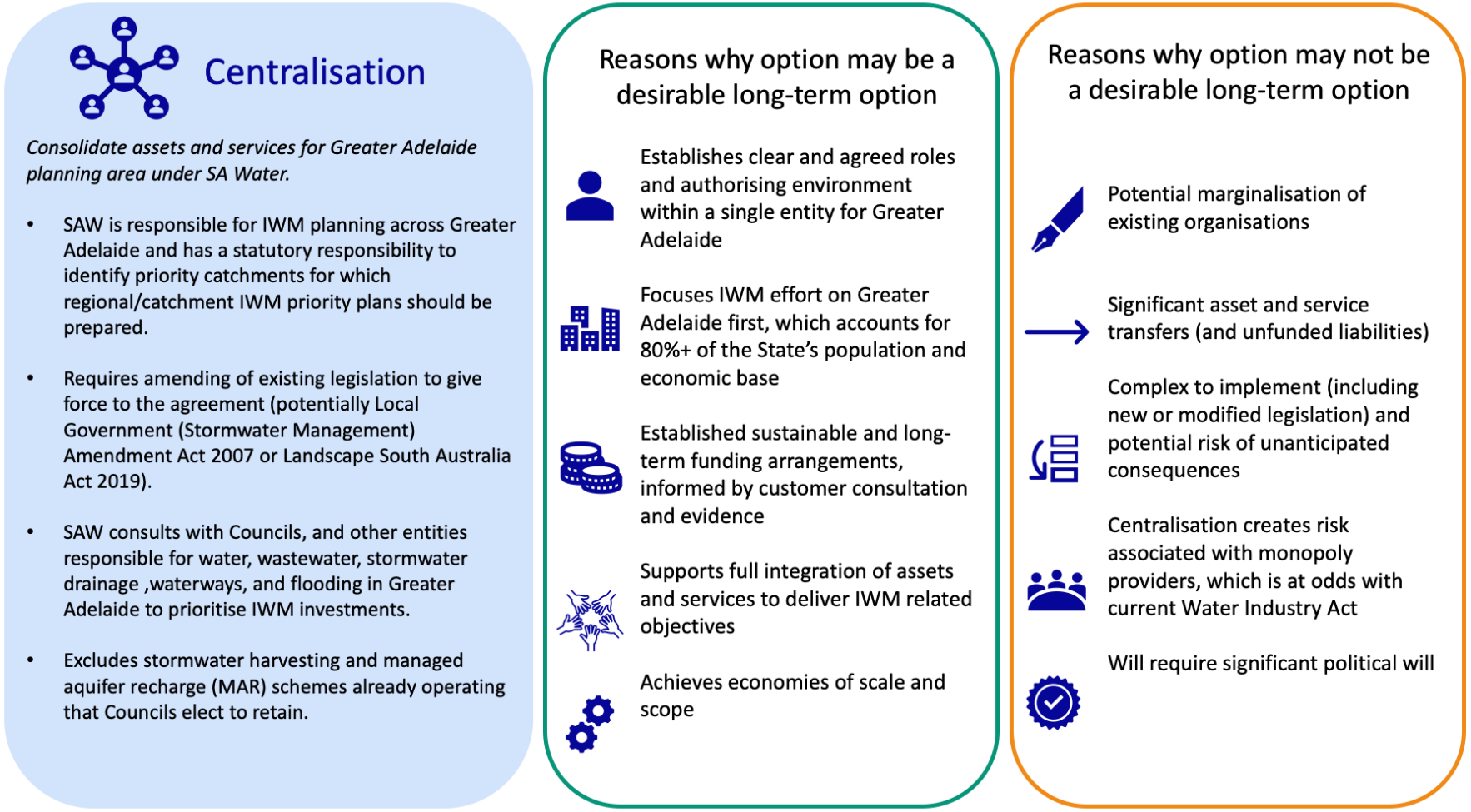


Figure 12: Overview of the centralisation arrangement.

4.5.6 Assessment against criteria

Table 5 assesses the centralised governance model against the criteria established by stakeholders and outlined in section 4.2.

Table 4.4: Centralised – option assessment against criteria.

Key

Yes, option meets sub criteria
Option potentially meets criteria
Unclear if option meets criteria
See note in Italic

Criteria	Description	Sub-criteria
1 – Effectiveness	Are the governance arrangements effective?	1.1 The option supports and enables service delivery partners and stakeholders to have clear and agreed roles, responsibilities, and funding arrangements to achieve objectives and agreed service standards.
		1.2 The option supports and enables a process for resolving disputes and uncertainties around objectives, authority, decision-making and delivery.
		1.3 The option is underpinned by clear objectives and service standards.
		1.4 Strategic and policy decision-making roles and responsibilities are sufficiently separate from operations and maintenance decision-making, i.e. decisions about what to do are separate from decisions around how to operate and maintain assets and services. The option supports and enables roles, responsibilities and funding arrangements to be assigned to those best placed to manage them.
		1.5 The option allows policies and regulations to be enforced.
2 – Efficiency	Are the governance arrangements efficient?	2.1 The option supports/enables achieving IWM outcomes at the lowest economic cost (and/or highest social, economic and environmental benefit). The option does not have gaps or duplication of effort related to roles and responsibilities, and shared resourcing is encouraged where appropriate.
		2.2 The option includes clear mandates and processes that enable agencies and organisations to make IWM decisions in a timely manner, including clear cascading direction from legislation to enabling policies into strategy and then planning and investment.
3 – Longevity	Can the arrangement	3.1 The option supports long-term adaptive planning based on evidence and trigger points to support decision-making.

