



To ensure that we are on track to meet our vision and outcomes will require a robust and adaptive monitoring and assessment framework.



Part 7

Staying on track
– implementation and monitoring

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Introduction

Water for Good is an overarching integrated management plan that will see South Australia become an internationally-recognised water-sensitive State by 2050.

It contains more than 90 actions collectively designed to ensure that we have a secure and reliable supply of water to support economic, social and cultural development.

A vital component of the Plan will be the development of water demand and supply plans for every region of the State outside of Greater Adelaide. They will sit side-by-side with **Water for Good** and support and inform its delivery in the short, medium and long terms.

Tracking the implementation and achievement of this suite of actions – and the status of water demand and supply through these regional plans – will require a robust and adaptive monitoring and assessment framework.

This section outlines how we will achieve this.

Key Points

- The implementation of **Water for Good** will require the active involvement of all South Australians.
- An adaptive management framework has been developed to review the assumptions underlying demand and supply augmentation scenarios
- The Office for Water Security will undertake the development and review of all regional water demand and supply plans
- The assumptions in each regional water demand and supply plan will be reviewed annually
- If an annual review finds a substantial deviation from the original assumptions underlying demand and supply augmentation scenarios, a comprehensive review will automatically be triggered
- A comprehensive review of all regional water demand and supply plans will occur every five years, unless triggered earlier.

Discussion

The South Australian Government, industry, business and water consumers will need to work collaboratively to ensure the actions in this Plan can be achieved successfully.

Water Proofing Adelaide

Water Proofing Adelaide (WPA) 2005 is a 20-year strategy for the management, conservation and development of Adelaide's water resources. It contains 63 strategies and sets the target of reducing water use by 70 GL a year by 2025. The area covered by WPA encompasses the Greater Adelaide region, including Myponga, the Barossa Valley and the western Mt Lofty Ranges.

In July 2008, engineering consultants GHD undertook an independent review of WPA. This not only fulfilled the strategy's commitment to regular review but was also in response to significant changes in climatic conditions, new knowledge and policy development at both State and national levels.

The key findings of the review were:

- That nearly all of the strategies are 'on track' to be met, with 14 already completed
- The establishment of the Office of Water Security has provided a central point of contact and coordination and re-invigorated action among the agencies and stakeholders delivering WPA
- Water savings and additional water supplies achieved at the time of the review (approximately 15 GL/a on-going) represent about 20 per cent of the 2025 WPA target.

Water for Good Action Plan

Table 12 outlines all of the actions contained within **Water for Good** as well as any actions arising out of *Water Proofing Adelaide*.

Adaptive management framework

As outlined in Part 3 – *The challenges of demand and supply*, an adaptive management framework will be developed to ensure that decisions are made in a timely manner. This new framework will consider the following factors:

- a set of water security standards
- state of the resource
- demand pressures
- governance and management
- options and assessment process
- measuring and monitoring.

Annual review of assumptions

This Plan and the regional water demand and supply plans will be reviewed annually. These reviews will not only look at the status of demand and supply in each area but also the assumptions the plans contain. **Water for Good** will be examined for the first time in 2010. The regional plans will be reviewed 12 months after they are completed and approved.

The review process will assess assumptions against set water demand and supply criteria; identify matters that relate to any future issues and assess the reliability of the current water supply system relative to forecast demand. Both demand and supply forecasts will be updated as required.

The annual review process will provide an important check-point for significant investment decisions, and this could improve the cost effectiveness of projects. The review frequency is particularly important in the water industry, as significant lead times are often required for the design and construction of infrastructure.

An adaptive management framework requires a clear single point of authority so that management and monitoring are transparent, accountable and supported by science. In the medium to long term, the Government will examine options for an independent entity to oversee the annual review process and to ensure that triggers contained in plans are appropriately activated. The independent entity would ensure consistent monitoring of water demand and supply standards and note any changes, as well as assess all options and initiatives as they may arise. In the interim, the Office for Water Security will undertake this role.

Five yearly comprehensive reviews

All water demand and supply plans will be comprehensively reviewed and updated every five years, unless such a review has been triggered earlier.

In addition to reviewing the assumptions, the five-year comprehensive review and amendment will incorporate an assessment of the effectiveness of the plan to date.

Outcome

Water for Good and all regional water demand and supply plans are regularly and robustly reviewed and updated.

New actions

Undertake annual reviews of **Water for Good** and regional water demand and supply plans, checking both the status of resources and the assumptions on which the plans are based.

Undertake comprehensive review and amendment of **Water for Good** and regional water demand and supply plans on a five-yearly basis.

The Minister will publish an annual statement that will:

- assess progress and identify any risks or issues
- review and confirm water security standards for the upcoming review period
- provide a demand and supply status for each region
- identify and analyse impacts of any emerging issues.

