



**Government of South Australia**

Department for Water

# **ANNUAL REPORT**

## **2011–12**

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DEPARTMENT FOR WATER

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Copies of the report are available from [www.waterforgood.sa.gov.au](http://www.waterforgood.sa.gov.au) or by contacting +61 8463 6800

30 September 2012

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30 September 2012

The Hon Paul Caica MP  
Minister for Environment and Conservation  
Minister for the River Murray  
Minister for Water  
Parliament House  
North Terrace  
ADELAIDE SA 5000

Dear Minister

I have great pleasure in submitting the Department for Water's annual report for the financial year ending 30 June 2012.

This report has been prepared in accordance with the:

- *Public Sector Act 2009*
- *Public Sector Regulations 2010*
- *Freedom of Information Act 1991*
- *Whistleblowers Protection Act 1993*
- *Public Finance and Audit Act 1987*
- *Department of the Premier and Cabinet Circular PC013 – Annual Reporting Requirements*

A handwritten signature in black ink, appearing to be 'Allan Holmes', with a long horizontal flourish extending to the right.

Allan Holmes  
**CHIEF EXECUTIVE**  
**DEPARTMENT OF ENVIRONMENT, WATER AND NATURAL RESOURCES**

## Chief Executive's statement

This is the final annual report by the Department for Water (DFW) since it was formed on 1 July 2010.

On 1 July 2012, the department amalgamated with the Department of Environment and Natural Resources. The creation of the new Department of Environment, Water and Natural Resources will enable greater integration of natural resources management and continue the vital work of the past two years to ensure South Australia's water security. I am pleased to lead the integrated department and I thank Scott Ashby – who led the Department for Water until being seconded to the position of Chief Executive of the Premier's Murray-Darling Basin Plan Taskforce in early June 2012 – for his leadership in creating a strong foundation for the future management of water resources.

It was another year of considerable effort and achievement on a range of complex issues. Two bodies of work in particular have long-term implications for the state.

The first, the department's work on the introduction of the *Water Industry Act 2012*, saw the culmination of several years' work on a legislative framework able to promote efficiency, competition and innovation in our water industry. The need for new legislation was due to a diversified industry, climate change and growth in our population and economy.

As part of the biggest overhaul of water industry legislation in the state's history, the new Act provides greater consumer protection, independent water pricing and an independent Water Industry Ombudsman.

The other major piece of work was the delivery of the South Australian Government's response to the draft Murray-Darling Basin Plan. This represented an important milestone for the department after more than 18 months' work, led by the Murray-Darling Basin Policy team. South Australia's response included 71 recommendations for improvement to restore the Murray-Darling Basin to a sustainable level of long-term health and address a number of constraints to optimise management of the system. Negotiation is under way to secure improvements.

The department continued to oversee the implementation of key actions in the *Water for Good* plan for water security and also report on whole-of-government progress. The second *Water for Good* Annual Statement was issued in June 2012 and found that of the 94 actions and four sub-targets listed, 16 had been completed, 56 were on track, 25 were experiencing some delay and one (the construction of a temporary weir at Pomanda Island) was no longer applicable.

Improved River Murray flows into South Australia again contributed to environmental progress. During the year, work was carried out to remove the visible section of the Narrung bund, fully connecting Lakes Albert and Alexandrina for the first time in three years. The bund was built at the height of the drought in 2008, and its removal is expected to help further reduce salinity levels in Lake Albert by restoring natural flow between Lake

Alexandrina and Lake Albert. Work also began this year on the removal of the Clayton regulator at Goolwa, which was built in 2009 as an emergency measure to avert large-scale acidification in the region by keeping water levels above critical triggers. Investigations also began into the removal of the Currency Creek regulator.

Improved river conditions allowed irrigators to start the 2012–13 water year with 100 per cent allocation.

The department's high-level science and monitoring work is critical to the sustainable management of water resources. This year, using this science and monitoring to inform policy, the department released a Demand and Supply Statement for the Northern and Yorke region and began planning for statements for the Arid Lands and Alinytjara Wilurara regions. An annual review of the Eyre Peninsula statement was also produced this year.

The state has played an important role in the protection of the Great Artesian Basin. As the largest and deepest artesian basin in the world, it covers almost one-quarter of the continent, including the north-east part of South Australia. During the year a major milestone was reached in the third phase of the Great Artesian Basin Sustainability Initiative, with the first of two large free-flowing wells in the basin's west sealed. This will preserve 3.8 megalitres a day of artesian groundwater.

Other work in the Far North includes ongoing activity on the Finding Long-Term Outback Water Solutions (FLOWS) initiative, which is investigating groundwater sources to support sustainable development.

Meanwhile, the department undertook consultation with South East communities over a proposal to divert surplus fresh water from the South East drainage network – that would otherwise flow out to sea – into local wetlands and the Coorong. If this proceeds it will effectively restore one of the region's natural historical watercourse flow paths.

The department also developed nation-leading policy and legislative reform on the impacts and use of forest water, resulting in the passage of the *NRM Commercial Forests Amendment Act*. This will see the impacts of irrigation and forestry water treated in a consistent way.

I commend the professionalism and commitment of staff during 2011–12 in ensuring the department met its statutory responsibilities and continued its contribution to South Australia's economic and environmental sustainability.

I also thank them for their efforts in the early phase of the amalgamation of the departments, and I look forward to providing improved services for South Australians through this important reform process.

**Allan Holmes**

A handwritten signature in black ink, consisting of a stylized, cursive initial followed by a horizontal line extending to the right.

**CHIEF EXECUTIVE**

## Highlights of 2011–12

The department's key 2011–12 achievements are highlighted below. Further information can be found in the body of this report.

- Led the South Australian Government's response to the draft Murray-Darling Basin Plan, providing 71 recommendations for improvement to restore the Basin to a sustainable level of health.
- Assisted with the introduction of the *Water Industry Act* – the biggest overhaul of water industry legislation in the state's history.
- Finalised new water-sharing rules and storage rights in the Murray-Darling Basin which allow South Australia to store critical human water and carryover water from one year to the next.
- Developed policy and legislative reform on the impacts of forest water use, resulting in the passage of the *NRM Commercial Forests Amendment Act*, which treats irrigation and forestry water impacts in a consistent way.
- Successfully negotiated the delivery of 429 580 ML of Living Murray and Commonwealth environmental water for use at a number of South Australian River Murray wetlands, floodplains and the Lower Lakes and Coorong.
- Removed the visible section of the Narrung Bund, began removal of the Clayton Regulator at Goolwa and investigated the removal of the Currency Creek Regulator.
- Completed a regional demand and supply statement for the Northern and Yorke NRM region and began work on statements for the Arid Lands and Alinytjara Wilurara NRM regions.
- Completed reports into the potential future impacts of climate change for the Northern and Yorke NRM region.
- Began major construction work to seal and drill key wells under the third phase of the Great Artesian Basin Sustainability Initiative.
- Investigated the feasibility of the South East Flows Restoration Project.
- Developed policy principles to assist development of the Lower Limestone Coast Water Allocation Plan.
- Provided technical and scientific expertise to help develop water allocation policies across South Australia to ensure there is enough water for communities, industry and the environment.
- Supported construction of eight significant stormwater harvesting and reuse projects across Greater Adelaide.
- Progressed water allocation plans for the Western and Eastern Mount Lofty Ranges to outline sustainable limits for taking water from local surface water and groundwater resources.



## **Roles, functions and objectives**

The department leads the management of South Australia's water resources. It advises the Government and the South Australian community on the quantity, quality, use and availability of water resources.

Its purpose is to ensure that there are always sufficient and sustainable water resources in South Australia for our health, our economy, our environment and our lifestyle.

Its work is directed by the legislation it administers, the South Australian Strategic Plan, *Water for Good*, the State Natural Resources Management Plan, the national water reform agenda and the National Water Initiative.

## **Legislation administered by the department**

**The department assists the Minister for Water and Minister for the River Murray in the administration of these Acts:**

*Ground Water (Qualco-Sunlands) Control Act 2000*

An Act to reduce the risk of waterlogging and salinisation of land and increased levels of salinity in the River Murray caused by the irrigation of land in the Qualco Sunlands irrigation area; to make a related amendment to the *Irrigation Act 1994*.

*Irrigation Act 2009*

An Act to provide for the irrigation of land in government and private irrigation districts.

*Murray-Darling Basin Act 2008*

An Act to facilitate the operation of an agreement entered into between the Commonwealth, New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory to promote and co-ordinate effective planning and management for the equitable, efficient and sustainable use of the water and other natural resources of the Murray-Darling Basin; to make related amendments to the *Development Act 1993*, the *Ground Water (Qualco-Sunlands) Control Act 2000*, the *Natural Resources Management Act 2004*, the *River Murray Act 2003* and the *Waterworks Act 1932*; to repeal the *Murray-Darling Basin Act 1993*.

*Renmark Irrigation Trust Act 2009*

An Act to consolidate certain Acts relating to the Renmark Irrigation Trust.

*River Murray Act 2003*

This is an Act to provide for the protection and enhancement of the River Murray and related areas and eco-systems.

*River Murray Waters Agreement Supplemental Agreement Act 1963*

An Act to ratify and approve an agreement entered into between the Prime Minister of the Commonwealth and the Premiers of the States of New South Wales, Victoria and South Australia respecting the waters of the Darling River stored at Menindee in the State of New South Wales in the connected series of lake storages collectively known as the Menindee Lake Storage.

*River Murray Waters (Dartmouth Reservoir) Act 1971*

An Act to ratify and approve an agreement relating to financial assistance for the construction of the Dartmouth Reservoir.

*Water (Commonwealth Powers) Act 2008*

An Act to refer certain matters relating to water management to the Commonwealth Parliament for the purposes of section 51 (xxxvii) of the *Constitution of the Commonwealth*.

*Water Industry Act 2012*

An Act to facilitate planning in connection with water demand and supply; to regulate the water industry, including by providing for the establishment of a licensing regime and providing for the regulation of prices, customer service standards, technical standards for water and sewerage infrastructure and installations and plumbing, and by providing performance monitoring of the water industry; to provide for other measures relevant to the use and management of water; to make amendments to various related Acts; to repeal the *Sewerage Act 1929*, the *Water Conservation Act 1936* and the *Waterworks Act 1932*.

**The department assists the Minister for Sustainability, Environment and Conservation in the administration of these Acts:**

*Groundwater (Border Agreement) Act 1985*

An Act to approve and provide for carrying out an agreement for the management of groundwater adjacent to the border of South Australia and Victoria; to make related amendments to the *Water Resources Act 1976*.

*Lake Eyre Basin (Intergovernmental Agreement) Act 2001*

An Act to ratify and approve the Lake Eyre Basin Intergovernmental Agreement.