	adapt as required and last into the future, without the need for wholesale reform?	3.2 The option can be modified in response to any major shifts in policy and regulation, or results of the monitoring and evaluation.
		3.3 The option ensures there are sufficient resources (people, skills, operating resources) available to sustain activities and investment to meet objective.
		3.4 The option is durable, such that the model will not collapse at the first (internal or external) challenge, e.g. developers through administrative appeals.
4 – Collaboration	Does the arrangement sufficiently engage with and account for insights from customers and key stakeholders?	4.1 The option provides the opportunity for key stakeholders, including First Nations groups, to provide input and expertise into decision-making processes at appropriate times and points. The option supports decision-making that is informed by customer and community preferences.
		4.2 The option encourages effective cross-sectoral coordination, especially between policies for water and the environment, people, agriculture, industry, and land use planning.
5 – Whole of system approach	Does the arrangement enable or reflect a whole-of-system approach to IWM?	5.1 The option supports an integrated approach to water management across functions, e.g. service providers, policymakers, etc. The option supports managing water at the appropriate scale(s): whole of system, catchment and local.
		5.2 The option enables investment prioritisation and trade-off decisions to be made.
6 – Financial arrangements	Will the financial arrangements support the delivery of the desired IWM long-term outcomes?	6.1 The option enables a sustainable, reliable, and secure long-term funding stream to be sourced, and funding decisions to be based on clear evidence of customer and citizens willingness to pay for outcomes provided.
		6.2 The option allows for legacy issues and upstream impacts to be addressed, i.e. is it consistent with an 'impactor pays' approach.
		6.3 The option allows for broader public costs and benefits to be considered in financing decisions (i.e. not just pricing and efficiency), and for costs to be shared accordingly. The option also supports equitable outcomes, including intergenerational.
7 – Complexity	Can the arrangement be implemented with a reasonable level of effort and in a reasonable timeframe?	7.1 The option includes elements/characteristics that will be/are difficult to implement.
		7.2 The option aligns with current stakeholder ambition for IWM governance reform.
		7.3 The option has a clear pathway for implementation. *See next chapter.*
		7.4 There are possible unintended major consequences for other sectors associated with the option that would inhibit implementation.

5 An implementation roadmap

This part outlines a staged implementation roadmap for progressing long-term IWM governance reforms in Greater Adelaide.

Key messages

- There was general agreement among stakeholders on the steps required to progress IWM governance reform, which was captured in an implementation roadmap. Proposed steps involve:
  - agreeing on arrangements for a temporary Office of IWM Reform
  - coordinating the delivery of existing IWM actions, including convening a Greater Adelaide IWM forum
  - undertaking due diligence on assets and services, and unfunded liabilities for these
  - undertaking due diligence on the consequential legislative and policy implications associated with both options
  - engaging with ESCOSA on regulatory reforms
  - formalising partnership arrangements with First Nations groups.
- To progress reform, key decisions will need to be made on:
  - the geographical scope for future arrangements
  - an approach for considering implications for other regions across the state and the most appropriate governance arrangements for those regions
  - how best to provide long-term, predictable and appropriate funding
  - the most appropriate approach for oversight and regulation.

5.1 The need for an implementation roadmap

The process highlighted that establishing either of the longer-term options will require complex reform of legislation, regulation, policy, financing, funding and roles and responsibilities. With the impacts of population growth and climate change already evident, stakeholders emphasised the urgency of progressing IWM in parallel to IWM governance reform. As such, the need for an implementation roadmap was identified, outlining the key steps towards long-term arrangements, while continuing to progress IWM.

Interim arrangements were considered critical to ensure clear responsibility and drive both governance reform and IWM while more detailed analysis of the long-term options is undertaken, and long-term arrangements are being established. It became evident through

the process that it was unlikely that funding would be provided for interim arrangements in the short-term. However, there remained general agreement on the steps required to progress IWM governance reform.

5.2 The roadmap

A transition to the statutory authority or centralisation arrangements will require interim foundational actions to support the development of the preferred, longer-term arrangements (Figure 13). The interim actions will clarify which of the long-term arrangements is preferable and the implementation complexity. The actions will also provide due diligence on assets and services and unfunded liabilities, which will be fundamental to risk management for the longer-term arrangements.

The roadmap also includes actions that are considered low- or no-regrets; that is, they will support better IWM governance in Greater Adelaide, irrespective of which longer-term governance option is adopted. They will make it easier for organisations already providing IWM services now to deliver these services in a coordinated and efficient way, with adequate funding and resourcing.

5.2.1 Establish a temporary Office of IWM Reform

Stakeholders agreed that one lead organisation needs to be assigned responsibility for progressing IWM and IWM governance reforms. Furthermore, there was broad support for establishing a temporary Office of IWM Reform with a clear and agreed-upon role for delivering the roadmap. The Office would operate until the roadmap is substantially established and/or delivered.

Many stakeholders emphasised the importance of sufficient resources, power, and independence for the Office given the complexity of reform – including the need for having the authority for the 'tough' decisions. It was noted that power and independence could be achieved with an independent Board and Commissioner to lead the delivery of the actions and report on progress. The former Commissioner for Water Security and associated Office was often provided as a positive example for what would be required to drive the reform. The Office would need to be appropriately resourced by (additional) staff and corporate services (including finance, human resources, and information technology).

There was no clear agreement on who the temporary Office or Commissioner should report to. Most stakeholders believed it should not sit within an existing agency (state, regional or local) but should report directly to the Minister for Climate, Environment and Water. Others suggested that it could sit within an existing agency independent of the day-to-day water management business – perhaps housing and planning given the existing government focus.

On the other hand, some felt it could be progressed through existing arrangements (e.g. the State Water Policy Forum and DEW). However, it was noted that local government was 'not

at this table', which would need to be addressed. Others considered this approach unlikely to progress reform due to limited staff resources.

Several options were put forward for reporting of the temporary Office:

- Minister for Climate, Environment and Water
- DEW, including the State Water Policy Forum
- The Department of the Premier and Cabinet
- Infrastructure SA
- SA Productivity Commission
- DHUD.

Given the level of support for a temporary Office, the need for interim arrangements to drive reform, and different views on the specific arrangements for the Office, a critical next step is for stakeholders to explore, and Government to ultimately decide, on the interim arrangements.