Figure 41
Review Process

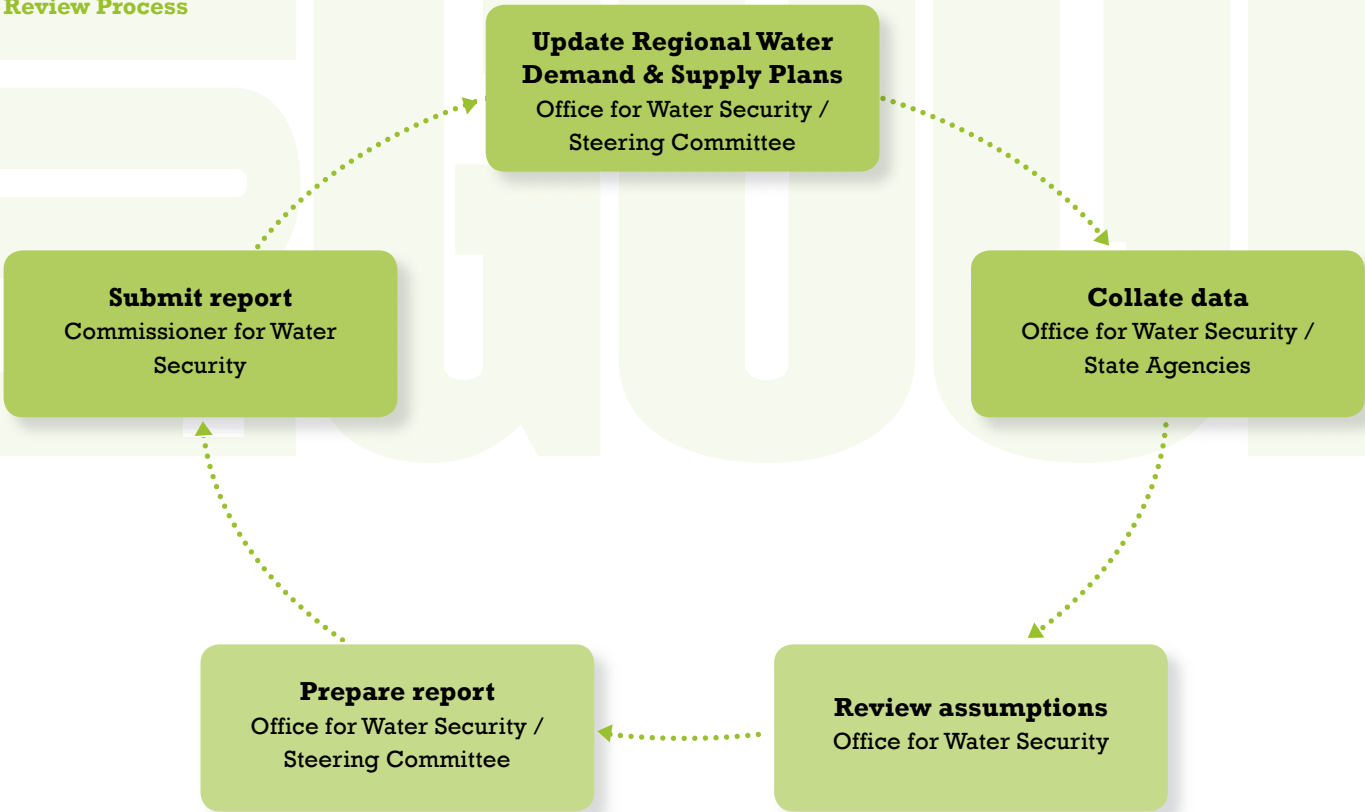


Table 12
Summary of Actions

Action	Start Date	Completion Date	Lead Agency	Partners
1. Establish an adaptable management framework, incorporating an annual review process, to assist in making timely and appropriate decisions to provide ongoing water security throughout the State.	2009	Ongoing	OWS	
2. The Minister will produce an annual statement that will: <ul style="list-style-type: none"> • assess progress of the Plan and identify any risks or issues • review and confirm water security standards for the upcoming review period • provide demand-supply status for each region • identify and analyse impacts of any emerging issues. 	2010	Ongoing	OWS	SA Water DWLBC NRM Boards DP&LG
3. The Minister will establish an independent planning process if demand and supply forecasts indicate a gap is likely to exist in the foreseeable future.	As required	As required	Minister for Water Security OWS	DWLBC Department of Treasury & Finance Independent chairperson
4. Undertake annual reviews of Water for Good and regional water demand and supply plans, checking both the status of resources and the assumptions on which the plans are based.	2009	Ongoing	OWS	SA Water DWLBC
5. Undertake comprehensive review and amendment of Water for Good and regional water demand and supply plans on a five-yearly basis.	2014	Ongoing	OWS	SA Water DWLBC ESCOSA
Desalination				
6. Construct a major desalination plant powered by renewable energy to supply Greater Adelaide with 'first water' by December 2010, 50 GL/a by mid 2011, and 100 GL/a by the end of 2012.	2009	2012	SA Water	
7. Additional water sources including desalinated seawater will supplement the Eyre Peninsula water resources, subject to site and environmental investigations.	2009	2014	SA Water	EPA
8. Complete the investigation for the design of, and need for, interconnection works between Adelaide's southern and northern water supply systems.	2009	2012	SA Water	
9. By 2010, finalise a statewide desalination policy to guide future desalination plant proposals, including the identification of additional suitable sites in case they are needed in the future.	Underway	2010	SA Water	EPA DWLBC OWS SA Health

Table 12**Summary of Actions (continued)**

Action	Start Date	Completion Date	Lead Agency	Partners
10. Investigate the viability of constructing groundwater desalination plants for regional townships where water quality (i.e. salinity) has been identified as an issue. This will enable improvements to these water supplies by 2025 at the latest.	Underway	2025	SA Water	SA Health OWS
Stormwater Recycling				
11. Complete existing committed stormwater projects, including Cheltenham Park, to provide an additional harvesting capacity of almost 12 GL/a by 2013.	2009	2013	Project proponents: LMC AMLR NRM Board DEH SA Water	Local Government Developers OWS SMA Adelaide Airport Limited
12. Update, by 2010, State water recycling guidelines to reflect the <i>Australian Guidelines for Water Recycling</i> , and include stormwater.	2009	2010	Department of Health	EPA SA Water DWLBC PIRSA OWS
13. Subject to Commonwealth assistance and in partnership with local government, stormwater harvesting and recycling will be underway, including: <ul style="list-style-type: none"> • in the western metropolitan area including Cheltenham Park, Riverside Golf Club, Old Port Road and Adelaide Airport • in the southern metropolitan area, building on the first stage of Water Proofing the South • in Playford and Salisbury, creating further capacity in the northern area, building on Waterproofing Northern Adelaide • at the Adelaide Botanic Gardens, and • at Barker Inlet. 	2009	2013	OWS	SA Water DEH Local Government AMLR NRM Board Commonwealth Government
14. Work with local government to update the State-Local Government Stormwater Management Agreement. Clarify the roles of State agencies and local government; reinforce the importance of collaboration; and strengthen governance arrangements.	2009	2011	OWS	DP&LG LGA SMA
15. Work with local government, the Stormwater Management Authority and other stakeholders (including the Commonwealth Government and private enterprise) to identify and develop new stormwater recycling projects in the Adelaide region, in line with the findings of the <i>Urban Stormwater Harvesting Options Study</i> .	2009	Ongoing	OWS	SMA Local Government SA Water LMC Private sector NRM Boards Commonwealth Government

Table 12
Summary of Actions (continued)

Action	Start Date	Completion Date	Lead Agency	Partners
16. Develop a master plan for effectively managing stormwater in Adelaide. Include interim milestones and water quality targets to support recommendations in the <i>Adelaide Coastal Waters Study Final Report</i> , to provide up to 60 GL/a of recycled stormwater, in Greater Adelaide, by 2050.	2010	2012	Office for Water Security SMA	Local Government SA Water LMC NRM Boards
17. As part of regional water demand and supply planning, develop and implement plans to provide up to 15 GL/a of stormwater harvesting potential in South Australia's regional areas, by 2050.	Underway	2050	OWS	SA Water, DWLBC NRM Boards Local Government
Wastewater Recycling				
18. Develop State guidelines for greywater recycling, consistent with <i>Australian Guidelines for Water Recycling</i> , by 2010.	2009	2010	Department of Health	EPA SA Water
19. Develop a master plan for effectively managing wastewater in Adelaide, in concert with the stormwater recycling master plan, to ensure optimum use of both water sources.	2012	2014	SA Water	Local Government OWS NRM Board SMA DP&LG
20. Encourage decentralised wastewater recycling schemes in new developments, in partnership with the implementation of the Plan for Greater Adelaide.	2011	Ongoing	DP&LG	SA Water Local Government OWS
21. Expand recycling of rural community wastewater management schemes (council operated) to 12 GL/a by 2050.	2010	2050	DP&LG	Local Government OWS
22. Complete wastewater recycling projects, including Glenelg to Parklands (open space irrigation), Blakeview (housing development), Southern Urban Recycling Project (housing development), by 2013.	2009	2013	SA Water	SA Health EPA LMC Local Government Private sector
Using and Saving Water				
23. Enhance the H ₂ OME rebate scheme in September 2009, by:	2009	2011	SA Water	OWS
<ul style="list-style-type: none"> including a new \$150 rebate for the purchase of a hot water recirculator modifying the washing machine rebates to apply to those with a minimum of 4½ stars an increase in the garden goods rebate to \$100 on a \$250 basket of goods, which will now include rainwater diverters a new \$200 rebate for the purchase of approved pool covers and cover rollers for existing household swimming pools. 				