*Natural Resources Management Act 2004*

An Act to promote sustainable and integrated management of the State's natural resources; to make provision for the protection of the State's natural resources; to repeal the *Animal and Plant Control (Agricultural Protection and Other Purposes) Act 1986*, the *Soil Conservation and Land Care Act 1989* and the *Water Resources Act 1997*.

*South Eastern Water Conservation and Drainage Act 1992*

An Act to provide for the conservation and management of water and the prevention of flooding of rural land in the South East of the State; to repeal the *South Eastern Drainage Act 1931* and the *Tatiara Drainage Trust Act 1949*.

*Upper South East Dryland Salinity and Flood Management Act 2002*

An Act to provide for a scheme to protect and improve the environment and agricultural production in the Upper South East through the proper conservation and management of water and the initiation or implementation by the Government of the State of works and environmental management programs and other initiatives; to make related amendments to the *South Eastern Water Conservation and Drainage Act 1992*.

*Water Efficiency Labelling and Standards Act 2006*

An Act to provide for water efficiency labelling and standards as part of a cooperative scheme between the Commonwealth and the States and Territories.

## **Relationship with other organisations**

In performing its roles this year the department worked closely with other state agencies, including the Department of Environment and Natural Resources, the Environment Protection Authority, SA Water, the Department of Treasury and Finance, the Department for Transport, Energy and Infrastructure, Zero Waste SA, the Department of the Premier and Cabinet and Primary Industries and Regions SA.

The department also had a close working relationship with the Natural Resources Management Council and the state's eight regional Natural Resource Management (NRM) boards.

The former Chief Executive was the State Government appointee to the Basin Officials Committee, established under the Australian Government's *Water Act 2007*. Together with the MDBA, the committee oversees management of river operations and natural resource management programs in the Murray-Darling Basin. It also provides advice to the authority and reports to the Legislative and Governance Forum on the Murray-Darling Basin.

The former Chief Executive was a member of a number of other committees and boards, including the Commonwealth of Australian Governments (COAG) Water Reform Committee, the eWater Cooperative Research Centre High Level Steering Committee, the Water Security Council, the Goyder Institute for Water Research Board, the Adelaide Desalination Project Steering Committee, the Stormwater Taskforce and the Metropolitan Adelaide Service Delivery Project Steering Committee.

The former Chief Executive was also a member of the national Environment and Water Standing Committee, the Natural Resource Management Standing Committee, the Senior Officials Water Reform Meeting and the State Government Planning Coordinating Committee. The department has representatives on the Border Groundwaters Agreement Review Committee and supports the South East Water Conservation and Drainage Board.

Departmental officers are members of many national committees and working groups with the aim of ensuring a coordinated and consistent approach to water resources management priorities, such as the management of the River Murray. Of particular importance was the ongoing relationship with the MDBA.

The department also worked with the Stormwater Management Authority and the Local Government Association.

## **South Australia's Strategic Plan**

The department was lead agency for the following targets in 2011–12:

### **73. Recycled stormwater**

South Australia has the system capacity to harvest up to 35 GL of stormwater per annum by 2025

### **74. Recycled wastewater**

South Australia has the system capacity to recycle up to 50 GL of wastewater per annum by 2025

### **75. Sustainable water use**

South Australia's water resources are managed within sustainable limits by 2018

### **76. River Murray – flows**

Increase environmental flows in the River Murray by a minimum of 1500 GL by 2018

### **77. River Murray – salinity**

South Australia maintains a positive balance on the Murray-Darling Basin Authority salinity register

In addition to these targets, the department supported the delivery of a number of others, including:

### **13. Work-life balance**

Improve the quality of life of all South Australians through maintenance of a healthy work-life balance

### **21. Greater safety at work**

Achieve a 40 per cent reduction in injury by 2012 and a further 50 per cent reduction by 2020

### **30. Boards and committees**

Increase the number of women on all State Government boards and committees to 50 per cent on average by 2014, and maintain thereafter by ensuring that 50 per cent of women are appointed, on average, each quarter

### **31. Chairs of boards and committees**

Increase the number of women chairing State Government boards and committees to 50 per cent by 2014

### **32. Customer and client satisfaction with government services**

Increase the satisfaction of South Australians with Government services by 10 per cent by 2014, maintaining or exceeding that level of satisfaction thereafter

### **33. Government planning decisions**

South Australia leads the nation in timely decisions of development applications through to 2020

### **35. Economic growth**

Exceed the national economic growth rate over the period to 2020

### **37. Total exports**

Increase the value of South Australia's export income to \$25 billion by 2020

### **38. Business investment**

Exceed Australia's ratio of business investment as a percentage of the economy by 2014 and maintain thereafter

### **39. Competitive business climate**

Maintain Adelaide's rating as the least costly place to set up and do business in Australia and continue to improve our position internationally

### **40. Food industry**

Grow the contribution made by the South Australian food industry to \$20 billion by 2020

### **42. Minerals production and processing**

Increase the value of minerals production and processing to \$10 billion by 2020

### **50. People with disability**

Increase by 10 per cent the number of people with a disability employed in South Australia by 2020

### **52. Women**

Have women comprising half of the public sector employees in the executive levels (including chief executives) by 2014 and maintain thereafter

### **53. Aboriginal employees**

Increase the participation of Aboriginal people in the South Australian public sector, spread across all classifications and agencies, to two per cent by 2014 and maintain or better those levels through to 2020

**61. Energy efficiency – government buildings**

Improve the energy efficiency of government buildings by 30 per cent by 2020. Milestone of 25 per cent by 2014

**62. Climate change adaptation**

Develop regional climate change adaptation plans in all State Government regions by 2016

**69. Lose no species**

Lose no native species as a result of human impacts

**95. Industry collaboration, research and development commercialisation**

Total gross cumulative value of industry and other funding for research earned by universities and state-based publicly funded research institutions to reach \$650 million by 2020

**96. Public research expenditure**

Public expenditure on research and development, as a proportion of gross state product, to be maintained at 1.2 per cent to 2020

## Operations and deliverables for 2011–12

### WATER FOR OUR COMMUNITIES

#### A diverse and sustainable portfolio of water sources

##### *Produce a Water for Good annual statement including a review of the demand/supply balance for Greater Adelaide*

*Water for Good* Action 2 states that the Minister will produce an annual statement that will: assess progress of the plan and identify any risks or issues; review and confirm water security standards for the upcoming review period; provide demand and supply status for each region; identify and analyse impacts of any emerging issues.

*Water for Good*, the Government's plan for ensuring future water security for South Australia, was released in 2009. It commits to an annual review of its implementation and demand and supply projections for Greater Adelaide and other NRM Regions of the state to ensure an adaptive management approach to our water future.

The 2011 Annual Statement shows that, of the 94 actions and four sub-targets in *Water for Good*, 16 have been completed, 56 are on track and 25 are experiencing some delay. No actions are significantly behind schedule and one is now deemed no longer necessary (the proposed weir at Pomanda Island).

Key achievements with the implementation of *Water for Good* since the last annual report include:

- Passing of the *Water Industry Act* by the South Australian Parliament
- Production of the first water from the Adelaide Desalination Plant
- The provision of a state submission to the Murray-Darling Basin Authority on the proposed Basin Plan
- Release of the Northern and Yorke Demand and Supply Statement and the first annual review of the Eyre Peninsula Statement
- Establishment of a legislative framework to manage water resource impacts of plantation forestry through the *Natural Resources Management (Commercial Forests) Amendment Act*
- Release of a consultation statement on water-sensitive urban design.



The assessment of demand and supply projections for Greater Adelaide for 2010–11 has also established that no major assumptions have changed and no new issues arisen which require a further revision of these projections, nor other actions in *Water for Good*.

***Define future governance arrangements for stormwater management in South Australia***

*Water for Good* Action 14 involves working with local government to update the State-Local Government Stormwater Management Agreement, clarifying the roles of state agencies and local government; reinforcing the importance of collaboration and strengthening governance arrangements.

The *Stormwater Strategy*, released on 5 July 2011, commits to working with the Local Government Association to develop a new operational model for the Stormwater Management Authority and to the finalising of a new State and Local Government Stormwater Management Agreement.

During 2011–12 the department and the Local Government Association considered governance options and prepared a draft Stormwater Management Agreement outlining proposed new operational arrangements for the Stormwater Management Authority to ensure it takes a strategic coordination and leadership role.

Consultation on the draft agreement was undertaken with state agencies and, through the Local Government Association, with councils.

In May 2012 the State Executive Committee of the Local Government Association considered council feedback and determined to consider a final draft at its next meeting in July 2012. The department and the Local Government Association are preparing the final draft.

The agreement will supersede the 2006 State-Local Government Stormwater Agreement which was approved in Schedule 1A of the *Local Government Act 1999*.

***Commence blueprint for integrated wastewater and stormwater use for Greater Adelaide***

*Water for Good* Action 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.*

*Water for Good* Action 16 - *Develop a master plan for effectively managing stormwater in Adelaide. Include interim milestones and water quality targets to support recommendations in the Adelaide Coastal Waters Study, to provide up to 60 GL/a of recycled stormwater, in Greater Adelaide, by 2050.*

*Water for Good* Action 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 resources.*

The Stormwater Strategy includes an action to prepare an integrated blueprint, to bring together stormwater and wastewater alongside other water resources in the Adelaide region; guide future infrastructure investment and policy requirements; and assist Adelaide to transition to a water-sensitive city for Greater Adelaide by 2014.

The department has held discussions with officers of relevant state agencies, Adelaide and Mount Lofty Ranges Natural Resources Management Board, South Australian Murray-Darling Basin Natural Resources Management Board and the Local Government Association on the potential scope and governance for the preparation of a blueprint.

The department also held discussions with the Goyder Institute for Water Research on research opportunities, with the institute currently finalising a research proposal to support the development of the blueprint. The department also engaged the Stormwater Management Authority in relation to its possible assistance in facilitating the progress of stormwater aspects of the blueprint.

Governance arrangements for the project are being finalised and will provide for both State and local government engagement.

## **A healthy working River Murray**

### ***Progress the development of the MDB reforms; in particular, the proposed Basin Plan and Murray-Darling Basin Agreement and schedules to the agreement***

#### **Proposed Basin Plan**

A key outcome for the department in 2011–12 was the development of a coordinated South Australian Government response to the proposed Murray-Darling Basin Plan.