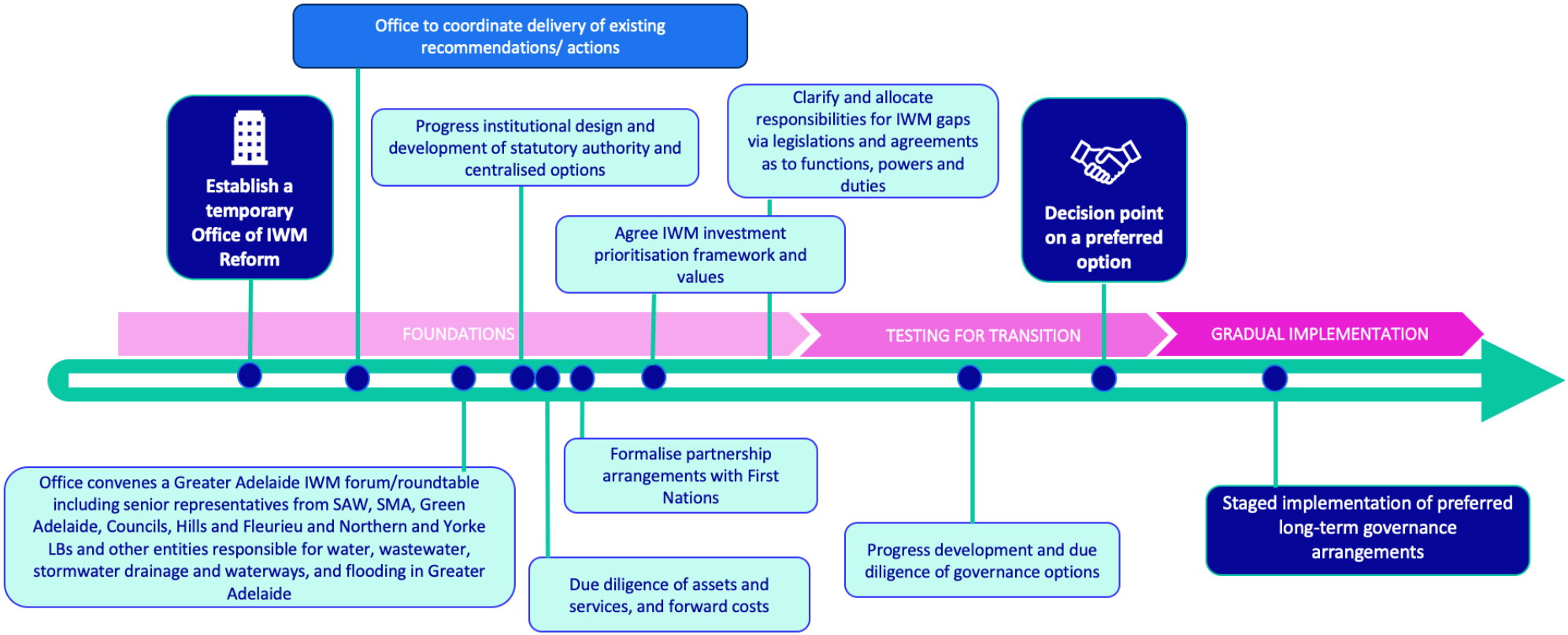


Figure 13: IWM governance reform roadmap.

5.2.2 Coordinate delivery of existing IWM actions

As discussed in sections 2.5 and 2.6, agencies across Greater Adelaide are continually working to identify areas for IWM governance improvement. However, as it stands, most of these strategies and reviews are prepared in isolation. Under the transitional arrangements, a priority low-regret action would be coordinating the implementation of these reviews within an overarching IWM framework to ensure they support and complement agreed-upon long-term IWM goals.

5.2.3 Convene a Greater Adelaide IWM forum

Convening a Greater Adelaide IWM forum is one governance approach that could support the coordinated implementation of recent reviews under an overarching IWM framework. Under the transition arrangements, the Commissioner/Office would convene an IWM forum(s), including senior representatives (with decision-making powers) from SA Water, SMA, local government, Green Adelaide, landscape boards, and other entities responsible for water, wastewater, stormwater drainage and waterways, and flood mitigation. The IWM forum(s) would focus on developing and delivering sub-regional implementation plans and coordinating the delivery of recent and future water governance reform actions described above. The current State Water Policy Forum may be an appropriate forum for this purpose, noting that membership may need to change.

5.2.4 Undertake due diligence

Before implementing larger-scale IWM governance reforms, the Commissioner/Office would further progress the development and due diligence of the statutory authority and centralised arrangements. This process, led by the temporary Office of IWM Reform, would build consensus with key stakeholders and institutions around preferred governance arrangements and transition pathways. It would also undertake due diligence on both the legislative and policy implications, the assets and services, and future costs of assets and services that may be transferred under long-term governance arrangements.

5.2.5 Engage with ESCOSA

Under any future governance arrangement, ESCOSA will continue to play an important regulatory role, particularly over the responsibilities and services provided by SA Water. ESCOSA will need to support, within regulatory requirements, progressing IWM governance arrangements and the IWM investments that customers and citizens want delivered.

As part of progressing customer-centric IWM governance reforms, ESCOSA could provide guidance that permits SA Water to:

- transparently and appropriately consider the full range of commercial, social and environmental costs and benefits for all options in regulated infrastructure and service decisions

- understand that ESCOSA will accept robust evidence of customer willingness to pay for services and infrastructure
- support IWM objectives through setting of explicit service standards
- understand what community and liveability projects fall within the scope of regulated infrastructure and regulated services
- adopt an adaptive and outcomes-based approach to regulation.

5.2.6 Formalise partnership arrangements with First Nations

Developing an effective approach to engaging with First Nations will be critical for exploring any future partnership arrangements. First Nations people must be respectfully and consequentially involved as early in the process as possible.

As part of this work, a plan for engaging First Nations of the Greater Adelaide region was developed by Sarah Smith (a Narungga/Kaurna woman and engagement specialist experienced in community project management) in consultation with identified First Nation representatives. While this work was focused on providing advice to Watertrust for short-term activities, it provided important insights for any future work related to IWM governance reform. Any future work should align with other activities underway (such as DEW's current engagement on a framework for First Nations Interests in Water).[1]

Mindful of the need to balance early representation with the longer-term imperative of achieving meaningful involvement of all four Nations in the region (Kaurna, Ngarrindjeri, Ngadjuri, and Peramangk), a high-level staged approach was developed that can be used as an overall guide to inform when different groups should be engaged for different purposes (Figure 14). It identified that engagement with First Nations should occur at three levels:

1. **Corporate community level** – This level is with community members who work in the government space and is what the current representation focuses on. This is appropriate for executive forums, cross-government workshops, and other broader, corporate activities.
2. **Community level –** This includes formal community organisations such as Aboriginal land local government. This level of engagement is required when specific policies, recommendations, or changes may impact communities. For example, if there are new proposed governance arrangements, then it would be appropriate to engage at

[1] We understand that DEW will lead engagement with First Nations across South Australia throughout 2025 to develop a framework to advance First Nations' water interests. This will include discussions around improving how the state government partners with First Nations communities in water planning and management. If required, outcomes from the statewide engagement that relate to engaging with First Nations of the Greater Adelaide region can be built into the approach detailed here.

this level to inform the design of such arrangements. This is likely the level of engagement required for future activities of this work.