Table 12**Summary of Actions (continued)**

Action	Start Date	Completion Date	Lead Agency	Partners
24. Support the expansion of the Water Efficiency Labelling and Standards (WELS) scheme to include additional products, and minimum performance standards for existing products.	2009	Ongoing	OWS SA Water	Commonwealth Government
25. Implement the best regulatory approach to mandate swimming pool covers by 2012.	2011	2012	DP&LG	SA Water OWS
26. Apply permanent water conservation measures to private bores in urban areas from 2010.	2010	Ongoing	DWLBC	OWS NRM Boards
27. Develop the Urban Landscape Program to provide South Australians with the knowledge, tools and incentives to develop appropriate water-wise gardens and landscapes by the end of 2011.	2010	Ongoing	SA Water	Gardening Industry OWS
28. By 2010, require SA Water customers using more than 25 ML a year to complete a water efficiency plan.	2010	Ongoing	SA Water	Private Industry
29. Include leak detection in the water auditing process of the Business Water Saver Program.	2009	2011	SA Water	
30. Work with industry to encourage the uptake of stormwater and recycled water for primary production in lieu of mains water.	2009	Ongoing	PIRSA	SA Water Local Government
31. Irrigation meters will be installed in the Mount Lofty Ranges Prescribed Areas by 2014, once water users are licensed.	2010	2014	DWLBC	NRM Boards
32. Develop a new water information website, with clear and readily accessible information on South Australia's water resources, and information to help South Australians improve water-use practices by the end of 2009.	2009	2009	OWS	DPC SA Water
33. Develop an awards program, including a Premier's award, to recognise the achievements of communities, individuals, schools, businesses, industry and government that are contributing to our future water security by the end of 2011.	2010	Ongoing	OWS	Industry bodies DPC
34. Work with the South Australian Multicultural and Ethnic Affairs Commission to develop targeted water education programs with the various ethnic communities of South Australia.	2010	Ongoing	OWS	SA Multicultural & Ethnic Affairs
35. Maintain permanent water conservation measures when new sources of water come on line and water restrictions can be lifted.	By end 2012	Ongoing	SA Water	
36. Extend delivery of irrigation efficiency programs, such as the Irrigated Public Open Space program, to all local councils and schools. Incorporate the identification of opportunities to substitute mains water used for community purposes with fit for purpose water (e.g. recycled water, rainwater and stormwater).	2009	2011	SA Water	DECS Local Government

Table 12
Summary of Actions (continued)

Action	Start Date	Completion Date	Lead Agency	Partners
37. Implement a retro-fitting program to improve the water efficiency of publicly-owned buildings, and encourage similar water efficiency measures in buildings leased by the Government, and in other private commercial buildings where appropriate.	2009	2013	State agencies	Private commercial building owners DP&LG
38. Continue SA Water's program of leak detection and repair in its metropolitan and major country town networks and report annually on progress.	2009	Ongoing	SA Water	OWS
39. By 2010, expand water education to raise awareness among South Australians of key water issues through a Water for Good education campaign.	2009	Ongoing	OWS	SA Water DPC
40. Provide SA Water customers with more information on their water bills, including comparisons with previous use and use in similar homes.	2009	2010	SA Water	OWS
41. By 2013, develop further curriculum resources to help lower and middle school students learn more about water resources, the water cycle, and what can be done to reduce water use.	2009	2013	OWS	SA Water DWLBC DECS
Rain, Rivers, Reservoirs and Aquifers				
42. Explore the economic and environmental feasibility of using saline water produced in salinity management schemes.	Underway	2015	DWLBC	SAMDB NRM Board
43. Commission, where required, regional scale studies on the impacts of climate change on water resources.	2009	2014	OWS	BOM CSIRO DPC SA Water
44. Adopt a two staged approach to water allocation planning, with an Interim Water Allocation Plan followed by a Comprehensive Water Allocation Plan for all newly prescribed areas.	2010	2012	DWLBC	NRM Boards
45. Provide funding of \$8.6 million over two years, (2009/10 and 2010/11), to strategically review and, where required, expand or upgrade the water resources monitoring network.	2009	2012	DWLBC	SA Water NRM Boards
46. Increase regularity of statewide data collation, assessment and reporting, where required.			DWLBC	SA Water EPA NRM Boards
47. Implement a statewide policy framework for managing the water resource impacts of plantation forests, and amend the <i>Natural Resources Management Act 2004</i> to allow forest water licensing, where appropriate, consistent with the statewide policy framework.	2009	Ongoing	DWLBC	NRM Boards PIRSA

Table 12**Summary of Actions (continued)**

Action	Start Date	Completion Date	Lead Agency	Partners
48. Require mining ventures to provide their own water supplies within the sustainable framework of natural resources management planning, and regional water demand and supply plans.	Underway	Ongoing	PIRSA	SA Water DWLBC
49. Develop water quality improvement plans for the Mount Lofty Ranges (MLR) Watershed by 2011 and other critical water catchments across the State by 2017.	2009	2017	EPA	DWLBC NRM Boards SA Water
50. Establish planning policies, based on the water quality risk hierarchy associated with the MLR Watershed Priority Areas, to ensure that new developments have a beneficial, or at least neutral, impact on water quality in the Watershed.	2010	2012	DP&LG	EPA Local Government
51. Undertake a comprehensive review of current management and protection of the MLR Watershed with a view to developing an agreed vision, targets and responsibilities for its future management by the end of 2010.	2009	2010	OWS	EPA NRM Boards DWLBC SA Water
52. Require relevant agencies to report annually on how they are meeting the MLR Watershed targets.	2011	Ongoing	OWS	DWLBC EPA
53. Work with the Murray-Darling Basin Authority and other Basin jurisdictions to ensure a healthy, working River Murray that will continue to provide critical human water needs for Greater Adelaide and regional South Australia, irrigation requirements and water for the environment. Specifically, by seeking: <ul style="list-style-type: none"> • a Basin Plan that incorporates appropriate 'end-of system' objectives, targets and actions by returning the River Murray to sustainable levels of extraction • a Basin Plan that establishes a permanent system of environmental flows for the River Murray and Lower Lakes, including management of unregulated flows and salinity • improved arrangements for risk management, storage, delivery of and accounting for water • reviewing and improving river operations, particularly river operating strategies and rules, to ensure more effective, efficient and transparent distribution of South Australia's water entitlement. 	2009	Ongoing	DWLBC	MDBA Other Basin States OWS
54. Complete, on time, the elements of the <i>Murray Futures</i> program designed to sustain, support and reinvigorate communities and industries within the Murray-Darling Basin in South Australia.	Underway	2018	OWS	DEH SA Water DWLBC PIRSA
55. Undertake real-time management of environmental issues and potential risks affecting the Lower Lakes.	Underway	Ongoing	DEH	DWLBC SA Water

Table 12
Summary of Actions (continued)

Action	Start Date	Completion Date	Lead Agency	Partners
56. Maintain a positive balance on the Murray-Darling Basin Salinity Register, and continue to implement strategies and actions to ensure the real time management of salinity in the lower reaches of the River Murray so that water quality remains at levels suitable for human consumption.	Underway	Ongoing	DWLBC	PIRSA SA Water MDBA
57. As a last resort, build a temporary weir at Pomanda Island to protect the water supply to the 1.2 million people currently receiving it from the River Murray below Lock 1. The temporary weir would only be constructed if inflows remain at critically low levels and agreed triggers for acidification or salinity were activated and could not otherwise be prevented.	2009 (if required & approved)	2010	SA Water	DWLBC OWS
58. Complete water allocation plans and regulatory review of water allocation plans for key areas, in the Mount Lofty Ranges, the Murray-Darling Basin, the South East and Central Adelaide.	Underway	2010	NRM Boards	DWLBC
59. Implement SA Water's fire recovery strategy for all reservoirs in the Mount Lofty Ranges catchments.	Underway	Ongoing	SA Water	
60. Bring additional water resources into formal management through prescription and water allocation planning, as necessary.	2010	Ongoing	DWLBC	NRM Boards
61. Continue programs to unbundle water rights across South Australia and remove barriers to trading water entitlements.	Underway	2014	DWLBC	NRM Boards
62. Work with Bureau of Meteorology to develop a Strategic Water Information Plan.	Underway	2012	DWLBC	BOM SA Water
63. The Environment Protection Authority will develop environmental values for priority water bodies across the State by 2014.	Underway	2014	EPA	NRM Boards
Planning				
64. Ensure regional water demand and supply plans are in place for all natural resources management regions throughout the State – in consultation with regional communities, building on existing plans, and incorporating local knowledge by 2014.	2009	2014	OWS	NRM Boards SA Water Local Government DP&LG Regional Economic Development Boards
65. Commission or contribute towards the development of a regional demand and supply forecasting model.	2009	2010	DWLBC	OWS SA Water BOM
66. Develop and implement a strategy to improve the quality of water provided to remote communities	2009	2014	OWS	SA Water DWLBC DPC