The department led a comprehensive cross-agency process to develop the government's response to the draft Basin Plan, released on 28 November 2011. This included a rigorous scientific, policy, legal and technical analysis of the proposals contained in the draft Basin Plan to assess the potential social, economic and environmental impacts for the state. As a key component of this analysis, government scientists and experts from the Goyder Institute for Water Research evaluated the science underpinning the MDBA's proposed water recovery target of an average of 2750 GL per year and the potential environmental consequences for South Australia. The published reports of this evaluation can be found at [www.waterforgood.sa.gov.au](http://www.waterforgood.sa.gov.au)

The department also supported the Premier's Basin Plan Taskforce, comprising of key ministers and senior government officials, which was established in 2011 to oversee the preparation of the government's response to the proposed Basin Plan.

The department managed significant stakeholder engagement for the preparation of the government's submission. This included meetings with community leaders, irrigation and industry groups, environment groups and Aboriginal communities. Community input also occurred through the 'Our River, Our Future' website.

The government's response to the draft Basin Plan was lodged with the MDBA on 16 April 2012. The submission made 71 recommendations for improvements and/or additional investment and/or commitments from the Australian Government to ensure the Basin Plan can be effectively implemented. A copy of the submission is available at [www.waterforgood.sa.gov.au](http://www.waterforgood.sa.gov.au)

The State Government's submission and the department's ongoing engagement with the MDBA throughout 2011–12 contributed to the development of the revised draft Basin Plan, which was released on 28 May 2012. The department and the Premier's Basin Plan Taskforce supported the Minister for Water and the River Murray to provide a further formal response through the Legislative and Governance Forum on the Murray-Darling Basin (formerly the Murray-Darling Basin Ministerial Council).

In 2012–13 the department and the Premier's Basin Plan Taskforce will continue to work with the MDBA in its development of the final Basin Plan, expected to be adopted in late 2012.

### ***Develop strategy to implement the Basin Plan in South Australia***

This year the department provided advice to state government agencies and the South Australian Murray-Darling Basin Natural Resources Management Board regarding potential implementation requirements arising from the proposed Basin Plan. Officers also engaged with the MDBA on planning to move from the existing arrangements to the new requirements under the Basin Plan.

Much of the implementation of the Basin Plan, including the application of new sustainable diversion limits, is likely to occur through state water resource plans. Existing water resource plans will be transitioned into the new management regime and new state water resource plans will be prepared, in consultation with water users and regional communities, ensuring they are consistent with the Basin Plan requirements.

Subject to the adoption of the final Basin Plan, the department will develop a comprehensive plan to implement reform in South Australia.

### **Review of the Murray-Darling Basin Agreement**

The agreement sets out the arrangements for the sharing and management of the Basin's water resources, particularly of the River Murray system. In South Australia, a healthy working River Murray is essential for water security and a progressive social and economic future.

The agreement is being reviewed on two fronts: through statutory reviews to ensure consistency with the Basin Plan and through states' input to an issues-based review stemming from a First Ministers' agreement on contingency water sharing arrangements in 2009–10. A focus of the issues-based review this year was to begin to document agreed river operations objectives and outcomes to be achieved by the MDBA, as well as all existing river operations rules and prior practise to:

1. Serve as a common baseline of information from which the authority and Basin state governments can assess future proposed changes.
2. Better understand constraints to the effective delivery of environmental water in the River Murray system and to identify options and opportunities for addressing those constraints.

A primary focus for 2012–13 will be to negotiate new river operations arrangements that optimise the efficient and effective delivery of water for environmental, economic and social needs.

### **Incorporation of Schedule G and Schedule H into the agreement and a new private carryover policy for SA**

In December 2011 the South Australian Government adopted a River Murray private carryover policy that will become operational for the 2012–13 water year. This was made possible by the incorporation of schedule G (*Accounting for South Australia's Storage Right*) and schedule H (*Water Sharing during Tiers 2 and 3*) into the Murray-Darling Basin Agreement in September 2011.

Schedule G provides the state with a formal right, for the first time, to store entitlement water for critical human water needs and private carryover in the major upstream storages for delivery at later time. Schedule H mandates a three-tier system of water sharing, a new reserves policy and formalises the process for addressing periods of severe water shortages. Together, the schedules are of great significance because they will provide South Australia with greater flexibility in managing the timing of the delivery of its water entitlements and will ensure that in all years critical human water needs from the River Murray will be met.

### ***Maintain a positive balance on the MDB salinity register and ensure real-time management of River Murray salinity.***

Salinity is a significant issue for South Australia due to:

- its location on the lower reach of the River Murray
- the natural geological structure of the Murray-Darling Basin in which the River Murray acts as a drain for salt out of the landscape
- the influence of human development in mobilising salt to the river
- the implications of salinity in terms of water quality for all uses (irrigation, environmental, critical human needs) including metropolitan Adelaide.

Salinity management therefore requires a continued investment from South Australia. The state is committed to managing salinity under the MDBA's Basin Salinity Management Strategy (BSMS). South Australia also recognises the importance of salinity management through:

Water For Good Action 56 - *Maintain a positive balance on the Murray-Darling Basin Authority's 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; and*

*South Australia's Strategic Plan Target 77 - South Australia maintains a positive balance on the Murray-Darling Basin Authority's Salinity Register.*

Key achievements to manage salinity in 2011–12 included:

- Delivery of South Australia's obligations under Schedule B to the Murray-Darling Basin Agreement, including South Australia's balance on the BSMS salinity registers remaining in positive credit.
- Analysis and provision of advice on the water quality and salinity management chapter of the draft Basin Plan.
- Policy guidelines for accounting for salinity impacts of environmental watering.
- Completion of peer review and accreditation of several groundwater models to support annual update of entries on the BSMS salinity registers.
- Completion of the salinity assessment of operation of the Chowilla environmental regulator.
- Development of a pilot annual River Murray irrigation water use report to understand current patterns in irrigation water use.

Work to be progressed in 2012–13 includes:

- Provision of policy advice on the revised draft Basin Plan.
- Development of salinity provisions for inclusion in the revised River Murray Water Allocation Plan.
- Updates to the South Australian River Murray Salinity Zoning Policy, including a simplified salinity assessment procedure to reduce processing time within the department and remove the reliance on outdated software.
- Incorporation of salinity requirements within the new Common Registry System.
- Finalise the five-year review of the Waikerie to Morgan and Woolpunda groundwater models to support further updates to data entries on the BSMS salinity registers.
- Pursue a cross-agency approach to crop data collection to support irrigation salinity assessments.
- Review of the Qualco-Sunlands Groundwater Control regulation.

## **River Murray Salt Interception Schemes**

A key tool available for reducing salinity in the River Murray is groundwater interception. Salt interception schemes (SIS) operate to intercept highly saline groundwater and transport it away from the River Murray for inland disposal. Works undertaken in 2011–12 include:

- continued construction of the Murtho SIS (expected to be completed in late 2012)
- commissioning of the four constructed bores of the Pike SIS
- ongoing operations and maintenance of existing schemes in accordance with their design specifications to intercept about 280 000 tonnes of salt per year
- investigations to determine the viability of extending the Woolpunda SIS
- five-year review of operations of the Waikerie 1, Waikerie IIA and Waikerie Lock 2 SIS.

### ***Complete and implement the SA River Murray Operations Strategy and River Murray Annual Operating Plan***

The cross-government River Murray Operations Coordinating Committee and River Murray Operations Working Group developed the working draft *South Australia's River Murray Operating Strategy 2011–12 to 2013–14* and *South Australia's River Murray Annual Operating Plan 2011–12*. The strategy takes account of the key environmental, economic and social outcomes for the River Murray in South Australia and identifies the river operations needed to deliver these outcomes. *South Australia's River Murray Operating Strategy 2012–13 to 2014–15* was also finalised in 2012.

South Australia's River Murray Annual Operating Plan 2011–12 was implemented throughout the year. The following key objectives of the plan were achieved:

- Optimisation of water accessibility for all users: in 2011–12, River Murray water was accessible by all water users. Water access entitlement holders were entitled to use 100 per cent water allocation from the start of the water year.
- Improved water quality in Lake Albert (target of less than 2000 EC): water quality in Lake Albert improved throughout 2011–12, although it did not meet this target. In June 2011 the salinity was around 6400 EC and in June 2012 around 3700 EC.
- Water levels in the Lower Lakes to be maintained above 0.40m AHD: the water level in the Lower Lakes was maintained above 0.4m AHD for the entire year. Water level cycles were introduced to assist in exporting salt from Lake Albert. The water level during these cycles ranged between 0.5m AHD and 0.82m AHD.
- Fishways to be operated during the peak migration periods (July to January): these were operated throughout 2011–12, not just in the peak migration period.
- Delivery of consumptive water aligned with anticipated timing demands: South Australia received its full Entitlement Flow plus additional dilution flow for the whole year, and unregulated flow for most of the year. This enabled the delivery of water to meet all consumptive demands.

- Water quality and salinity to remain within defined targets: with the exception of Lake Albert, water quality and salinity remained within the defined targets, including Morgan salinity of less than 800 EC.
- Deliver environmental water to achieve greatest ecological benefit for the river, floodplains, wetlands and the Coorong, Lower Lakes and Murray Mouth: South Australia received unregulated flow for most of the year. This limits the state's ability to receive environmental water from The Living Murray and the Commonwealth Environmental Water Holder. South Australia received a total of 429.58 GL of environmental water during 2011–12.
- Four wetland watering events on the Chowilla Floodplain were planned in 2011–12. Due to receiving high flow (including unregulated flow) three of these projects were no longer required as the wetlands were inundated naturally. Coombool Swamp received 3 GL of environmental water through pumping, which provided benefits to understorey vegetation, tree health and native wildlife. Environmental water also provided improvements to the Lower Lakes (salinity, river levels and fish passage) and contributed to keeping the Murray Mouth open.
- Optimise the use of unregulated flow: the unregulated flow pattern was enhanced to just below 60 GL/day, which provided water to temporary wetlands on the Chowilla Floodplain. This flow freshened groundwater, exported salt from the floodplain and contributed to the improved health and numbers of native flora and fauna.

Unregulated flow has travelled the length of the River Murray in South Australia to reach the Coorong and Murray Mouth. This has had a positive impact on water levels in the Lower Lakes, resulted in good flows over the barrages, lowered salinity levels in the Lower Lakes, improved fish passage and contributed to keeping the Murray Mouth open.

### ***Complete the removal of the Narrung Bund and the Goolwa Channel and Currency Creek regulators***

Phase 1 works as part of the Narrung Bund removal project began in March 2011 and were completed in July 2011. This involved the removal of the imported sand material, sheet piles and concrete used during construction.

The Narrung Bund was removed using excavators operating from the crest of the structure, excavating material to a level below the pre-construction bed level to ensure that there was 'void' space available to relocate the displaced natural lake bed sediments from construction. Phase 2 works required the department to submit a report to the Australian Government requesting the release of funds. Approval of Phase 2 was received in April 2012 and work will be scheduled to be completed within other works.