3. **With and in communities** – This is where specific engagement is needed with community members on local and relevant issues. This type of engagement is appropriate when there are local impacts. If the project focuses on high-level institutional arrangements, then this type of engagement may not be required. However, if the project progresses to establishing and delivering IWM, then specific engagement with communities will be appropriate. This approach can be used for engaging if the work progresses.

Figure 14: High-level approach to engaging with First Nations groups.

5.2.7 Address points of focus

Throughout the process, several areas were highlighted as requiring further work as part of due diligence:

- **Geographical scope of IWM governance options –** While the work outlined in this report used the boundary relevant to related SA Water work at the time, it was evident that further work is required to define the most appropriate geographic boundary for IWM governance reform options.
- **South Australian approach –** Related to the above challenge, it was identified that IWM governance reform for Greater Adelaide will have implications for the rest of the state. An approach is required to consider each region and the whole of the state to identify the most appropriate arrangements in each region and ensure no unintended consequences.

- **Funding and financing** – Long-term and sustainable funding for IWM is lacking and current funding models limit the ability to bring on new water sources (such as recycled water) to offset other sources. While new levies and taxes are politically challenging, it was highlighted that a reliance on grants and short-term funding is insufficient and unsustainable. Addressing this challenge will require building community and political support for additional funding to progress IWM and meet community expectations regarding water management.
- **Regulation –** The process highlighted that within the current regulatory environment does not promote IWM. In addition, various perspectives and questions were raised regarding the regulation of the two longer-term arrangements, particularly the statutory authority.
- **Services and assets –** The process revealed a range of perspectives and views regarding the extent of assets and services to be considered in any reform process and if and how these assets would be transferred. Further consideration of these issues is required, including developing a clear definition of stormwater and flood mitigation assets and services.

These are difficult and complex issues requiring careful consideration. They must be addressed if real progress towards IWM is to be made.

6 Concluding remarks

For many years, Greater Adelaide's stakeholders have strongly supported IWM. Despite this support, IWM progress has been limited. The South Australian Government's commitment to addressing governance arrangements provided a significant opportunity to progress IWM.

Discussions during this process confirmed a universal view regarding the *urgency* and *importance* of progressing IWM to support water-related values and address imminent challenges such as population growth and climate change. Stakeholders also highlighted the inadequacy of current governance arrangements for IWM and the need for governance reform.

The process of stakeholders collectively exploring potential governance options ultimately identified two possible institutional arrangements – both are bold and ambitious. The support for more ambitious levels of reform reflects the need for significant change to achieve desired outcomes, and that 'tinkering around the edges' will not be enough. A staged implementation roadmap was developed, which includes more detailed investigations of the two preferred options.

While the water sector considers that the case for major IWM governance reform is strong, it has yet to be successfully articulated to the government and communities. This will be critical for attaining 'buy-in' and appropriate resourcing. For this to occur in the absence of a more pressing political driver (e.g. drought), it was identified that a stronger case for reform will need to clearly articulate the broad social benefits, particularly given the current cost-of-living pressures. This could be built through:

- Engaging broader stakeholders, particularly across the planning and housing sectors and water users, to build wider support for IWM based on the urgent need to achieve urban liveability and resilience outcomes in the face of pressing climate change and population growth pressures
- Champions from across the sector advocating for the reform, including to Ministers of the different and relevant portfolios (e.g. water, planning, housing, infrastructure)
- Engaging the community, including First Nations, to help build the case for change
- A business case or cost-benefit analysis of short-listed governance arrangements, considering the full suite of societal costs and benefits.

To achieve this, stakeholders must continue to work together, recognising that even in the best of circumstances, it will take time, energy and commitment to navigate the complexities of the required change. Should buy-in from the government be established, agreement will need to be reached on the interim arrangements. Leadership of a single agency with appropriate resourcing and authority will be critical for driving reform, along with the support from champions from across the sector.

This work offers an important foundation for considered reform, that could progress a vision for Greater Adelaide's water system that is secure and prepared to support communities, industries and ecosystems to thrive for generations to come.

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Appendix A: About Watertrust Australia

Why we exist

Our water resources and catchments are essential to our communities, First Peoples, industries, and ecosystems. Yet Australia is the driest inhabited continent on Earth and has some of its most highly variable rainfall and runoff. Climate change is disrupting historical patterns and exacerbating droughts and floods.

This creates an immense challenge in deciding who gets water, where and when. We don't always share aspirations or a vision for managing our waters and catchments, and the ways to achieve them. In fact, water policy is often plagued by deep divisions, contested evidence and mistrust. Policymakers often don't know how to get over these hurdles, leading to deadlocks and poor water outcomes for many.

To get past our deadlocks and the status quo we need new approaches to water policy and management decision-making.

We are a trusted, independent and impartial broker of better water and catchment policy decision-making. We are funded by a coalition of philanthropies working together to provide financial support for an initial 10-year period and are incubated at the Australian Academy of Science.

Role of Watertrust

We are working towards three goals:

1. Governments develop water and catchment policy through inclusive, legitimate and fair processes.

Australia's water policy decision-makers face countless challenges in navigating the many demands and considerations that come with water and catchment management.

We provide the support policymakers need to run better processes, engage meaningfully with stakeholders, and wade through the available evidence so they can create better policies with lasting impact for all.

2. Stakeholders meaningfully participate in water and catchment policy processes.

Water stakeholders frequently express frustration at water policy processes and often don't see policy decisions as fair or legitimate. They're frustrated at either being excluded from decision-making processes entirely or feel like they're over-consulted but under-listened to.

They want to be involved in policy processes, so policies are more likely to work for everyone, now and into the future. We want to make this transformation happen.

3: Engagement with evidence drives productive dialogue and debate.

Evidence is often cherry-picked and weaponised by interest groups to shut down debate and limit policy options. This creates more division and makes policy decisions harder.

We think it's critical that policymakers and stakeholders engage with evidence in ways that expand the range of policy options so we can find solutions that work for everyone.