Table 12**Summary of Actions (continued)**

Action	Start Date	Completion Date	Lead Agency	Partners
67. By 2013, develop and implement the best regulatory approach for South Australia to mandate water-sensitive urban design, dovetailing with the Plan for Greater Adelaide.	2012	Ongoing	DP&LG	SA Water DWLBC OWS
68. Introduce targets for water-sensitive urban design by 2010.	2009	2010	DP&LG	SA Water SA Health OWS
Fostering Innovation and Efficiency				
69. Work with research institutions and industry to enhance co-ordination of the research effort and improve collaboration to identify priorities and ensure timely delivery.	Underway	Ongoing	DFEEST	PIRSA DTED DWLBC SA Water OWS NRM Research Alliance
Pricing and Market Instruments				
70. Appoint ESCOSA as the independent economic regulator for monopoly suppliers of urban and regional water and wastewater services in South Australia. This will apply to SA Water's potable water and wastewater services in the first instance.	2009	2010	DTF OWS	
71. Initiate a transition to a single potable water use price for SA Water's non-residential customers.	2011	2016	ESCOSA	DTF SA Water
72. In consultation with customers, and over a period of five years, transition SA Water customers to water supply charges based on the number and size of the customers' meters while managing any unreasonable impacts for individual customers.	2011	2016	ESCOSA	DTF SA Water
73. Request the independent regulator, in the medium term, to examine price structures that may benefit economic efficiency and water security.	2015	2020	DTF	
74. Develop State-based recycled water pricing principles to ensure competitive pricing of these emerging water sources.	2010	2011	OWS	DTF SA Water SMA
75. Set water and wastewater prices to encourage economically efficient use and continue to support low-income households through transparent, targeted concessions schemes.	2010	Ongoing	DTF	ESCOSA DFC
76. Require the independent regulator to monitor and report on the effect of statewide pricing.	2011	Ongoing	ESCOSA	DTF OWS

Table 12
Summary of Actions (continued)

Action	Start Date	Completion Date	Lead Agency	Partners
77. Maintain government ownership of SA Water and develop a State-based third-party access regime that allows water and wastewater suppliers to access monopoly water and wastewater infrastructure. Any such access will require licensing to ensure protection of public interest, public health and the environment.	2010	2015	DTF OWS	ESCOSA SA Water Private Sector
78. Explore the merits of innovative and competitive arrangements, in the medium term, which could allow for competition in the supply of bulk water, recycled water and retail services to customers, while retaining government ownership of the public water supply infrastructure.			DTF OWS	
79. Continue to move potable water use prices for SA Water customers towards cost-reflective prices.	Underway	Ongoing	DTF	OWS ESCOSA
80. Bill SA Water customers for consumption on a quarterly basis to provide more timely information regarding water use.	2009	Ongoing	SA Water	
81. Identify the costs of providing water planning and management in South Australia, introduce a water planning and management cost-recovery framework, and set charges in accordance with it from 2011-12.	Underway	2012	DWLBC	
82. Continue to support regional communities using SA Water's networks through the application of statewide pricing and report costs transparently in the State Budget.	Underway	Ongoing	DTF	OWS SA Water
Legislative and Regulatory Changes				
83. Release a discussion paper for consultation during 2009 outlining proposed new legislation: introduce new legislation in 2010.	2009	2010	OWS	SA Water DWLBC
84. Work with the LGA to review and update the governance of the Stormwater Management Authority to ensure that appropriate emphasis is given to stormwater harvesting and reuse.	2009	2009	OWS	LGA DP&LG
85. Introduce legislative amendments to remove any prohibition on SA Water proactively taking a role in stormwater reuse.	2010	2010	OWS	SA Water LGA SMA
86. Give explicit statutory recognition to an Environmental Water Reserve through the <i>Natural Resources Management Act 2004</i> .	2010	2010	OWS	DWLBC NRM Boards
87. Provide definitions for the various types of wastewater, and certainty as to ownership.	2010	2010	OWS	SA Water

Action	Start Date	Completion Date	Lead Agency	Partners
88. Ensure excellent service and fair treatment through independent and transparent customer consultation, complaints processes and the establishment of a Customer Advocacy and Advisory Council.	2010	2010	OWS	SA Water ESCOSA
89. Give statutory force to water demand and supply plans and outline how these will be developed, implemented, reviewed and maintained.	2010	2010	OWS	DWLBC SA Water
90. Give explicit statutory recognition to the concept of managing the water cycle and, of water security	2010	2010	OWS	DWLBC SA Water
91. Strengthen existing assurance of water planning and service delivery	2010	2010	OWS	DWLBC SA Water
92. Develop new legislation to ensure best practice water quality standards are maintained as water supply becomes increasingly diversified.	2010	2010	SA Health	SA Water EPA OWS
93. Provide for independent technical regulation of plumbing standards and practices.	2010	2010	OWS	DTE1 SA Water
94. Continue to support world-leading research to assess the potential for treating stormwater to a very high quality and monitor future scientific developments and technological innovations. However, we do not intend to feed recycled water directly into the mains water system.	Underway	Ongoing	OWS	SA Health DFEEST

Part 7

Staying on track
– implementation and
monitoring

WATER
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Appendices

Appendix 1

Definition of Greater Adelaide

Comparison of various definitions of “Adelaide”

The water consumption for Adelaide has been either reported or described in water planning studies based on a number of different definitions of the area served. These include:

- “Metropolitan Adelaide” for which SA Water reports consumption
- The Metropolitan Adelaide Water Supply System (MAWSS) as defined operationally by SA Water
- The Adelaide area defined in the “Water Proofing Adelaide” study.
- The “Greater Adelaide” area that is the subject of the 30 year planning study
- The Adelaide Statistical Division
- The Adelaide and Mount Lofty Ranges Natural Resources Management Region.

The following inner metropolitan councils are common to all of these areas:

Gawler	West Torrens
Playford	Adelaide
Tea Tree Gully	Norwood Payneham St Peters
Salisbury	Burnside
Port Adelaide Enfield	Unley
Campbelltown	Mitcham
Charles Sturt	Holdfast Bay
Walkerville	Marion
Prospect	Onkaparinga

Differences between the various definitions of “Adelaide” are as shown in the table:

Additional Areas Included	Metro Adelaide supply area	ASD	WPA	NRM	MAWSS	Greater Adelaide
Adelaide Hills Council	small part	✓	✓	✓	✓	
Mount Barker Council		part	part	✓	✓	
Victor Harbor Council			✓		✓	
Yankalilla Council			✓		✓	
Alexandrina Council			Goolwa & Pt Elliot	Strathalbyn & Clayton	✓	
Murray Bridge Council				✓	✓	
Barossa Valley Council		✓	most		✓	
Mid-Murray Council				part	part	
Light Council		✓	part		✓	
Mallala Council			part		✓	
Kangaroo Island					✓	

Differences between the various definitions of “Adelaide” are as shown in the table:

Additional Areas Included	Metro Adelaide supply area	ASD	WPA	NRM	MAWSS	Greater Adelaide
2000/01	194	199	212	213	215	224
2002/03	178	184	197	199	201	210
2004/05	166	171	183	185	186	195
2007/08	139	143	153	155	156	163

The Metro Supply Area and the MAWSS consumptions are those recorded by SA Water. The others are estimated based on a combination of customer meter data and master meter data.