Funding of about \$7.2 million was approved by the MDBA and the Australian Government to implement works to decommission the Clayton Regulator and develop the method and processes to remove the Currency Creek Regulator.

Phases 1 and 2 of the Clayton Regulator removal project began in October and January respectively and both phases were complete in February 2012.

It is anticipated that Phase 3 removal of the Clayton Regulator (relocating displaced lake-bed sediments) will be undertaken by October 2012.

A business case outlining South Australia's preferred removal method and identifying the costs associated with removing the Currency Creek Regulator has also been submitted for funding. Once this is approved by the MDBA and Australian Government the works will be procured and implemented during 2012–2013.

***Work with the Murray-Darling Basin Natural Resources Management Board to develop a draft River Murray Prescribed Watercourse Water Allocation Plan***

The River Murray Prescribed Watercourse Project helps the Murray-Darling Basin Natural Resources Management Board to address limitations in the current water allocation plan, particularly in the following areas: its administration, its ability to provide for, and promote, sustainable water use, with policies gaps, and in its integration and compliance with other legislation.

The project will deliver an amended water allocation plan for the River Murray Prescribed Watercourse by June 2014. The plan will:

- be informed by knowledge and policies developed during recent drought
- ensure effective administration of water allocations
- be integrated and compliant with other legislation and the draft Murray-Darling Basin Plan
- define an effective set of rules to administer water allocation transfers, water use monitoring and reporting
- continue to provide water users with certainty to support sustainable investment, and environmental water use.

**Communities and industries valuing and using water wisely**

***Utilise existing awards programs to recognise the achievements of communities, individuals, schools, businesses, industry and government that are contributing to our future water security***

Action 33 of *Water for Good* involves the development of an awards program to recognise achievements in water use and innovation.

To date the *Water for Good* awards program has sponsored:



- the Excellence in Water Security Award at the Local Government Managers Australia 2010 Leadership Excellence Awards
- the Australian Water Association's Premier's Water Medal from 2011 to 2013
- the KESAB Sustainable Communities Awards and the Water for Good Excellence Awards for schools and community groups
- the Innovation Award at the 2011 Water Industry Alliance annual awards ceremony
- the Excellence in Infrastructure Award at the Stormwater Industry Association's 2011 South Australian awards.

The department also supports key community and educational events, which this year included:

- the Water Show - for students from Reception to Year 7, this performance introduces the subject of water in a dynamic piece of theatre
- 2011 International Kids Teaching Kids Conference
- Local Government Association Showcase and General Meeting.

***Develop water wise education programs for households, businesses, community groups, schools and ethnic communities***

The WaterWise Communities initiative began in late 2009 as a partnership between the department, the Local Government Association and SA Water. It encourages councils, residents, businesses, schools, churches, sporting and recreational facilities to pledge their commitment to being responsible users of water.

The program was expanded during the year through the translation of personal water plans and magnets with water saving tips into 17 languages targeting 15 prominent ethnic groups.

At 30 June 2012, 47 councils, 3613 householders, 42 businesses, 82 community groups and 99 schools had registered.

***Introduce water-sensitive urban design interim targets***

*Water for Good* Action 68 and the Stormwater Strategy involve actions to introduce targets for water-sensitive urban design in South Australia.

During 2011–12 the department supported the Goyder Institute for Water Research in undertaking work and making recommendations for possible water-sensitive urban design targets relevant to South Australia. The Goyder Institute's recommendations were incorporated in a Water Sensitive Urban Design Consultation Statement prepared by the department and publicly released in January 2012. In addition to outlining proposed water-sensitive urban design targets, the consultation statement also included for feedback possible future directions the state might consider to encourage greater uptake in urban development and redevelopments.

The consultation statement was released on the Water for Good website, and the department also sought feedback from other state agencies, local government and key building industry organisations.

The feedback is being considered before the preparation of proposed water-sensitive urban design target recommendations and proposed supporting actions for consideration by the State Government.

### ***Commence the Amata and Mimili water conservation projects***

In 2010 South Australia was awarded approximately \$5.5 million through a joint submission to the Council of Australia Governments (COAG) Strategy on Water and Wastewater Improvement Strategy in Remote (including Indigenous) Communities to provide water infrastructure upgrades and a water conservation program in the Anangu Pitjantjatjara Yankunytjatjara (APY) Land communities of Amata and Mimili.

This combined infrastructure/water conservation program is unique in Australia and was developed in response to a recommendation from a 2005 discussion paper that in arid communities 'water demand can be managed to meet sustainable limits by implementing water conservation measures in each community in conjunction with the development of primary water supply infrastructure'.

The water supply infrastructure upgrades are being led by SA Water, while the water conservation program is being managed by the department. Water supply infrastructure upgrades for Amata have been completed and the next phase of procurement for remaining works has been initiated.

The first stage of consultation with the communities to support the water conservation program was finalised in February 2012, with Flinders University being engaged to undertake this stage and provide a report on key findings.

The key findings from this consultation, as expressed by the communities, included:

- Water quality continues to be an issue that is shared among remote communities using bore water.
- The community has little information about its water resources and the roles played by various agencies.
- The communities noted the importance of diversifying their water supplies, e.g. rainwater.
- A number of programs were identified that could support the water conservation program, such as TAFE undertaking a course on simple home maintenance and replacing washers on leaky taps.

The process of community engagement is providing valuable information on how best to support remote communities and their future water supply issues, particularly in regard to opportunities to develop capacity and knowledge to enable them to take responsibility and manage their own water supplies.

Further work is also being undertaken to develop links between water supply issues and other service delivery constraints on the APY Lands. The department has also initiated discussions with state agencies on the lands to consider opportunities for improved water usage and conservation.

### ***Develop a policy for cultural water management***

Work has been undertaken with the Alinytjara Wilurara NRM Board defining the engagement with Aboriginal communities on approaches to cultural water. This will form the basis for further policy development to be applied across the state. This is in addition to engagement with Aboriginal communities – in particular the Ngarrindjeri and First Peoples – through the state’s response to the draft Basin Plan.

### ***Work with the Natural Resources Management Boards to implement new/amended Water Allocation Plans for the Barossa, Tatiara, River Murray, Lower Limestone Coast, Tintinara Coonalpyn and the Western and Eastern Mount Lofty Ranges Prescribed Water Resources Areas***

#### ***Issue existing water licenses in the Baroota, Kangaroo Flat, Mount Lofty Ranges and Adelaide Plains prescribed areas***

The department continued to contribute to sustainable management of water resources by working closely with the Natural Resources Management Boards to provide input into and to implement the reviewed water allocation plans for the state’s prescribed water resources.

#### **Barossa**

The Barossa Water Allocation Plan is a second-generation plan and was adopted in June 2009.

It addresses significant groundwater and surface water connectivity through setting extraction and well density limits and buffer zones for well construction near watercourses. These principles are enforced when administering and assessing licence and water transfer applications.

The department has effectively supported the Adelaide Mount Lofty Ranges Natural Resources Management Board through the administration of the plan.

#### **Tatiara**

The 2011–12 year resulted in a second round of reductions to licensed groundwater allocation in the Tatiara Prescribed Wells Area as part of implementing the water allocation plan to better align groundwater sustainability with limits to extraction. The reduction policies had been extensively consulted on as part of the review of the plan leading up to its adoption in 2010 and are a significant milestone in groundwater management both nationally – as it provides alignment to the National Water Initiative Principles – and for overall sustainability of groundwater resources for the state.

#### **Tintinara Coonalpyn**

The review of the Tintinara Coonalpyn Water Allocation Plan included attendance at community consultation forums and participation on the Water Allocation Planning Committee. The plan was subsequently adopted during April 2012 and will result in reductions to licensed allocations being required in two groundwater management areas.

This plan is scheduled for implementation in the 2012–13 water use year.

### **Lower Limestone Coast**

The department continued to assist with the review and development of the Lower Limestone Coast Water Allocation Plan by providing licensing information and policy input to the South East Natural Resources Management Board. Departmental officers adopted a coordination role to assist, identify and obtain the necessary policy, legal and scientific input that is required as part of the review of the plan. Further support will be provided to the board during the community consultation phases.

### **Western and Eastern Mount Lofty Ranges Prescribed Water Resources Areas**

The department will continue to closely liaise with both the Adelaide and Mount Lofty Ranges (Western Water Allocation Plan) and South Australian Murray-Darling Basin Natural Resources Management Boards (Eastern Water Allocation Plan) regarding the development of their respective water allocation plans.

The department has further developed all water resource and use assessments in order to implement existing user licenses in the two regions.

### **Baroota**

There are 21 existing user licences to be issued with existing user entitlements, taking into account the capacity of the resource and the need of water-dependent ecosystems.

Existing user licenses for the Baroota Prescribed Area are anticipated to be issued early in the first quarter of the 2012–13 year.

## **Communities able to respond to changing water resource conditions**

### ***Implement the Riverbank Collapse Hazard Plan***

The department is the Hazard Leader for Riverbank Collapse Hazard under the State Emergency Management Plan. The Hazard Leader is responsible for leading a multi-agency response to the prevention of, preparedness for, response to and recovery from riverbank collapse events and ultimately building community resilience.

Key outcomes achieved during 2011–12 include:

- implementation and review of the hazard plan
- completion of a state risk assessment for riverbank collapse under the National Partnership Agreement for Disaster Resilience

- completion of a zone risk assessment workshop for the Murray and Mallee Zone to inform the Zone Emergency Management Plan
- investigations and assessment of the risk of further riverbank collapse at sites along the River Murray
- working with local landholders to restrict access to sites at high risk of collapse
- implementation of a communications plan to ensure the public is informed of important hazard information and site management actions to build a resilient community
- establishing long-term management plans and monitoring for the highest risk sites in partnership with local councils
- preparing a proposal for further riverbank collapse research with the Goyder Institute for Water Research to address key knowledge gaps.

These actions have allowed local landholders to make informed decisions to re-open four key sites. These include Caloote Landing boat ramp, Dickson Reserve (Taillem Bend), Ngaut Ngaut Conservation Park and the closed section of Mannum Caravan Park.

The current focus of the Riverbank Collapse Hazard Program is to implement a strategic long-term management approach to guide future management of the hazard, whilst continuing to offer advice to landowners for each high-risk site.

### ***Implement long-term carryover arrangements in South Australia***

The capacity to carry over unused River Murray water from one year to the next was a drought-related policy introduced during 2006–07 in response to the lowest recorded annual inflow to the River Murray system and the projected continuation of low inflows.