Delivery model

We have an independent Board, supported by an Influence Advisory Committee. We maintain a small and diverse team of experienced and trusted staff, who work closely with of external, independent experts, including members of our Expert Advisory Panel. This allows us to be nimble, establishing bespoke project teams consisting of internal and external members that are tailored for specific water issues.

Appendix B: Greater Adelaide water governance institutional arrangements

Department for Environment and Water (DEW)	• Responsible for leading the development of state-wide strategy and oversight of implementation of state-wide water policy • Flood management hazard leader with specific duties in state-wide emergency flood management planning, including the development of a Hazard Plan • Management of specific stormwater assets identified in the Stormwater Management Agreement (e.g. Patawalonga)	State emergency management plan under the Emergency Management Act 2004 (SA) Stormwater Management Agreement SA Landscape Act 2019 Water Industry Act 2012
SA Water	• SA Water is a government-owned provider of water and sewerage services. Their primary function is to provide services (a) for the supply of water by means of reticulated systems (b) for the storage, treatment and supply of bulk water; and (c) for the removal and treatment of wastewater by means of sewerage systems. • SA water is also responsible for the Sturt River Flood Control Dam, and the parts of Adelaide watercourses that it manages pursuant to the Metropolitan Drainage Act 1935 (SA) and the South Western Suburbs Drainage Act 1959 (SA)	SA Water Corporation Act, 1994 Water Industry Act 2012 South Western Suburbs Drainage Act 1959 (SA) Metropolitan Drainage Act 1935 (SA) Safe Drinking Water Act 2011 Environment Protection Act 1993 SA Landscape Act 2019
Essential Services of Commission SA (ESCOSA)	• Undertakes economic regulation in the water and sewerage industries • Provides advice to local councils under the Local Government Act 1999 (a new function commenced on 30 April 2022) • Provides advice to the South Australian Government on economic and regulatory matters and conducts formal public inquiries	Water Industry Act 2012

Local Government	• Take measures (including building and maintenance of infrastructure) to protect their local government area from natural hazards, including flooding from stormwater runoff • Have a role to "manage, develop, protect, restore, enhance and conserve the environment in an ecologically sustainable manner ..." • Assess development applications against the Development Code. • Have a role in maintaining some roads (and stormwater fixtures installed to protect roads)	Schedule 1A of the Local Government Act 1999 (SA) Planning, Development and Infrastructure Act 2016 (SA) Metropolitan Drainage Act 1935 (SA) South-Western Suburbs Drainage Act 1959 (SA)
Stormwater Management Authority	• Provide oversight and coordination of stormwater management, • Assist state and local government in preparing policies and best practice • Facilitate and coordinate preparation of stormwater management plans (SMP) with local government • Provide funding under the Stormwater Management Fund (SMF) to support local government in the delivery of SMPs	The Stormwater Management Agreement and Schedule 1A of the Local Government Act 1999 (SA)
Landscape Boards & Green Adelaide	• Administer the Landscape SA Act • Provide strategic leadership for their regions landscape management • Have special powers to carry out works, including works undertaken for the purposes of stormwater management or flood mitigation	Landscape Act 2019 (SA)

Environment Protection Authority (EPA)	• Responsible for the protection of the environment, including from a water quality perspective • Responsible for issuing and managing licenses as well as mitigation of non-point source pollutions	Environment Protection Act 1993 (SA) and Environment Protection (Water Quality Policy) 2015
Department for Infrastructure & Transport (DIT)	• Responsible for overseeing the development and land use planning across the state • Manages approximately 25 percent of SA's road network • Develops stormwater design standards and guidelines	Planning, Development and Infrastructure Act 2016 (SA)
Department for Health & Wellbeing	• Responsible for developing policy and providing advice to other agencies and the public to prevent or minimise the adverse health effects of environmental hazards in the South Australian community, including providing advice to water providers, local councils, government agencies, and the public on the health implications of recycled water use (including stormwater reuse)	South Australian Recycled Water Guidelines 2012) SA Public Health Act 2011 Safe Water Drinking Act 2011
State Emergency Services	• Flood emergency control agency, responsible for coordinating emergency response following a flooding event	State emergency management plan under the Emergency Management Act 2004 (SA)
Office of Technical Regulator (OTR)	• Responsible for compliance with legislation and applicable technical standards in the electricity, gas and water industries to ensure the safety of workers, consumers and property.	Water Industry Act 2012

Appendix C: Assessment criteria

Criteria	Sub-criteria	
Effectiveness *The extent to which governance arrangements are effective.*	1	The arrangement is underpinned by clear objectives and service standards.
	2	The arrangement supports and enables service delivery partners and stakeholders to have clear and agreed roles, responsibilities, and funding arrangements to achieve objectives and agreed service standards.
	3	The arrangement supports and enables a process for resolving disputes and uncertainties around objectives, authority and decision-making.
	4	Strategic and policy decision-making roles and responsibilities are sufficiently separate from operations and maintenance decision-making (i.e. decisions about what to do are separate from decisions around how to operate and maintain assets and services).
	5	The arrangement supports and enables roles, responsibilities, and funding arrangements to be assigned to those best placed to manage them.
	6	The arrangement allows decisions, policies, and regulations to be enforced.
Efficiency *The extent to which governance arrangements are efficient.*	1	The arrangement supports/enables achieving IWM outcomes at the lowest economic cost (and/or highest social, economic and environmental benefit) in Greater Adelaide.
	2	The arrangement does not have gaps or duplication of effort with respect to roles and responsibilities, and shared resourcing is encouraged where appropriate.
	3	The arrangement includes clear mandates and processes that enable agencies and organisations to make IWM decisions in a timely manner (including clear cascading direction from legislation to enabling policies into strategy and then planning and investment).
Longevity *The arrangement adapts as required and lasts into the future, without the need for*	1	The arrangement supports long-term adaptive planning based on evidence and trigger points to support decision-making.
	2	The arrangement can be modified in response to any major shifts in policy and regulation, or results of the monitoring and evaluation.
	3	The arrangement ensures there are sufficient resources (people, skills, operating resources) available to sustain activities and investment to meet objectives.
	4	The arrangement is durable, such that the arrangement will not collapse at the first (internal or external) challenge (e.g. developers through administrative appeals).