A “rule of thumb” is suggested based on these numbers for comparing demand estimates in different definitions of “Adelaide”:

- Metro Adelaide = 90.2% x MAWSS
- Adelaide Statistical Division = 92.8% x MAWSS
- The Water Proofing Adelaide study area = 99% x MAWSS
- NRM area = 101% x MAWSS
- Greater Adelaide Plan area = 105.3% x MAWSS

Appendices

Other key relationships are:

- “Metro Adelaide” = 91.0% x WPA area
- Greater Adelaide Plan area = 106.3% x WPA area

It should be noted that these relationships are proposed as a means of interpreting existing study outputs, for comparison purposes. The ratios will vary as development occurs in different areas, particularly within the outer metro part of Greater Adelaide.

Description of definitions of “Adelaide”

SA Water’s “Metropolitan Adelaide” demand area

Based on the area served by the six metropolitan water treatment plants (Barossa, Little Para, Anstey Hill, Hope Valley, Happy Valley and Myponga) *that are within the metropolitan councils described above*. (Supplies from these plants that are outside the above council areas are excluded).

Includes also a very small part of the Adelaide Hills Council area adjacent to Rostrevor.

SA Water’s Metropolitan Adelaide Water Supply System (MAWSS) (as defined for operational purposes)

MAWSS describes the water supply system that supplies Metropolitan Adelaide, but the consumptions include all the water supplied by that system. In addition to the “metropolitan Adelaide” area it includes:

- Adelaide Hills and Mount Barker
- Murray Bridge Council (including Mannum)
- Alexandrina, Victor Harbor and Yankalilla Council areas
- Parts of the Mallala, Light and Barossa council areas (supplied from the Barossa Reservoir), but not including the Barossa Valley.

The Adelaide area defined in the “Water Proofing Adelaide” study

Water Proofing Adelaide was based around the four (then) Catchment Water Management Board (CWMB) areas in metropolitan Adelaide, with some additional areas that were important in respect of future urban demands. It included:

- Northern Adelaide & Barossa CWMB
- Torrens CWMB
- Patawalonga CWMB
- Onkaparinga CWMB
- All of the Barossa and Light Council areas
- Part of Mt Barker Council (urban portion)
- Myponga Reservoir

It does not include Murray Bridge, Mannum or the Fleurieu Peninsula.

“Greater Adelaide”

Greater Adelaide is most similar to the MAWSS area, but includes all of the Barossa, Mallala and Light Councils.

Adelaide Statistical Division

The Adelaide Statistical Division is similar to the metro Adelaide water consumption area, with the addition of the Adelaide Hills Council.

Appendix 2

List of water legislation

List of South Australian legislation relevant to this plan

Environment Protection Act 1993

Essential Services Commission Act 2002

Food Act 2001

Irrigation Act 2009

Local Government (Stormwater Management) Amendment Act 2007

Metropolitan Drainage Act 1935

Metropolitan Drainage Works (Investigation) Act 1957

Murray-Darling Basin Act 2008

Natural Resources Management Act 2004

Public and Environmental Health Act 1987

Renmark Irrigation Trust Act 2009

River Murray Act 2003

Sewerage Act 1929

South Australian Water Corporation Act 1994

South-Western Suburbs Drainage Act 1959

Water Conservation Act 1936

Waterworks Act 1932

Example: Victorian Water Industry Regulatory Order (WIRO)

Water Industry Act 1994

Water Industry Regulatory Order 2003

Amended as at 25 October 2005.

The Governor in Council makes the following Order:

General

1. Title

This **Order** is called the Water Industry Regulatory Order 2003.

2. Commencement

This **Order** comes into operation on 1 January 2004 and remains in force until it is revoked.

3. Authorising Provision

This **Order** is made under section 4D(1)(a) of the Act.

4. Purpose

The purpose of this Order is to provide a framework for economic regulation by the **Commission** for services provided by the regulated water industry by:

- (a) specifying which goods and services are to be prescribed goods and services in respect of which the **Commission** has the power to regulate prices;
- (b) declaring which goods and services are to be declared goods and services in respect of which the **Commission** has the power to regulate standards and conditions of service and supply;
- (c) specifying the approach to be adopted by the **Commission** in regulating the price of prescribed goods and services;
- (d) specifying particular matters to which the **Commission** must have regard in exercising its powers and functions under this **Order**;
- (e) conferring on the **Commission** certain functions in relation to monitoring, performance reporting and auditing; and
- (f) conferring on the **Commission** certain functions in relation to dispute resolution.

5. Definitions

In this **Order**, unless the contrary intention appears the words and phrases have the meanings given to them in Schedule 1.

Coverage

6. Prescribed Services and Declared Services

(a) The following services supplied by or within the regulated water industry are declared services in respect of which the Commission has the power to regulate standards and conditions of service and supply:

- (i) **retail water services**;
- (ii) **retail recycled water services**;
- (iii) **retail sewerage services**;
- (iv) **storage operator and bulk water services**;
- (v) **bulk sewerage services**;
- (vi) **bulk recycled water services**;
- (vii) **metropolitan drainage services**;
- (viii) **irrigation drainage services**;
- (ix) **connection services**;
- (x) services to which **developer charges** apply; and

(xi) **diversion services.**

(b) The following services supplied by or within the **regulated water industry**, with the exception of those provided by the First Mildura Irrigation Trust, Gippsland and Southern Rural Water Authority, Goulburn-Murray Rural Water Authority, Grampians Wimmera Mallee Water Authority and Lower Murray Urban and Rural Water Authority, are specified as prescribed services in respect of which the **Commission** has the power to regulate prices:

- (i) **retail water services;**
- (ii) **retail recycled water services;**
- (iii) **retail sewerage services;**
- (iv) **storage operator and bulk water services;**
- (v) **bulk sewerage services;**
- (vi) **bulk recycled water services;**
- (vii) **metropolitan drainage services;**
- (viii) **irrigation drainage services;**
- (ix) **connection services;**
- (x) services to which **developer charges** apply; and
- (xi) **diversion services.**

(c) The following services supplied by the First Mildura Irrigation Trust, Gippsland and Southern Rural Water Authority, Goulburn-Murray Rural Water Authority, Grampians Wimmera Mallee Water Authority and Lower Murray Urban and Rural Water Authority are specified as prescribed services after 1 July 2006 in respect of which the **Commission** has the power to regulate prices:

- (i) **retail water services;**
- (ii) **retail recycled water services;**
- (iii) **retail sewerage services;**
- (iv) **storage operator and bulk water services;**
- (v) **bulk sewerage services;**
- (vi) **bulk recycled water services;**
- (vii) **metropolitan drainage services;**
- (viii) **irrigation drainage services;**
- (ix) **connection services;**
- (x) services to which **developer charges** apply; and
- (xi) **diversion services.**

(d) Nothing in this **Order** is to be taken as precluding services that come within one of the categories of service identified in paragraphs (a), (b) and (c) being regulated, whether as to price, standards and conditions of service and supply, in a different manner from either other services that come within that same category or other services that come within a different category.

Regulatory Period

7. Regulatory Period

(a) The first **regulatory period** shall be:

- (i) for the First Mildura Irrigation Trust, Gippsland and Southern Rural Water Authority, Goulburn-Murray Rural Water Authority, Grampians Wimmera Mallee Water Authority and Lower Murray Urban and Rural Water Authority, the 2 year period commencing on 1 July 2006; and
- (ii) for all other regulated authorities, the 3 year period commencing on 1 July 2005.