During the drought period, carrying over unused water was a useful mechanism for licensed water users to supplement heavily restricted water allocations and more effectively manage inter-seasonal risk. The Murray-Darling Basin Ministerial Council in September 2011 approved South Australia's Storage Right (Schedule G) under the Murray-Darling Basin Agreement (*Water Act 2007*). This provides South Australia's first formal storage right and required community and industry consultation in relation to the development of a carryover policy and implementation arrangements in 2011–12 and for implementation from 2012–13, if seasonal conditions permit.

The new carryover system is established within the appropriate legislative, administrative and operational framework and is underpinned by robust and transparent long-term storage rights.

A formal carryover right complements the state's medium and long-term strategies of *Water for Good* and Murray Futures by allocating/storing, protecting and monitoring water resources.

Schedule G provides South Australia's right to store part of its Entitlement Flow in upstream storages as a reserve to meet critical human water needs and private carryover. Storage of

such deferred water is subject to there being no effect on the water availability or on the storage space for New South Wales or Victoria, and is dependent on a number of operational conditions.

South Australia received unregulated flow for the majority of 2011–12 and in accordance with the conditions of Schedule G, no Entitlement Flow was able to be deferred to meet private carryover.

In addition, under Schedule G, South Australia's stored water is the first water to spill from the storage in which it is located. If the spilled water cannot subsequently be re-regulated, it will be used for environmental purposes. As the major operational storages (Hume Reservoir, Menindee Lakes and Lake Victoria) all spilled for substantial periods of time during 2011–12, any water stored by South Australia would have spilled.

### ***Deliver the South Australian Flood Hazard Plan, including a statewide flood risk assessment***

The department has been assigned the role of Hazard Leader for Flood Hazard under the State Emergency Management Plan. The Hazard Leader is responsible for leading a multi-agency for planning emergency management activities pertaining to the prevention of, preparedness for, response to and recovery from flood events.

The key objectives are to protect public safety and infrastructure and build community resilience to a significant flood event.

These objectives link into the South Australian Strategic Plan for maintaining safe communities and healthy neighbourhoods by ensuring communities and key stakeholders are aware of the risks associated with flooding, and ensuring high-risk areas are identified and appropriately managed. The objectives also address prosperity, climate change issues associated with sea-level rise and increased flood risk in considering critical infrastructure and associated flood risks.

The priority activities completed in 2011–12 include:

- reviewing flooding preparedness of the South Australian River Murray, following the high flow of February 2011
- issuing River Murray High Flow Advice during periods of increased flows in 2012
- completing River Murray flood inundation mapping and making it available to the public
- assessing state-wide flood risk in consultation with stakeholders, in accordance with the National Partnership Agreement on Disaster Resilience
- completion of zone risk assessment workshops to inform the Zone Emergency Management Plans
- leading the multi-agency Flood Inquiries Taskforce, assessing the implications of the Queensland and Victorian flood inquiries for flood management in South Australia.

Following completion of these areas of work, an agenda of reform for managing flood in South Australia is being developed.

A key focus in the coming 12 to 24 months will be to implement the outcomes of the Flood Inquiries Taskforce as directed by the State Emergency Management Committee, and improve the State Flood Risk Assessment.

### ***Investigate the need for dam safety legislation***

Dam safety and related activities was a significant feature of the Queensland Flood Commission of Inquiry. Accordingly, consideration of this issue has been deferred until completion of the Flood Inquiries Taskforce review of the findings of both the Queensland and Victorian inquiries.

### ***Complete remedial work on the Glenelg Gates on the Patowalonga Lake System***

The Patowalonga Lake System (PLS) was established to mitigate water quality problems in the lake and adjacent beaches and to minimise any potential impacts to the marine environment, particularly coastal seagrass meadows.

The PLS has the dual function of enabling the continuous circulation of seawater through the Patowalonga Lake and directing catchment stormwater to the sea via the Barcoo Outlet. In addition, the system will divert high stormwater flows to the sea via the lake, except for those rare occasions when such flows coincide with high tides, requiring excess stormwater to be stored in the lake. The PLS is operated and maintained under a service contract with a private sector company.

The department also has a program of work to upgrade and repair the PLS infrastructure. This is the result of detailed infrastructure assessments to determine the extent of remediation works required. The program for 2011–12 is detailed below.

### **Detailed design for the Glenelg Gates Modernisation Project:**

The modernisation of the Glenelg Gates includes:

- replacement of the degraded gates and removal of the top part of the gates' superstructure
- improvement of site amenities, including the walkway over the Glenelg Gates.

A significant portion of the detailed design work was completed during 2011–12. The total cost of the detailed design is estimated to be approximately \$320 000 (excluding GST) and the construction works will be completed during 2012–13.

### **Rehabilitation of a number of gates within the Northern Gates**

Regular inspections and testing identified that a number of hydraulic actuators of the Northern Gates require rehabilitation. Hydraulic actuators, which open and close the gates, were repaired on three gates. This improved the gate operation and reliability and minimised

water leaking past gate seals when gates are closed, especially when high storm water flows impact on the upstream side of the gates.

**Removal of marine materials and sediments in the Barcoo Outlet:**

The Barcoo Outlet duct system is a critical part of the PLS and comprises an 850m long, 5m x 5m precast concrete arched duct (inverted U shape) designed to discharge urban stormwater, sediments and other material 200 metres offshore at West Beach. Marine materials and sediments accumulate at the sea end of the Barcoo Outlet duct, causing a partial blockage which is periodically removed.

During 2011–12 this project removed an estimated 410 cubic meters of sand, debris and other deposited material from the sea end of the Barcoo Outlet to improve hydraulic efficiency of the system during major storm events.

**Investigation to manage sediment accumulation at the PLS, including the Barcoo Outlet.**

The PLS has two small basins to capture leftover sediments in the stormwater. Removal and disposal of the accumulated sediment from these basins is difficult due to the nature of the content materials and limited, costly disposal options.

During 2011–12 an investigation was conducted and a business case developed to consider options to manage the current and future sediment loads in the two basins.



## **WATER FOR OUR ECONOMY**

### **Competitive and innovative water markets**

#### ***Finalise new water industry legislation for introduction into the Parliament of South Australia and begin planning for implementation***

*Water for Good* Action 70 involves appointing the Essential Services Commission of South Australia (ESCOSA) as the independent economic regulator for monopoly suppliers of urban and regional water and wastewater services. Action 89 involves giving statutory force to water demand and supply plans and outlining how these will be developed, implemented, reviewed and maintained.

The Water Industry Bill 2011 was introduced to Parliament on 27 July 2011, with the aim of providing greater consumer protection and encouraging more competition. Its introduction represented the culmination of an extensive period of research, analysis and consultation to prepare the draft legislation, and heralded the achievement of a major milestone in the delivery of the Government's commitment to reform South Australia's water industry legislation.

The Bill was passed on 5 April 2012 and the *Water Industry Act 2012* was proclaimed to come into operation from 1 July 2012.

The Act provides for a consolidated and contemporary legislative base for the provision of water and sewerage services, repealing the *Sewerage Act 1929*, *Waterworks Act 1932* and *Water Conservation Act 1936*. It introduces several major reforms, including the appointment of ESCOSA as an independent economic regulator, an independent technical regulator and licensing of retail water or sewerage service providers.

The Act also sets out a framework for water demand and supply planning. Many of the operational provisions of the new legislation, including licensing, will commence on 1 January 2013 to allow time for institutional and industry readiness.

A new set of regulations is required to support the Act. Work began in 2011 on preparing the regulations, which will be available for public consultation during 2012 before being finalised in time for the commencement in full of the Act on 1 January 2013.

#### ***Support the Department of Treasury and Finance in the development of a state-based third party access regime***

*Water for Good* Action 77 involves maintaining government ownership of SA Water and developing a state-based third-party regime that allows water and wastewater suppliers to access monopoly water and wastewater infrastructure.

The *Water Industry Act 2012* commits the Government to publishing a report about third-party access to water and sewerage infrastructure within one month of the commencement of section 26 of the Act and to use best endeavours to introduce into Parliament within nine months a Bill for a third-party access regime. The report will include, among other things, details of the various options for third party access, the procedures for seeking access, access pricing principles and the ability to maintain health and environmental standards.

The department will support the Department of Treasury and Finance in the development of the state-based third-party access regime during 2012–13.

## **Water facilitating increased productivity and economic growth**

### ***Introduce online licensing forms to reduce processing time and administrative cost to business***

Online SmartForms have been developed to enable customers to complete and submit an application, with payment, to the department in one easy step. The Water Planning and Management Division processes more than 4000 well construction permit applications a year. The introduction of the online application has reduced customer application time by 40 per cent, also helping the department and state achieve red tape reduction targets.

Additional SmartForms are under development and will be deployed in 2012–13 for:

- River Murray trade and transfer applications
- annual water use returns
- meter installation notification
- well drillers completion report
- customer feedback.

### ***Develop a whole of South East Drainage and Wetland Management Program***

During 2011–12 the department, in close association with the South Eastern Water Conservation and Drainage Board, established the South East Drainage and Wetland Management Program to deliver optimal and integrated management of the total South East drainage system (comprising 2589 km of drains and floodways) to meet multiple objectives.

The department, in collaboration with the board, used funds of \$5.4 million to:

- Commence the backlog of bridge restoration works. Maintenance was undertaken on 23 steel road bridges traversing drains in the lower South East at a cost of \$1.3 million, extending their service life for another 25 years. In total 140 similar bridges require restoration works.

- Transition the Upper South East drainage system from construction to an operational phase, resulting in the delivery of environmental flows to key environmental assets, including delivery of 26.6 GL of saline groundwater to the Coorong and providing 7.2 GL to the REFLOWS floodway, hydrating approximately 2000 hectares of wetlands.
- Undertake priority drainage management and maintenance works and the purchase of specialised equipment, including a long arm hydraulic excavator and a 33 tonne hydraulic excavator.
- Deliver improved and integrated communication between Adelaide, Naracoorte and Millicent through the implementation of a standard operating ICT environment in the two regional offices.
- Prepare a consolidated and integrated asset management framework for the Upper and Lower South East drainage systems to underpin the development of a sustainable funding model.

Additionally, the board continued to use its annual budget of \$2.1 million to deliver effective drainage and wetland management services to the lower South East, in accordance with the *South Eastern Water Conservation and Drainage Act 1992*.

***Develop the Finding Long-Term Outback Water Solutions (FLOWS) project to support sustainable mining development***

The FLOWS initiative spans a number of sub-projects under the groundwater program. This work is also supported by a significant research program being undertaken by the Goyder Institute for Water Research. The FLOWS initiative is contributing to total exports, mineral production and processing and sustainable water supply in South Australia, supporting South Australian Strategic Plan targets 37, 42 and 75 respectively.