Criteria	Sub-criteria	
wholesale reform.		
Collaboration *The arrangement sufficiently engages with and accounts for insights from customers and key stakeholders.*	1	The arrangement provides the opportunity for key stakeholders to provide input and expertise into decision-making processes at appropriate times and points.
	2	The arrangement enables meaningful collaboration and engagement with First Nations groups.
	3	The arrangement supports decision-making that is informed by customer and community preferences.
	4	The arrangement supports a culture where all water users and managers are committed to implementing IWM as the best method for achieving desired water-related outcomes.
	5	The arrangement promotes regular monitoring and evaluation of water policy and governance where appropriate and shares the results with the public.
	6	The arrangement encourages effective cross-sectoral coordination, especially between policies for water and the environment, people, agriculture, industry, and land use planning.
Whole-of-system approach	1	The arrangement supports an integrated approach to water management across functions e.g. service providers, policymakers, etc.
	2	The arrangement supports managing water at the appropriate scale(s): whole of system, catchment and local.
	3	The arrangement enables investment prioritisation and trade-off decisions to be made.
Financial arrangements	1	The arrangement enables a sustainable, reliable, and secure long-term funding stream to be sourced.
	2	The arrangement allows for legacy issues and upstream impacts to be addressed i.e. is it consistent with an 'impactor pays' approach.
	3	The arrangement ensures funding decisions are based on clear evidence.
	4	The arrangement allows for broader public costs and benefits to be considered in financing decisions (i.e. not just pricing and efficiency), and for costs to be shared accordingly.
	5	The arrangement supports equitable outcomes (horizontal and vertical). *Note: Horizontal equity refers to treating people in similar situations in similar ways. Vertical equity refers to those with greater means contributing proportionally more than those with lesser means. For example, vertical equity could be achieved by charging different prices to different people for the same service.*
Achievability of Implementation	1	The characteristics of the arrangement make it difficult to implement.
	2	The arrangement aligns with current stakeholder ambition for IWM governance reform.
	3	There are possible unintended major consequences for other sectors associated with the arrangement that would inhibit implementation.

Appendix D: Phases

Phase 0 – Confirming the challenges and ambition for IWM

Watertrust initially engaged with stakeholders to understand the broad issues and explore whether Watertrust could provide a valuable role in convening an independent process for stakeholders to collectively explore future governance arrangements (Phase 0). This consisted of a series of one-on-one meetings with selected stakeholders of different types.

Phase 1 – Exploring barriers and opportunities

Phase 1 focused on identifying desired outcomes from IWM, governance barriers to IWM, and the level of ambition among relevant stakeholders for governance reform. Key activities included:

- a high-level analysis of the experiences of IWM governance reform across Australia, including an interview with a national water utility leader involved in IWM implementation
- an online stakeholder survey, capturing the views of a broad range of stakeholders, with 20 respondents in leadership positions at South Australian state government agencies, water utilities, local governments and industry organisations
- structured one-on-one stakeholder interviews with leaders from 15 state government agencies, water utilities, local governments and industry organisations
- research to better understand the current governance arrangements and work to date
- an interim report capturing the areas of agreement and disagreement revealed through the survey and interviews
- an independently convened Executive Forum involving 44 sector leaders from across 30 organisations
- a phase 1 summary report.

Phase 2 – Exploring possible governance options

The aim of Phase 2 was to identify and explore possible governance options and develop a shortlist of options that warrant detailed investigation. Through an iterative process, the benefits and limitations of various option were identified, with the number of options progressively narrowed. Remaining options were further refined based on stakeholder perspectives. In addition, a possible pathway forward for stakeholders was identified, including key steps required to progress towards long-term arrangements.

Phase 2 included:

- an independent, preliminary analysis of feasible institutional and funding arrangements for achieving the desired outcomes of IWM as a basis for stakeholder input
- a series of sector workshops (state agencies, regional bodies and stakeholders, local government) for stakeholders to provide input on potential institutional and funding arrangements
- an online stakeholder survey on criteria for design and assessing refined governance options
- preparation of a summary report of findings of sector workshops
- development of a refined shortlist of possible institutional and funding arrangements based on the input of stakeholders and design and assessment criteria
- targeted one-on-one meetings with a cross-section of stakeholders to test the refined, shortlisted options
- preparation of a summary report of findings of targeted one-on-one meetings
- preparation of this report, including refined and more detailed options based on sector workshops and one-on-one meetings.

The original plan was for another Executive Forum with an intent of reaching agreement among sector leaders on the shortlisted governance options warranting due diligence. However, through the process it become clear that many stakeholders felt that an Executive Forum was no longer the most valuable approach given the general agreement on the longer-term options warranting due diligence and a lack of clarity on the government's appetite for reform in the short-term.