(b) Except in the case of the **first regulatory period**, the **Commission** must set the term of each **regulatory period**.

Regulatory Approach

8. Decision in relation to prices

Before the commencement of a **regulatory period**, the **Commission** must:

- (a) approve all of the prices which a **regulated entity** may charge for prescribed services, or the manner in which such prices are to be calculated or otherwise determined, as set out in the **regulated entity's Water Plan**, until the commencement of the next **regulatory period**; or
- (b) specify the prices which a **regulated entity** may charge for **prescribed services**, or the manner in which such prices are to be calculated or otherwise determined, until the commencement of the next **regulatory period**.

For the avoidance of doubt:

- (c) a decision of the **Commission** under paragraph (a) or (b) is a determination for the purposes of the **ESC Act**.

9. Approval of prices

The **Commission** must give the approval referred to in clause 8(a) if it is satisfied that the prices which the **regulated entity** may charge for **prescribed services** or the manner in which they are to be calculated or otherwise determined (as set out in the **Water Plan**):

- (a) were developed in accordance with the **Procedural Requirements**; and
- (b) comply with the relevant **Regulatory Principles**.

10. Specifying prices

The **Commission** may only specify prices, or the manner in which such prices are to be calculated or otherwise determined, under clause 8(b) if a **regulated entity**:

- (a) fails to deliver to the **Commission** a **Water Plan** within the time specified for such delivery in the **Statements of Obligations** that has been issued to that **regulated entity**; or
- (b) after considering the **Water Plan** and any variations to it made after the issue of the Commission's draft decision in relation to the **Water Plan**, the **Commission** is not satisfied that the prices which the regulated entity may charge for prescribed services or the manner in which they are to be calculated or otherwise determined:
 - (i) were developed in accordance with the **Procedural Requirements**; and
 - (ii) comply with the relevant **Regulatory Principles**.

11. Draft decision

Before making a decision under clause 8, the **Commission** must issue a draft decision which either:

- (a) proposes to give the approval referred to in clause 8(a); or
- (b) proposes to refuse to give the approval referred to in clause 8(a) and specifies the reasons for the **Commission's** proposed refusal (which may include suggested amendments to, or action to be taken in respect of, the **Water Plan** that, if adopted or taken, may result in the **Commission** giving that approval) and the date by which a **regulated entity** must resubmit a revised **Water Plan** or undertake such action as to ensure compliance.

12. Information

In order to be satisfied that prices, or the manner in which such prices are to be calculated or otherwise determined:

- (a) were developed in accordance with the **Procedural Requirements**; and
- (b) comply with the relevant **Regulatory Principles**, the **Commission** may require the regulated entity to provide additional information in support of its **Water Plan**.

Procedural Requirements and Regulatory Principles

13. Procedural Requirements

In order to be satisfied that prices, or the manner in which such prices are to be calculated or otherwise determined, have been developed in accordance with the **Procedural Requirements**, as required by this **Order**, the Commission must be satisfied that the regulated entity has observed the procedural requirements as set out in the **Statement of Obligations**.

14. Regulatory Principles

(1) In order to be satisfied that prices, or the manner in which such prices are to be calculated or otherwise determined, comply with the **Regulatory Principles**, as required by this **Order**, the Commission must be satisfied that:

- (a) the prices contained in the Water Plan as those which the regulated entity proposes it be permitted to charge for prescribed services over the term of the Water Plan, or the manner in which the Water Plan proposes that such prices are to be calculated or otherwise determined, must be such as to:
 - (i) provide for a sustainable revenue stream to the regulated entity that nonetheless does not reflect monopoly rents and or inefficient expenditure by the regulated entity;
 - (ii) allow the regulated entity to recover its operational, maintenance and administrative costs;
 - (iii) allow the regulated entity to recover its expenditure on renewing and rehabilitating existing assets;
 - (iv) allow the regulated entity to recover:
 - (A) a rate of return on assets as at 1 July 2004 that are valued in a manner determined by, or at an amount otherwise specified by, the Minister at any time before 1 July 2004;
 - (B) all costs associated with existing debt incurred to finance expenditure prior to 1 July 2006, in a manner determined by the Minister at any time before 1 July 2006;
 - (v) allow the regulated entity to recover a rate of return on investments made after 1 July 2004 to augment existing assets or construct new assets;
 - (vi) provide incentives for the sustainable use of Victoria's water resources by providing appropriate signals to water users about:
 - (A) the costs of providing services, including costs associated with future supplies and periods of peak demands and or restricted supply; and
 - (B) choices regarding alternative supplies for different purposes;
 - (vii) take into account the interests of customers of the regulated entity, including low income and vulnerable customers;
 - (viii) provide the regulated entity with incentives to pursue efficiency improvements and to promote the sustainable use of Victoria's water resources; and
 - (ix) enable customers or potential customers of the regulated entity to readily understand the prices charged by the regulated entity for prescribed services, or the manner in which such prices are to be calculated or otherwise determined;
- (b) the expenditure forecasts contained in the Water Plan must reflect the efficient delivery of the proposed outcomes contained in the Water Plan and take into account a planning horizon that extends beyond the term of the Water Plan.

(2) The **Regulatory Principles** in clause 14(1) do not apply to the regulated entities referred to in clause 7(a)(1), if clause 14A applies."

14A. Rural Sector Regulatory Principles for the First Regulatory Period

For the **first regulatory** period for the entities referred to in clause 7(a)(i), in order to be satisfied that the manner in which prices are to be calculated or otherwise determined complies with the **Regulatory Principles** in paragraphs (a) and (b) of this clause as required by this **Order**, the Commission must be satisfied that:

- (a) the prices contained in the **Water Plan** as those which these authorities propose to be permitted to charge for **prescribed services** over the term of the **Water Plan**, or the manner in which the **Water Plan** proposes that such prices are to be calculated or otherwise determined, must be such as to:

- (i) provide for a sustainable revenue stream to the regulated entity that nonetheless does not reflect monopoly rents and or inefficient expenditure by the authority;
 - (ii) allow the regulated entity to recover its operational, maintenance and administrative costs;
 - (iii) allow the regulated entity to recover its expenditure on renewing and rehabilitating existing assets, either by classifying the expenditure as maintenance, recovering a renewals annuity, or borrowing and recovering the cost over time;
 - (iv) allow the regulated entity to recover:
 - (A) a rate of return on assets as at 1 July 2004 that are valued in a manner determined by, or at an amount otherwise specified by the Minister at any time before 1 July 2004; or
 - (B) all costs associated with existing debt incurred to finance recent expenditure prior to 1 July 2006, in a manner determined by the Minister at any time before 1 July 2006;
 - (v) allow the regulated entity to recover a rate of return on investments made after 1 July 2004 to augment existing assets or construct new assets;
 - (vi) provide incentives for the sustainable use of Victoria's water resources by providing appropriate signals to urban water users about:
 - (A) the costs of providing services, including costs associated with future supplies and periods of peak demands and or restricted supply; and
 - (B) choices regarding alternative supplies for different purposes;
 - (vii) take into account the interests of customers of the regulated entity, including low income and vulnerable urban water users;
 - (viii) provide the regulated entity with incentives to pursue efficiency improvements; and
 - (ix) enable customers or potential customers of the regulated entity to readily understand the prices charged by the regulated entity for **prescribed services**, or the manner in which such prices are to be calculated or otherwise determined;
- (b) the expenditure forecasts contained in the **Water Plan** must reflect the efficient delivery of the proposed outcomes contained in the **Water Plan** and take into account a planning horizon that extends beyond the term of the **Water Plan**.