The non-prescribed groundwater resources assessment for the Alinytjara Wilurara and SA Arid Lands NRM regions (Phase 1) were completed.

The Goyder Institute project identified the best aerial geophysical technique for mineral and groundwater identification and this is to be adopted by the Department of Manufacturing, Innovation, Trade, Resources and Energy for its next airborne geophysical survey.

South Australia signed the National Partnership Agreement on CSG and Large Coal Mining. Under this the department signed agreements to undertake preliminary assessment work for bio-regional assessments in the Arckaringa and Pedirka Basins and enhanced monitoring and analysis within the Lake Eyre Basin.

***Provide water-related advice on the proposed Olympic Dam expansion to the Olympic Dam Task Force***

The department provided comments on the development approval conditions for water-related activities for the proposed mine expansion to the Olympic Dam Task Force and to Planning SA.

Advice was provided to the task force on water-related aspects during the negotiation of the new *Roxby Downs (Indenture Ratification) Act*.

This work contributes to total exports, mineral production and processing and sustainable water supply in South Australia (SASP Targets 37, 42 and 75 respectively).

### ***Implement the Great Artesian Basin Sustainability Project to improve pressure levels in the Great Artesian Basin***

The Great Artesian Basin Sustainability Initiative Phase 3 contributes to sustainable water supply (SASP Target 75).

Eleven wells were decommissioned and three wells re-drilled during the year.

Difficulties were experienced during an attempt to decommission a further two wells within the period and work is continuing on revising the methodology to achieve a successful outcome.

A particular highlight was the decommissioning of the technically challenging Big Blyth Bore. The 200m deep bore has been filled with cement, saving more than 1000 ML of water each year.

A further seven bore drains have been closed and an additional 25 km of piping and associated water delivery infrastructure has been delivered to assist with bore drain closures.

The Great Artesian Basin national monitoring network installation program is continuing, with 24 monitoring sites completed, leaving 18 remaining. Of the 42 sites, 17 will be fully instrumented.

The field work to establish the non-flowing basin monitoring network was completed and 20 suitable sites selected. The use of monitoring data from mining companies in the region has enabled the network to be more comprehensive than the original design.

### ***Develop a statewide mine dewatering policy***

Mining exploration and production (including petroleum, gas and geothermal projects) is expanding rapidly in South Australia, with Strategic Plan target 42 aiming to increase the value of minerals production and processing to \$10 billion by 2020.

Target 75 is for South Australia's water resources to be managed within sustainable limits by 2018, while *Water for Good* Action 47 requires mining ventures to provide their own water supplies within the sustainable framework of natural resources management planning and regional water demand and supply plans. The Government's Plan for Accelerating Exploration 2020 strategy includes projects to source water for mining.

Mine dewatering is often an essential part of resource extraction, as it lowers the water table around the resource to allow access. Mine dewatering is covered by the definition of 'to take' water under the *Natural Resources Management Act 2004*. As such, if provided for in the

relevant water allocation plan, the mine proponent requires a licence and allocation under that plan.

Dewatering is presently managed on a plan-by-plan basis. An overarching policy will be developed to provide clarity for mining proponents, to protect other water users and groundwater dependent ecosystems, to ensure that water taken by activities that may interfere with aquifers is properly licensed and accounted for, and to encourage productive use of water.

In 2011–12 the department reviewed the policies of other jurisdictions and South Australian water allocation plans for existing relevant policy as a first step in developing an overarching policy. During this scoping phase it became clear that addressing mine dewatering in isolation from other aquifer interference activities would not address the key water resource management and planning issues, and would be inconsistent with the policies of other jurisdictions.

Subsequently the project was expanded to develop an aquifer interference policy. Key issues and risks were identified and a draft aquifer interference discussion paper has been prepared for consultation within government in early 2012–13.

## **WATER FOR OUR ENVIRONMENT**

### **Surface water and groundwater resources being used sustainably**

#### ***Conduct the feasibility study on low flow bypasses in collaboration with the South Australian Murray-Darling Basin and Adelaide and Mount Lofty Ranges Natural Resources Management Boards***

In December 2011 the Returning Low Flows to Mount Lofty Ranges Steering Committee was established. It comprised two representatives each from the Department for Water and the Adelaide and Mount Lofty Ranges and South Australian Murray-Darling Basin Natural Resources Management Boards.

The provision of low flow releases is fundamental to maintaining healthy water-dependent ecosystems in the Mount Lofty Ranges, while at the same time optimising the use of water for productive purposes.

The key policy drivers for low flow releases are the three water allocation plans which relate to the project area:

- Marne Saunders
- Draft Eastern Mount Lofty Ranges WAP
- Draft Western Mount Lofty Ranges WAP

The strategic placement program, which is a key scientific and technical program aimed at determining where low flows should be released, is being undertaken by the department in collaboration with the two boards and is to be completed by December 2012.

#### ***Develop a state policy on environmental water requirements and provisions***

#### ***Develop and implement a strategic framework for environmental water management***

The department led South Australia's input into the development of an Australian Environmental Water Management Framework, developed by the National Water Commission. The framework includes criteria for assessing environmental water management planning, implementation, monitoring, reporting evaluation and governance. It was released in May 2012.

In addition, the National Water Commission funded a South Australian Improving Environmental Water Policy project. This resulted in the development of key elements for South Australia's proposed Environmental Water Management Framework. This clearly shows how existing state planning documents, as well as those required under the Basin Plan, fit together. While developed with a focus on the River Murray system in South Australia, it can easily be adapted for other water resource areas.

Another aspect of the project was to establish improved environmental water evaluation, reporting and accounting mechanisms for South Australia. The final product was an Environmental Watering Reporting Manual, including standard operating procedures and relevant templates that contribute to transparency and consistency for River Murray environmental water trading, reporting and accounting. A third sub-project included the development of a discussion paper for a Monitoring, Evaluation, Reporting and Improvement Framework for Environmental Water.

All of these outputs will be used to further develop the strategic framework for environmental water management in 2012–13. Work will continue on both the strategic framework and the long-term environmental watering plan for the South Australian River Murray, which will be required to implement the final Murray-Darling Basin Plan.

### ***Coordinate development of annual environmental water bids to the Living Murray and Commonwealth Environmental Water Holder***

Strategic Plan target 76 covers increasing environmental flows in the River Murray by a minimum of 1500 GL by 2018.

Management of environmental water in the Murray-Darling Basin is in transition. State processes are beginning to change in preparation for the Basin Plan. The draft Basin Plan includes a framework for environmental water planning in the Murray-Darling Basin and gives the states two key responsibilities: development of long-term environmental watering plans and annual environmental watering priorities.

Each year the department coordinates the development of annual environmental water priorities to provide to the two main environmental water holders, The Living Murray Program and the Commonwealth Environmental Water Holder. The 2012–13 priorities were developed as part of the 2012–13 Annual Environmental Watering Plan for the South Australian River Murray.

There will be significant volumes of environmental water available, as storages are full and allocations across the Murray-Darling Basin are likely to be high. The focus for environmental watering priorities is shifting towards flow management at the catchment and landscape level, in addition to the individual site level which has been the focus in recent years. The 2012–13 annual plan identifies the environmental watering priorities through the use of four potential scenarios, taking into account current water holdings, constraints to delivery, including risks, and lessons learned from previous watering actions. The annual plan uses the South Australia environmental water requirements and targets developed as part of the state response to the draft Basin Plan.

The department has also led South Australia's policy and planning input to the development of a multi-site watering trial which has been approved by the Murray-Darling Basin Officials Committee. This trial allows a deviation from normal operating and water sharing arrangements to enable a multi-site watering trial to proceed. The trial will be independently reviewed and evaluated.

### ***Establish an Environmental Water Reserve***

*Water for Good* Action 86 covers statutory recognition for an environmental water reserve through the *NRM Act 2004*.

In February 2012 the Minister for the River Murray gave approval for the department to develop a detailed proposal outlining how a South Australian Environmental Water Reserve could be established and operated. The Minister agreed to establish the reserve in an administrative capacity, pending the introduction of legislative amendments that provide for the existence and basic functions of the reserve.

As part of a funding agreement between the South Australian Government and the Australian Government regarding the expansion of the Adelaide Desalination Plant, South Australia agreed to the acquisition of 6 GL of high-reliability entitlements for environmental purposes within South Australia. The first 2 GL has been purchased by the Minister for use in 2012–13. This water will be managed in the reserve in a transparent manner.

A key aspect of the establishment of the reserve is to develop trading rules and governance arrangements, which will include consultation with industry and the community. Work will continue on this project in 2012–13.

## **Water-dependent ecosystems are protected and can adapt to climate change**

### ***Implement environmental watering actions at priority sites in the South Australian River Murray***

Delivery of environmental water plays a vital role in supporting the future health of South Australia's River Murray and its floodplains and wetlands. In recent years, environmental watering has ensured the maintenance of drought refuges, prevented the loss of species and habitat and enabled re-colonisation and re-establishment of species and ecosystem functions when higher flows returned.

Environmental water bids for 2011–12 were developed and submitted to the MDBA's The Living Murray Program (TLM) and the Commonwealth Environmental Water Holder (CEWH). During 2011–12 South Australia received 429 580 ML of environmental water for River Murray wetlands, floodplains and the Lower Lakes and Coorong. This included water received from the following sources:

- the MDBA TLM program (138 750 ML), which consisted of 3000 ML delivered to wetlands within the Chowilla floodplain and 135 750 ML delivered to the Lower Lakes and Coorong
- the CEWH (290 530 ML), which consisted of 600 ML for Berri Evaporation Basin on the Katarapko floodplain and 289 930 ML delivered to the Lower Lakes



- Nature Foundation SA (300 ML) provided for the threatened Murray hardyhead fish population in the Berri Evaporation Basin.

South Australia also received a significant volume of unregulated flow that inundated many of the South Australian River Murray wetlands and some parts of the floodplain. The majority flowed to the Lower Lakes, Coorong and Murray Mouth (LLCMM) icon site. Ecological monitoring at the Chowilla and LLCMM icon sites has indicated improved ecological condition following the high flows of 2011 and 2012. However, considerable improvement is needed for the long-term ecological health of the system.

Environmental water provided during 2011–12 was used to enhance the natural high flow event. Additional environmental water increased the volumes released through the barrages from Lake Alexandrina to the Murray Mouth and Coorong estuary, thereby increasing connectivity, increasing the estuarine area and decreasing salinity levels in the Coorong.