Appendix E: Stakeholders

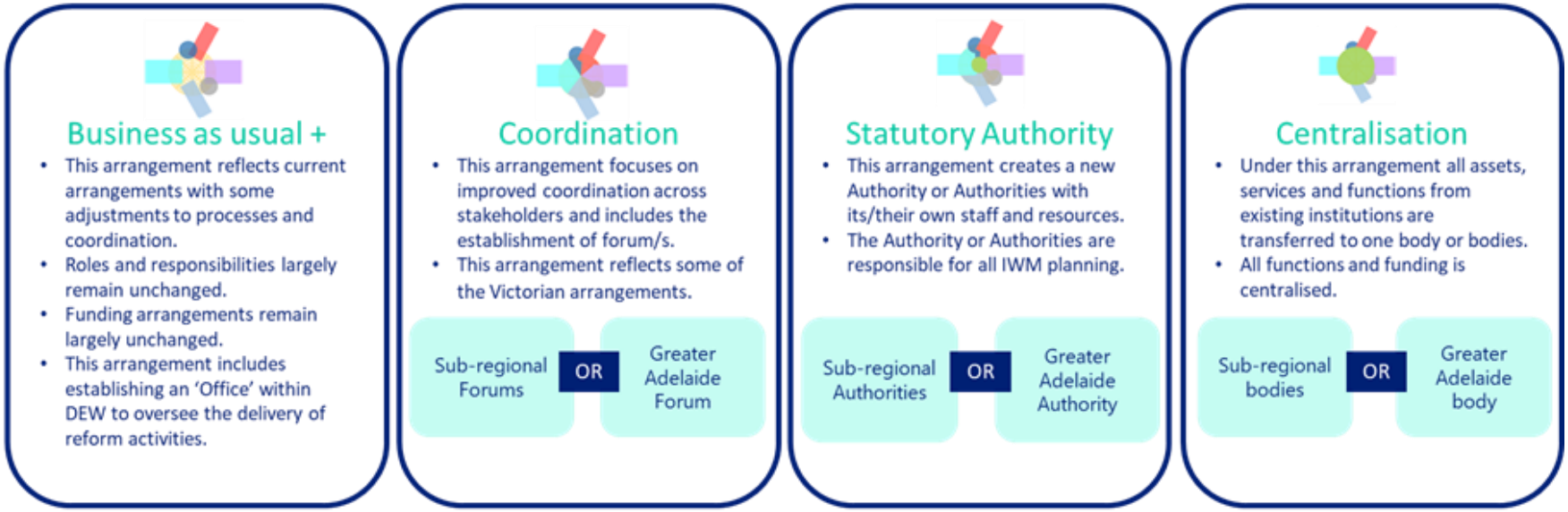
Organisation	Number of personnel engaged	Engagement activity					
		Project updates and communication	Interview Phase 1	Executive forum	Council briefings	Sector workshop	Interview Phase 2
Adelaide Hills Council	3	Yes			Yes		
Adelaide Plains Council	3	Yes			Yes	Yes	
Alexandrina Council	3	Yes				Yes	
Barossa Infrastructure Limited	1		Yes	Yes			
City of Adelaide	2	Yes			Yes		
City of Burnside	1	Yes					
City of Campbelltown	3	Yes		Yes			
City of Charles Sturt	3	Yes		Yes			Yes
City of Holdfast Bay	3	Yes			Yes		
City of Marion	3	Yes	Yes	Yes		Yes	
City of Mitcham	3	Yes		Yes	Yes	Yes	
City of Norwood, Payneham and St Peters	1	Yes					
City of Onkaparinga	3	Yes	Yes		Yes	Yes	
City of Playford	3	Yes		Yes	Yes	Yes	Yes
City of Port Adelaide Enfield	2	Yes				Yes	
City of Prospect	1	Yes					
City of Salisbury / Salisbury Water	4	Yes	Yes	Yes		Yes	
City of Tea Tree Gully	2	Yes		Yes	Yes	Yes	Yes
City of Unley	1	Yes					
City of Victor Harbour	6	Yes			Yes	Yes	
City of West Torrens	4	Yes			Yes	Yes	
District Council of Yankalilla	2	Yes			Yes		
Conservation Council	3	Yes		Yes		Yes	

Organisation	Number of personnel engaged	Engagement activity					
		Project updates and communication	Interview Phase 1	Executive forum	Council briefings	Sector workshop	Interview Phase 2
Corporation of the Town of Walkerville	1	Yes					
Department for Energy and Mining / Office of the Technical Regulator	3	Yes		Yes		Yes	Yes
Department for Health and Wellbeing / SA Health	3	Yes				Yes	Yes
Department for Trade and Investment – Planning and Land-use Services	5	Yes		Yes		Yes	Yes
Department of Treasury and Finance	3	Yes		Yes		Yes	Yes
Department for Environment and Water	5	Yes		Yes	Yes	Yes	
Eastern Region Alliance Water	2	Yes		Yes	Yes	Yes	
Environment Protection Authority	3	Yes	Yes	Yes		Yes	
Essential Services Commission of South Australia	4	Yes		Yes		Yes	Yes
Green Adelaide	4	Yes	Yes			Yes	
Hills and Fleurieu Landscape Board	4	Yes	Yes	Yes		Yes	
Legatus Group	1	Yes					
LGA South Australia	2	Yes	Yes	Yes	Yes	Yes	
Light Regional Council	2	Yes	Yes	Yes	Yes	Yes	
Mount Barker District Council	2	Yes	Yes			Yes	
Murraylands and Riverland Landscape Board	4	Yes		Yes		Yes	Yes
Northern and Yorke Landscape Board	3	Yes		Yes		Yes	
Regional Development Australia – Murraylands and Riverland	1	Yes					
Regional Development Australia – Barossa Gawler Light Adelaide Plains	3	Yes		Yes		Yes	
Resilient East	1	Yes				Yes	
Rural City of Murray Bridge	3	Yes		Yes	Yes		Yes
SA Water	8	Yes		Yes		Yes	
South Australian Council of Social Service	3	Yes				Yes	

Organisation	Number of personnel engaged	Engagement activity					
		Project updates and communication	Interview Phase 1	Executive forum	Council briefings	Sector workshop	Interview Phase 2
Stormwater Management Authority	4	Yes	Yes	Yes		Yes	
The Barossa Council	2	Yes			Yes		
Town of Gawler	1	Yes					
Urban Development Institute of Australia – SA Division	2	Yes				Yes	
Water Ambassador for SA	1			Yes			
Water Sensitive SA	1			Yes			
Water Utilities Australia	3		Yes	Yes			

Appendix F: Longlist of options

Four high-level institutional arrangements have been identified across a decentralised-centralised spectrum



Business as usual +

Stateside water policy	IWM and statewide water policy and plans developed by DEW.
Option summary	Office of Integrated Water Reform established within DEW to coordinate delivery of existing recommendations/ actions and report on progress of these actions to the Minister. Also identifies how to address IWM gaps by allocating responsibilities across institutions.
Powers conferred by	Existing legislation.
Other legislative reform required	Clarify and allocate responsibilities for 'IWM gaps'. Allocation of responsibility would need to be formal and passed into relevant legislation and agreements as functions, powers and duties (under for example WIA 2012 and LGA 1999, Metropolitan Drainage Act 1935 (SA) and the South-Western Suburbs Drainage Act 1959 (SA), SMA, and Landscape SA Act 2019) so that responsibilities do not contravene existing legislation. For example, modification of the WIA 2012, LGA 1999 and SMA 2007, and Natural Resources Management Act 2004.
Asset and service management	Remains with existing institutions (Appendix B). **SA Water:** water, wastewater and specific waterways **Local government:** protect community from natural hazards, including flooding from stormwater runoff + some wastewater, SMPs **SMA:** oversee and coordinate stormwater and fund SMPs via SMF **Landscape Board(s) and Green Adelaide:** special powers for works in stormwater management or flood mitigation.
Planning, investment prioritisation & coordination	Office encourages the use of consistent investment prioritisation approach and coordination of IWM across IWM institutions.
Funding and resourcing	Regulated and unregulated fees and charging approach. Funding for asset and service gaps and new assets and services allocated to be collected by delivery agencies, using existing funding approaches, under a wider remit. Funding for Office of Integrated Water Reform through DEW State Budget appropriation.