Regulation of Service Quality

15. Specifying standards and conditions

The **Commission** may specify standards and conditions of services and supply with which a **regulated entity** is obliged to comply in connection with the provision by it of **declared services**:

- (a) by approving standards and conditions of services and supply which a regulated entity has included in its **Water Plan**; or
- (b) by specifying standards and conditions of services and supply in a **Code** issued under section 4F of the Act; or
- (c) by any combination of the means specified in paragraphs (a) and (b).

Monitoring, Performance Reporting and Auditing

16. Performance Monitoring and Reporting

The **Commission** has the function of monitoring and reporting publicly on the performance of the **regulated water industry**.

17. Auditing

The **Commission** has the function of carrying out audits in relation to:

- (a) the compliance of **regulated entities** with the standards and conditions of service and supply specified by the **Commission** in any Code or set out in their **Water Plans**, and the systems and processes established by the **regulated entity** to ensure such compliance;

- (b) the reliability and quality of information reported by **regulated entities** to the **Commission** and the conformity of that information with any specification issued by the **Commission**; and
- (c) the compliance of **regulated entities** with obligations imposed in any **Statement of Obligations** issued to them in respect of the management of their assets.

In the case of any such audits:

- (d) the Commission may decide the scope and frequency of such audits provided that such audits are not conducted more frequently than once in any given **financial year**;
- (e) conducted pursuant to paragraph (c), the **Commission** must include in that audit any matters requested by the **Minister**.

18. Audits requested by Minister

The **Minister** may request the **Commission** to audit the compliance of a **regulated entity** with such obligations as are identified by the **Minister** and as are imposed on that **regulated entity** under the **Statement of Obligations** that is issued to it, in which case the **Commission** must carry out that audit in accordance with that request.

19. Publication of audit results

The **Commission** must publicly report on the results of all audits conducted under clause 17 or 18.

Dispute Resolution

20. Disputes between regulated entities

In such circumstances as the **Commission** determines, the **Commission** has the function of facilitating the resolution of a dispute in relation to prices and standards and conditions of service and supply provided for in an agreement between two **regulated entities** to supply **storage operator and bulk water services, bulk sewerage services** and **bulk recycled water services**. The **Commission** may carry out this function by requiring mediation or arbitration or by any other means the **Commission** considers appropriate.

Dated: 16 December 2003

Responsible Minister:

John Thwaites

Minister for Water

Clerk of the Executive Council

Schedule 1

Definitions

In this **Order**:

"**Act**" means the Water Industry Act 1994;

"**business day**" means a day on which banks are open for general banking business in Melbourne, not being a Saturday or a Sunday;

"**bulk recycled water service**" means a service provided by **Melbourne Water** in connection with the provision of a supply of recycled water;

"**bulk sewerage service**" means a service provided by **Melbourne Water** in connection with the conveyance, treatment and disposal of wastewater for a **regulated entity**;

"**Code**" means a code under section 4F of the **Act**;

"**Commission**" means the Essential Services Commission established under the **ESC Act**;

"**connection service**" means the connection of a serviced property to a water supply system or sewerage system;

"**declared services**" means the services described in clause 6 of this **Order**;

"**developer charges**" means:

Appendices

(a) contributions to the cost of works imposed under sections 27, 28 and 29 of the **Act**;

(b) contributions to the costs of works imposed under Division 6 of Part 13 of the **Water Act 1989**; and

(c) contributions to the cost of drainage works imposed under section 269A of the **Melbourne and Metropolitan Board of Works Act 1958**;

"**diversion service**" means a service provided by a **regulated entity** in connection with the management, extraction or use of groundwater or surface water;

"**ESC Act**" means the Essential Services Commission Act 2001;

"**financial year**" means a year ending 30 June;

"**irrigation drainage services**" means a service provided by a Rural Water Authority in connection with the removal and disposal of run-off from irrigation;

"**Melbourne Water**" means the Corporation as that term is defined in Melbourne Water Corporation Act 1992;

"**metropolitan drainage service**" means a service provided by **Melbourne Water** in connection with the performance of its functions under Part X of the Melbourne and Metropolitan Board of Works Act 1958;

"**metropolitan retail water company**" means:

(a) City West Water Limited (ACN 066 902 467);

(b) South East Water Limited (ACN 066 902 547); or

(c) Yarra Valley Water Limited (ACN 066 902 501);

"**Minister**" means the Minister administering the **Act**;

"**Order**" means this Water Industry Regulatory Order 2003;

"**prescribed services**" means the services described in clause 6 of this **Order**;

"**Procedural Requirements**" means the procedures referred to in clause 13 of this **Order**;

"**Regional Urban Water Authority**" has the meaning given in section 4A of the **Act**;

"**regulated entity**" has the meaning given in section 4A of the **Act**;

"**regulatory period**" means a period over which a decision of the Commission under clause 8 of this **Order** is to apply;

"**Regulatory Principles**" means the principles set out in clause 14 and 14A of this **Order**;

"**regulated water industry**" has the meaning given in section 4A of the **Act**;

"**retail recycled water service**" means a service provided by a **regulated entity** in connection with the provision of a supply of recycled water;

"**retail sewerage service**" means a service provided by a **metropolitan retail water company** or by a **Regional Urban Water Authority** in connection with the removal, treatment and disposal of sewage and **trade waste**;

"**retail water service**" means a service provided by a **regulated entity** in connection with the provision of a supply of water to a person other than a **regulated entity**;

"**Rural Water Authority**" has the meaning given in section 4A of the **Act**;

"**Statement of Obligations**" means a Statement of Obligations issued by the **Minister** under section 41(2) or section 8(1) of the **Act**;

"**storage operator and bulk water service**" means a service provided by a **regulated entity** in connection with the provision of a supply of water to a **regulated entity**;

"**trade waste**" means any waterborne waste (other than sewage) which is suitable, according to the criteria of a **regulated entity**, for discharge into the **regulated entity's** sewerage system;

"**urban water users**" means customers who receive an urban water service from Grampians Wimmera Mallee Water Authority or Lower Murray Urban and Rural Water Authority;

"**Water Plan**" means a water plan that is required to be delivered to the **Commission** by a **regulated entity** under a **Statement of Obligations**.

Glossary

Aquifer – Underground sediments or fractured rock that hold water and allow water to flow through them. Aquifers include confined, unconfined and artesian types.

Aquifer Storage and Recovery – Involves the process of recharging water into an aquifer for the purpose of storage and subsequent withdrawal.

Augmentation – provision of additional water supply, normally achieved through construction of new infrastructure

Biodiversity – A shortening of the term biological diversity, which means the variety of all life forms.

Blackwater – Wastewater containing, or likely to be contaminated by, human waste matter (e.g. toilet wastewater or waters contaminated by toilet wastewater).

Brownfield sites – Development on sites that have previously been used for urban land uses.

Catchment – An area of land that collects rainfall and contributes to surface water (streams, rivers, wetlands) or to groundwater.

Climate change – Variations in historic weather patterns due to increases in the Earth's average temperature resulting from increased greenhouse gases in the atmosphere

Critical human water needs – Minimum amount of water that can reasonably be provided from the Murray-Darling Basin, required to meet core human consumption requirements and non-human consumption where failure to do so would cause prohibitively high costs

Commercial use – Commercial uses can include, but are not limited to, automotive/equipment showrooms, food outlets, restaurants, hotels, garden centres, motels, offices, supermarkets and shops.

Demand management – An approach that is used to intentionally reduce the consumption of water through specific initiatives, normally either to conserve supplies or defer augmentations.