### ***Complete the Riverine Recovery Early Works Project***

In March 2011 the Australian and South Australian Governments jointly announced the first tranche of works, worth \$9.2 million, under the Riverine Recovery Project. Known as the early works, projects included in this package were:

- Yatco Lagoon Project – relocation of all off-takes and associated pumps from the lagoon to the main channel of the river and the implementation of an adaptive management system. These works will provide irrigators with increased water security and deliver water savings.
- Pike River Floodplain Project – replacement of a main inlet regulator and pump modifications. These works provide critical infrastructure for the management of environmental flows, fish passage and habitat improvements on the floodplain.
- Katfish Reach – upgrade and construction of infrastructure that can enable management of the Murray hardyhead habitat, restoration of Katarapko Island Drainage Basin and enhance floodplain flow and fish passageway.

Work was undertaken to prepare for the implementation of these projects, including calling and assessing tenders for the construction of the various pieces of infrastructure. At the end of the tender process, increased flows into South Australia as a result of significant rainfall events in the eastern catchment affected water levels at a number of the project sites, preventing access for construction activities until the water levels recede.

Consequently, further work on these projects has been deferred until later in 2012 when it is hoped that work sites have sufficiently dried to enable the safe and timely construction of the required infrastructure.

### ***Implement the Riverine Recovery Program***

Implementation of the Riverine Recovery Project began on 1 July 2011. The project aims to improve ecological outcomes for floodplains and wetlands, use environmental water more

effectively, provide social benefits and deliver up to 15 GL of environmental water savings to the Commonwealth to help protect or restore environmental assets in the Murray-Darling Basin. The project is aimed at improving the efficiency of environmental water use and re-allocating these water savings for the benefit of the environment.

Planning and landholder engagement activities commenced during 2011–12. Investigations have also begun to enhance river operations by varying the timing and delivery of environmental water and, where appropriate, adjusting the height of weirs, building upon work previously undertaken by the state and MDBA. These activities will aim to make the most of available water resources.

Information management will also be improved to support decision-making. This means that various indicators of wetlands and floodplains, including wildlife, vegetation and water quality, will be monitored and stored for easy access, with the results being used to better inform the management of environmental water. This will enable positive ecological and biological outcomes to be maximised with the available water resources.

### ***Contribute to the delivery of the Coorong, Lower Lakes and Murray Mouth Program***

In July 2008 the Council of Australian Governments agreed to provide, subject to due diligence, up to \$200 million to support an enduring response to the environmental problems facing the Coorong Lower Lakes and Murray Mouth (CLLMM) region.

Delivery of the CLLMM program was established within the Department for Environment and Natural Resources (DENR), with a multi-agency steering committee as the peak governance structures.

The Executive Director, Operations and Major Programs Division, Department for Water, is a member of this committee and continues to provide strategic input to the development of the business case for funding and development and implementation of the CLLMM long-term plan.

Management of the Commonwealth funding deed arrangements and high-level financial reporting services are delivered through the Policy and Strategy Division of the department. In June 2009 the joint DFW-DENR delivery of the drought responses – Lake Albert Water Level Management Program and the Goolwa Channel Water Level Program – were formally incorporated into the CLLMM program structure.

The Director, River Murray Operations (DFW) co-chairs (with the Director, CLLMM Program) the task force responsible for delivering these projects. The DFW environmental works and measures team continues to lead the delivery of these projects in close collaboration with the CLLMM program.

### ***Facilitate the successful implementation of the South East to the Coorong Project***

The South East Flows Restoration (SEFR) Project is part of the Government's long-term plan for South East wetlands and the Coorong, and is part of the CLLMM Program.

During 2011–12 the SEFR Project investigated the feasibility (technically and financially) of delivering water from the South East drainage system to South East wetlands and the Coorong South Lagoon via a constructed floodway and upgrade of existing drainage infrastructure.

This included:

- engaging with key stakeholders to consider a number of flow path options and determine a preferred alignment
- undertaking detailed technical works along the preferred alignment, including hydraulic analysis and land surveys
- completing a number of ecological assessments, including determining environmental water requirements of Lake Hawdon
- engaging with landholders along the preferred alignment. This included a project presence at the Lucindale Field Days, a landholder evening at Kingston and one-on-one meetings with approximately 50 landholders to discuss the project.

***Develop a framework to monitor and evaluate the effectiveness of environmental water requirements and provisions***

This project contributes to sustainable water supply, which addresses Strategic Plan target 75.

The project incorporated a number of activities to promote best practice monitoring and evaluation of environmental water policy and management instruments, including the development and implementation of a monitoring program that will allow evaluation of the delivery and effectiveness of environmental water provisions. The project team also developed the following papers: *Monitoring, evaluation, reporting and improvement (MERI) guidelines for water allocation plans* and *A monitoring, evaluation, reporting and improvement framework for environmental water - discussion paper*. It also contributed to the development of policy documents including *Risk management framework for water planning and management* and *Risk management policy and guidelines for water allocation plans*.

## **WATER REFORM**

### **Leading in national water reform**

#### ***Finalise the statewide forest policy framework and the Natural Resources Management (Commercial Forests) Amendment Bill 2010***

In November 2011 the South Australian Parliament passed the *Natural Resources Management (Commercial Forest) Amendment Act* to enable water planners to use either forest water licences or land use permits to regulate the water impacts of commercial forests. This is the first legislation of its kind in the world. To enable the implementation of this legislation the department also prepared, on behalf of the Minister, the Lower Limestone Coast Water Allocation Plan policy principles which were completed in March 2012.

#### ***Reform the water allocation planning process***

A program of reform designed to improve water planning processes is being undertaken by the department, including the reform of systems and processes used to manage water licensing and compliance functions.

The reform program has a number of key projects, including the development of a project business plan template for new or amended water allocation plans. This will standardise and simplify the process by which the department and Natural Resources Management Boards work together to develop water plans. A range of policies that affect water planning are also being developed, including policies on unallocated water, the implementation of unbundled water rights and risk management for water planning and compliance. These projects are supported by the Water Planning Taskforce, which was established in late 2010 and whose members represent the department and the Natural Resources Management Boards.

In relation to systems reform, the National Compliance and Enforcement Framework is being implemented. This staged project is moving the department's compliance strategies to a nationally consistent risk-based approach. A new regulatory compliance model has been adopted which focuses on achieving outcomes through cooperation and nurturing willing participation.

#### ***Determine and progress South Australia's position for a Common Registry System***

The establishment of a Common Registry Solution (CRS) is a key action of the Intergovernmental Agreement on the National Water Initiative and a component of the National Water Market System. The CRS will implement an online customer-centric, standardised National Water Register to improve the efficiency of transactions and ensure the timely availability of water market information for consumers. It will provide a publicly

accessible, compatible system for registering water access entitlements and trades, including cross-jurisdictional water trades.

The CRS is due to be delivered in mid-2015. All jurisdictions, with the exception of Victoria, are involved in the development of the CRS. It will eventually replace the existing departmental water licensing system.

## **Modern legislation and policies to support the efficient and effective delivery of water and wastewater services**

### ***Develop legislation ready for introduction into the Parliament of South Australia to establish a new drainage infrastructure management authority for assets in the South East***

A South East Drainage Operation and Management Bill has been prepared to improve the planning and management of water in the drainage system, wetlands and watercourses in the South East through:

- establishing a new South Eastern Drainage Management (SEDM) Board which will be responsible for operating, managing and maintaining the South East drainage system
- introducing a South East Drainage and Wetland Management Strategy, prepared by the South East Natural Resource Management Board
- providing additional powers to assist the SEDM Board to undertake its functions.

It is anticipated that a draft Bill will be introduced into Parliament in late 2012.

### ***Contribute to the review of the Natural Resources Management Act 2004 and the State Natural Resources Management Plan***

In 2011–12 a review of the *Natural Resources Management Act 2004* was undertaken by the Department of Environment and Natural Resources. The Department for Water contributed to the process through a steering group and produced extensive advice on potential changes to water resource management aspects of the legislation. A comprehensive package of reforms will be developed in 2012–13, including amendments required for the Basin Plan, for possible inclusion in the *Natural Resources Management Act 2004*.

The department also developed a detailed paper on state-wide water planning and policy principles as input to the development of the revised State Natural Resources Management Plan. This work will be used to develop key actions under the plan through the development of a state water planning policy library.

The department was a major contributor to the development of the National Water Initiative Policy Guidelines for Water Planning and Management, which were endorsed by COAG in April 2012. The principles in this document will form a starting point for South Australian policies.

### ***Develop state policy for unbundling of water rights***

Unbundling of the current water rights and responsibilities, expressed on a water licence, means clearly describing and specifying these rights and responsibilities in separate instruments:

- Water access entitlement: the ongoing right to a specified share of the available water for the prescribed water resource.
- Water allocation: the right to take a specific volume of water for a given period of time, not exceeding 12 months, based on the volume of water available for allocation in that period.
- Delivery capacity entitlement: the ongoing right to access a proportion of the capacity of a water distribution system.
- Water resource works approval: the permission to construct, operate and maintain works for the purpose of taking prescribed water at a particular location, in a particular manner.
- Site use approval: the permission to use the water at a particular site in a particular manner.

The first three of these are tradable property rights, while the other two are non-tradable approvals.

A draft policy for the implementation of unbundling water rights was developed and consulted on with the Natural Resources Management Council and regional NRM Boards. The policy was finalised and endorsed and published on the WaterConnect website. The policy provides for a 'fit for purpose' approach where the extent of unbundling will depend on the outcome of a feasibility study and benefit assessment for each water allocation plan to be developed or reviewed. In all cases the water rights will be expressed as a right to a share of the water available, to improve adaptability to short-term and long-term variability in water resources.

### ***Develop a risk management framework for water planning and management***

The draft Risk Management Framework for Water Planning and Management was completed and endorsed by the department. It provides a consistent approach and terminology for risk management and translates the International Risk Standard (ISO 130000) for water planning and management. It was reviewed positively by the National Water Commission and has also received strong support from CSIRO scientists. The framework is already being used across the department, for example to conduct risk assessments for the process of granting water rights to existing users in the Eastern and Western Mount Lofty Ranges.

A draft Risk Management Policy and Guide for Water Allocation Planning was also developed and tested with water planners across the state. This document operationalises the framework specifically for water allocation plan development and defines minimum requirements. The benefits of a risk-based approach to water planning and management include providing opportunities for community identification of risk and incorporation of these concerns into decisions about trade-offs between social, economic and environmental issues and prioritising issues for monitoring, implementation and compliance.

Both documents have been provided to the NRM Council and regional NRM Boards for final comment before Ministerial sign-off and publication on the WaterConnect site.

## **SCIENCE, POLICY AND INFORMATION**

### **Knowledge of the state, condition and availability of water resources**

#### ***Report on the status and condition of prescribed groundwater resources for Prescribed Wells Areas***

The Prescribed Areas Groundwater Assessments Status Reports Project provides regular reviews of the condition and status of the water resources (considered as being of strategic significance or at high risk), particularly in response to changing climatic influences and consumptive demands. The process undertaken to develop the reports also resulted in recommendations for ongoing resource condition monitoring of these resources.