Coordination - IWM Forum (Sub-regional or Greater Adelaide)

Stateside water policy	IWM and statewide water policy and plans developed by DEW.
Option summary	IWM forum/roundtable with an independent convenor; potentially as a subgroup of an existing institution(s). Forum members are key stakeholders in IWM in Greater Adelaide or for sub-regions within. IWM forum roundtable sets strategic direction via high level plan (vision, objectives, performance measures and targets) and agree on work priorities and how to address IWM gaps. Decision-making is based on consensus, led by convenor. Could be implemented at the Greater Adelaide scale, or at a sub-regional scale.
Powers conferred by	Agreement of forum members, no legislative changes to confer powers. Potential modification of one or more Acts to enable Minister to establish Forum(s).
Other legislative reform required	Clarify and allocate responsibilities for 'IWM gaps' - private local, public local and regional (major) drainage and waterways. Allocation of responsibility would need to be formal and passed into relevant legislation and agreements as functions, powers and duties (under for example WIA 2012 and LGA 1999, Metropolitan Drainage Act 1935 (SA) and the South-Western Suburbs Drainage Act 1959 (SA), SMA, and Landscape SA Act 2019) so that responsibilities do not contravene existing legislation. For example, modification of the WIA 2012, LGA 1999 and SMA 2007, and Natural Resources Management Act 2004.
Asset and service management	Remain with existing institutions. IWM Forum(s) issues non-enforceable recommendations and performance measures for IWM asset and services by SA Water, Councils, Green Adelaide and other key entities. Can also make non-enforceable recommendations so that entities co-operate in IWM management planning and the construction and maintenance of IWM related management works.
Planning, investment prioritisation & coordination	IWM forum uses consensus to agree on strategic direction through high level plan and IWM work priorities, having regard to forum members own plans and responsibilities. Agreement is best endeavours, i.e. non-binding
Funding and resourcing	Regulated and unregulated fees and charging approach from existing institutions. Funding for asset and service gaps and new assets and services allocated to be collected by delivery agencies, using existing funding approaches, under a wider remit. Funding for IWM forum subgroup depends on how institution is established

IWM Statutory Authority (Sub-regional or Greater Adelaide)

Stateside water policy	IWM and statewide water policy and plans developed by DEW.
Option summary	Establish an IWM Authority/Authorities either as new entity or transforming/extending functions of existing entity. Authority/Authorities include a Board and its own resourcing and staff independent of SA Water, DEW, Councils, SMA, Green Adelaide, and Landscape Boards. Authority/Authorities is responsible for IWM planning across Greater Adelaide or within subregions, with a statutory responsibility to identify priority catchments for which IWM priority plans (IWMPs) should be prepared. Also responsible for determining how to address IWM gaps.
Powers conferred by	Potential creation of new Act or amendments to the Water Industry Act, Landscape SA Act 2019 and amending Local Government (Stormwater Management) Amendment Act 2007 and other Acts.
Other legislative reform required	Clarify and allocate responsibilities for 'IWM gaps' - private local, public local and regional (major) drainage and waterways. Allocation of responsibility would need to be formal and passed into relevant legislation and agreements as functions, powers and duties (under for example WIA 2012 and LGA 1999, Metropolitan Drainage Act 1935 (SA) and the South-Western Suburbs Drainage Act 1959 (SA), SMA, and Landscape SA Act 2019), so that responsibilities do not contravene existing legislation. For example, modification of the WIA 2012, LGA 1999 and SMA 2007, and Natural Resources Management Act 2004.
Asset and service management	Remain with existing institutions. IWM Authority/Authorities can make enforceable undertakings and define performance measures for IWM investment by SA Water, Councils, SMA, Green Adelaide, Landscape Boards, and other key entities. The Authority can also make enforceable recommendations so that entities co-operate in IWM management planning and the construction and maintenance of IWM related management works.
Planning, investment prioritisation & coordination	Authority/Authorities leads investment planning and priority setting across institutions. Planning and investment prioritisation and coordination is binding through legislation or equivalent on existing institutions.
Funding and resourcing	Through existing regulated and unregulated fees and charging approach from existing institutions. Funding for asset and service gaps and new assets and services through mandated by Authority/Authorities, to be collected by delivery agencies. Authority/Authorities can mandate financial contributions beyond those included in plans (such as Councils' Strategic Asset Management Plans and the Long-Term Financial Management Plan).

Centralised (Sub-regional or Greater Adelaide)

Stateside water policy	IWM and statewide water policy and plans developed by DEW
Option summary	Transfer responsibility for all assets, services, and functions from existing institutions a single institution at Greater Adelaide scale or institutions at a sub-regional scale. Centralised institution(s) includes a Board and its own resourcing/staff that is independent of Councils and other entities currently responsible for water, wastewater, stormwater drainage and waterways, and flooding in Greater Adelaide. All corporate services (including finance, human resources, and information technology) are internalised at the institution.
Powers conferred by	Potential creation of new Act or amendments to the Water Industry Act, Landscape SA Act 2019 and repealing Local Government (Stormwater Management) Amendment Act 2007 and other Acts.
Other legislative reform required	Clarify and allocate responsibilities for 'IWM gaps' - private local, public local and regional (major) drainage and waterways. Allocation of responsibility would need to be formal and passed into relevant legislation and agreements as functions, powers and duties (under for example WIA 2012 and LGA 1999, Metropolitan Drainage Act 1935 (SA) and the South-Western Suburbs Drainage Act 1959 (SA), SMA, and Landscape SA Act 2019) so that responsibilities do not contravene existing legislation. For example, modification of the WIA 2012, LGA 1999 and SMA 2007, and Natural Resources Management Act 2004.
Asset and service management	Centralised entity.
Planning, investment prioritisation & coordination	Planning, prioritisation and coordination is undertaken by centralised entity in consultation with key stakeholders – customers, Councils, SA Water, Green Adelaide, Landscape Boards, DEW and others.
Funding and resourcing	Regulated fees and charges. Councils, and other institutions that assets and services are transferred from reduce fees and charges to account for transfer.