Desalination – The process of removing dissolved salts from seawater (or brackish water) so that it becomes suitable for drinking or other productive uses.

Detention – Short-term storage of runoff. The objective of a detention facility is to regulate the runoff from a given rainfall event to reduce the impact on downstream stormwater systems and improve water quality.

Drinking water (potable water) – Water that is fit for human consumption.

Ecological footprint – Total area of land and/or water required to sustain a given population, organisation or activity.

Ecosystem – A community of plants, animals and microorganisms that are linked by energy and nutrient flows and that interact with each other and with the physical environment.

Effluent – The outflow of wastewater from any water processing system or device.

Environmental flow release – Release from a water storage intended to maintain appropriate environmental conditions in a waterway.

Externalities – When setting price, consideration should be given to the full cost to society of providing the water including the costs or benefits arising from an individual's consumption that affects others, such as social and environmental impacts. These impacts are known as externalities

Greenfield sites – Development on open land (usually greater than 4000 square metres) that has not previously been developed for urban land uses.

Greywater – Household wastewater from the laundry, bathroom and kitchen.

Glossary

Groundwater – Sub-surface water, particularly that which is held in aquifers.

Industrial wastewater – The liquid waste from any industry, business, trade or manufacturing premises, other than domestic sewage, which is disposed of to the sewer. Also known as trade waste

Irrigation – The application of water to cultivated land or open space to promote the growth of vegetation or crops

Natural recharge – The infiltration of water into an aquifer from the surface (rainfall, stream flow, irrigation etc).

Natural resources management – All activities that involve the use, development or protection of natural resources and/or that impact on the state and condition of natural resources, whether positively or negatively.

Prescribed Water Resource – A prescribed water resource may be surface water, groundwater, a watercourse, or a combination of these.

Recycled water – Water derived from wastewater systems or stormwater drainage systems that has been treated to a standard that is appropriate for its intended use.

Run-off – That part of precipitation that flows from a catchment area into rivers, lakes, watercourses, reservoirs or dams.

Security of supply – Reliability or surety of meeting water supply demand. Storages provide the capability to ensure a certain level of supply is available despite seasonal variations in stream flow

Sewerage system – The network of collection, conveyance, treatment and disposal facilities for wastewater. Also known as wastewater system

Sewer mining – The localized harvesting of raw sewage that is treated to a safe level as required for a particular use

Stormwater – Water that flows off roofs, properties and roads during rain events

Surface water – water flowing over land or collected in a dam or reservoir

Third party access – Arrangement whereby a new provider can apply for and be granted access to a monopoly's infrastructure to transport their product to customers

To take water – process of pumping, siphoning or diverting water from a watercourse. Also includes permitting stock to drink from a watercourse, a natural or artificial lake, a dam or reservoir.

Transfer/distribution system – A system of conduits (e.g. pipes, channels and aqueducts) used to supply water to customers. A distribution system is typically made up of large supply 'mains', which convey the water from major storages to smaller service reservoirs; these then feed into smaller 'service' pipes which deliver the water to the customers.

Trunk mains – major pipelines that transfer bulk water from its source (river, reservoir, treatment plant, bore field) to the distribution system.

Wastewater – Contaminated water before it undergoes any form of treatment. The water may be contaminated with solids, chemicals, or changes in temperature.

Water allocation plan – A legal document detailing the rules for the allocation, use and transfer of water from prescribed water resources, as well as the water-affecting activities that require permits.

Water licence – Volume of water that the licensee is authorised to take or to hold, representing a share of water from a prescribed water resource as defined in the relevant water allocation plan

Water sensitive urban design – An approach to urban planning that integrates the management of the total water cycle into the design of new developments to improve water use efficiency without adversely affecting lifestyle.

Water trading – Process of buying and selling either permanent or temporary water entitlements under an established set of rules.

Abbreviations

AARD	– Aboriginal Affairs and Reconciliation Division
ABS	– Australian Bureau of Statistics
ACCC	– Australian Competition and Consumer Council
AMLR NRM Board	– Adelaide and Mount Lofty Ranges Natural Resources Management Board
ASR	– Aquifer Storage and Recovery
ASTR	– Aquifer Storage, Transfer and Recovery
AuSSI	– Australian Sustainable Schools Initiative
AWRIS	– Australian Water Resource Information System
BASIX	– Building Sustainability Index (NSW)
BoM	– Bureau of Meteorology, Australia.
BSMS	– Basin Salinity Management Strategy
CH₄	– Methane
CO₂	– Carbon Dioxide
COAG	– Council of Australian Governments
CRC	– Cooperative Research Centre
CSIRO	– Commonwealth Scientific and Industrial Research Organisation
CSO	– Community Service Obligation
DECS	– Department of Education and Children's Services (Government of South Australia)
DEH	– Department for Environment and Heritage (Government of South Australia)
DFC	– Department for Families and Communities (Government of South Australia)
DFEEST	– Department of Further Education, Employment, Science and Technology (Government of South Australia)
DPC	– Department of the Premier and Cabinet (Government of South Australia)
DP&LG	– Department of Planning and Local Government (Government of South Australia)
DSTO	– Defence Science and Technology Organisation
DTED	– Department of Trade and Economic Development (Government of South Australia)
DTEI	– Department for Transport, Energy and Infrastructure (Government of South Australia)
DTF	– Department of Treasury and Finance (Government of South Australia)
DWLBC	– Department of Water, Land and Biodiversity Conservation (Government of South Australia)
EC	– Electrical Conductivity
EDB	– Economic Development Board
EIS	– Environmental Impact Statement
EPA	– Environment Protection Authority (Government of South Australia)
ESCOSA	– Essential Services Commission of South Australia
EV	– Environmental Value
EWR	– Environmental Water Reserve
GL	– gigalitre
GL/a	– gigalitres per annum
GWh	– gigawatt hours

Abbreviations

ICE WaRM – International Centre of Excellence for Water Resource Management

ICT – Information and Communications Technology

IPCC – Inter-Governmental Panel on Climate Change

IPOS – Code of Practice for Irrigated Public Open Space

kL – kilolitre

kL/a – kilolitres per annum

kL/day – kilolitres per day

LGA – Local Government Association of South Australia

LMC – Land Management Corporation

LRMC – Long Run Marginal Cost

MAR – Managed Aquifer Recharge

MDB – Murray-Darling Basin

MDBA – Murray-Darling Basin Authority

ML – megalitre

ML/a – megalitres per annum

ML/d – megalitres per day

MLR – Mount Lofty Ranges

NRM – Natural Resources Management

NWI – National Water Initiative

NWQMS – National Water Quality Management Strategy

OWS – Office for Water Security (Government of South Australia)

PIRSA – Primary Industries and Resources South Australia (Government of South Australia)

RMEM – River Murray Environmental Manager

SACES – South Australian Centre for Economic Studies

SAMDB NRM Board – South Australian Murray-Darling Basin Natural Resources Management Board

SARDI – South Australian Research and Development Institute, a division within PIRSA

SA Water – South Australian Water Corporation (Government of South Australia)

SIS – Salt Interception Scheme

SMA – Stormwater Management Authority

WAP – Water Allocation Plan

Watershed – the Mount Lofty Ranges drinking water catchments

WELS – Water Efficiency Labelling and Standards Scheme

WIA – Water Industry Alliance

WIRO – Water Industry Regulatory Order

WNARS – Waterproofing Northern Adelaide Regional Subsidiary

WPA – Water Proofing Adelaide

WQO – Water Quality Objective

WSAA – Water Services Association of Australia

WSUD – Water Sensitive Urban Design

WWTP – Waste Water Treatment Plant

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