The groundwater level and salinity status reports for the Mallee, Peake, Roby and Sherlock and the Marne-Saunders Prescribed Areas for 2009–10 have been completed and are available on WaterConnect.

The groundwater level and salinity status reports for 2011 for most other prescribed areas are being finalised and will be available on WaterConnect during 2012–13.

#### ***Undertake groundwater assessments for non-prescribed areas in the Northern and Yorke, Alinytjara Wilurara, South Australian Arid Lands, Kangaroo Island and the South Australian Murray-Darling Basin Natural Resources Management regions***

The Non-Prescribed Groundwater Resources Assessment Project will improve the knowledge and understanding of groundwater resources across non-prescribed regions of the state. This will benefit a broad range of stakeholders with regard to water source options for potential future development. This work contributes to total exports, mineral production and processing and sustainable water supply in South Australia (Strategic Plan Targets 37, 42 and 75 respectively).

The assessment reports for Eyre Peninsula, Northern & Yorke, Kangaroo Island, Alinytjara Wilurara and South Australian Arid Lands NRM Regions were released on WaterConnect.

Mining demand pressures and the requirement to support water resources information has highlighted the need to advance Phase 2 investigations in regions of high industry activity.

Further sub-regional assessments will be progressed in priority NRM regions (Eyre Peninsula, Alinytjara Wilurara and South Australian Arid Lands). Phase 2 will migrate into an operational focus, involving generation of knowledge for priority areas, advancing detailed desktop investigations, collaborating with the research and private sectors and updating reporting products and information sources.

Additional achievements include new hydrostratigraphic logs for more than 800 wells and hundreds of new geological or drillers' logs being added to the state's digital database, and



collaboration with the Department of Manufacturing, Innovation, Trade, Resources and Energy in the production of the Geoscience Australia report *The Frome airborne electromagnetic survey, South Australia*.

***Design and implement an optimum monitoring network for South Australia using the most appropriate technology available***

The State Water Monitoring Network Operational Management Plan Project aims to improve planning, coordination and communication processes relating to water resource monitoring activities and investments. It encompasses all stakeholders actively involved in state and condition monitoring throughout South Australia.

A draft operational framework has been developed and is being reviewed. It includes:

- Discussion papers on roles and responsibilities of stakeholder monitoring agencies and the department's internal business processes.
- Technical reports on proposed monitoring site classification systems, monitoring site operating standards, service level standards and performance measures.
- A technical policy on monitoring site classifications and a technical procedure for documenting monitoring site requirements within the department.

Once finalised, the framework will be applied to the development of regional water monitoring network operational management plans, commencing with the Northern and Yorke NRM region.

Monitoring and asset maintenance activities continued across the state's water monitoring networks to ensure stakeholder confidence in the data is maintained.

In the APY Lands, the operation of water supply infrastructure for a further six communities was transferred from a manual to a fully automated process control system.

Planning and construction is well under way to transfer the water supply systems for Pitjantjatjara, Fregon and Yalata settlements to a fully automated process in the first half of 2012–13.

A total of 33 water monitoring data collection and data entry procedures have now been published on WaterConnect.

***Model potential impacts from climate change on priority water resource areas***

The Impacts of Climate Change on Water Resources (ICCWR) project provides an understanding of the risks to water resources and water-dependent ecosystems in South Australia arising due to climate change and climate variability. The outcomes of the project fulfil Action 43 of *Water for Good*: 'Commission, where required, regional scale studies on the impacts of climate change on water resources'.

Achievements and products in 2011–12 include:

- Completion of modelling and publication of a report on the potential impacts of climate change on the capacity of priority water resources of the Northern and Yorke NRM Region, the Eyre Peninsula NRM Region and the Alinytjara Wilurara NRM Region (including water resource impact risk projections for the Demand and Supply Statement of the Alinytjara Wilurara NRM Region).
- Completion of a report on first order assessment and prioritisation of risks of climate change impacts to South Australia's water-dependent ecosystems.
- Completion of a scoping report for the detailed assessment of climate change impacts on water-dependent ecosystems.
- Project management of the hydrological modelling applications test bed component of the Goyder Institute project 'Development of an agreed set of climate projections for South Australia'.
- Presentation of ICCWR project products at the National Forum of the Australian Climate Change Adaptation Research Network for Settlements and Infrastructure, the Goyder Institute Annual Forum and the National Climate Change Adaptation Research Conference in Melbourne.

## **Understanding of future demand and supply opportunities**

### ***Develop regional demand and supply statements for the Northern and Yorke and the Alinytjara Wilurara Natural Resources Management regions***

*Water for Good* Action 64 relates to ensuring regional water demand and supply plans are in place for all natural resource management regions throughout the state – in consultation with regional communities, building on existing plans, and incorporating local knowledge by 2014.

Regional demand and supply statements outline the state of all water resources in a region, both drinking and non-drinking quality, the current and future demand pressures, and provide projections to 2050 where demand for water could exceed supply.

The Northern and Yorke Demand and Supply Statement was released in December 2011. It suggests that demand for drinking quality water under the high population growth scenario is not projected to exceed supply until 2044–45. Demand for drinking quality water under the low population growth scenario is not projected to exceed supply before 2050.

Development of the Alinytjara Wilurara Demand and Supply Statement and the South Australian Arid Lands Demand and Supply Statement began in January 2012 and is anticipated to be completed by December 2012.

### ***Conduct the annual review of the regional demand and supply statement for the Eyre Peninsula Natural Resources Management region***

*Water for Good* Action 4 involves undertaking annual reviews of the plan and regional water demand and supply plans, checking both the status of resources and the assumptions on which the plans are based.

The annual review of the Eyre Peninsula Demand and Supply Statement was released in April 2012. The statement, released in April 2011, indicated that under a worst-case scenario, demand for drinking-quality water was projected to exceed supply in 2017–2018. As such, it was anticipated that an Independent Planning Process would need to be initiated in 2012–2013.

Upon review of the demand-supply projections, under a worst-case scenario of high population growth, demand for drinking quality water is not projected to exceed supply until 2023–2024. Therefore, an independent planning process will not be required until 2018–2019.

In keeping with the *Water Industry Act 2012*, the assumptions underlying the projections will be reviewed in 12 months; should anything change, the timing of the demand-supply projections and associated independent planning process will be adjusted accordingly.

## **Enhanced community and industry access to quality water information**

### ***Expand WaterConnect to be the central South Australian Government water information site***

The content of WaterConnect was expanded to include groundwater status reports, inundation maps, water management publications, water trading technical publications and surface water technical publications.

A web-based application with spatial navigation capability was implemented. It enables access to EPA aquatic ecosystem condition reports through the WaterConnect portal.

Work is being finalised on the delivery of an integrated groundwater data portal, to be released in early 2012–13.

A number of systems were migrated onto WaterConnect to provide more integrated access to water information and data. Work is under way to expand links to relevant water information and data held by other agencies. Enhancement of WaterConnect as the central South Australian Government water information portal will continue in 2012–13.

### ***Expand IP telemetry to provide increased access to real-time data***

In 2011–12, 49 new and existing monitoring sites were transferred to internet protocol (IP) telemetry. A further eight sites were converted to satellite telemetry infrastructure where IP technology could not be used. This is in addition to the 125 monitoring sites that were commissioned in 2010–11.

The continuation of this project will also ensure that all new agency monitoring sites installed will be IP compliant (where communication is possible) and that partner agencies are informed of the benefits, cost savings and opportunities of IP telemetry.

The highlight was the upgrading of the South East telemetered groundwater monitoring network (18 sites) in line with the remainder of the state's telemetered monitoring platforms.

Work will also be undertaken with the South Eastern Water Conservation and Drainage Board to implement the transfer of its 34 sites, where applicable, across to IP telemetry in 2012–13.

The department's Technical Review Group developed and comprehensively tested a new IP-capable monitoring solution to specifically address groundwater installations. This will deliver a lower cost monitoring platform specifically suited to groundwater monitoring sites.

The first units were delivered in late May 2012 and will be installed in a joint groundwater monitoring program with Adelaide and Mount Lofty Ranges Natural Resources Management Board.

## **Improved knowledge through scientific collaboration**

*Lead the South Australian Government's contribution to the \$50 million Goyder Institute for Water Research to ensure that the best scientific minds available are being targeted at resolving the state's key water resource management issues*

The Goyder Institute management board approved the Strategic Research Plan 2011–15 and the Annual Research and Development Plan and Budget 2011–12.

The Goyder Institute established an independent expert panel which conducted a review of the hydrological and ecological analyses of the draft Basin Plan's 2750 GL water recovery scenario undertaken by State Government agencies. It also provided expert opinion on the hydrological and ecological consequences of the proposed water recovery scenario. The institute's expert panel report provided critical input into the development of the State Government's response to the proposed Basin Plan.

The Goyder Institute supported the Torrens Lake water quality improvement field trial, which has provided valuable information on the potential effectiveness of amenity flows to control cyanobacteria algal outbreaks in the lake.

*Work with the National Centre for Groundwater Research and Training (NCGRT) to ensure that South Australia's priority groundwater research needs are being addressed*

The department continued to support development of the Willunga SuperScience site.

Two NCGRT Aboriginal scholarship holders worked in the department to gain experience in applied water science.

The mid-term review of the centre was conducted in March 2012 by an independent expert review panel nominated by the Australian Research Council. The review identified that the centre was a highly effective research organisation.

The centre director was appointed chair of the national interim Independent Scientific Committee on Coal Seam Gas and Large Coal Mining.

***Develop an international knowledge exchange program***

A number of international knowledge exchange opportunities were progressed during 2011–12. In partnership with NCGRT visiting scientist arrangements, a number of internationally renowned professors and scientists visited the department during the year.

The Manitoba collaboration was successfully continued with the visit of the Executive Director, Regulatory and Operational Services, Manitoba Water Stewardship, to share his knowledge about the Manitoba floods which occurred in the Canadian Spring of 2011.

A new international collaboration project was also established with flood information experts from the Netherlands. This is aimed at conducting a trial of flood intelligence capabilities developed in the Netherlands in two urban areas in South Australia that are prone to flash flooding. It also provides a unique opportunity to exchange knowledge with an international team on capabilities to mitigate flood risks and the challenges of integrating diverse sources of information.

Negotiations were undertaken with the International Centre of Excellence in Water Resource Management (IceWarm) for a range of opportunities for exchanges.

Discussions were also held with University of Adelaide regarding improved water research alignment, including arrangements with Manitoba.

A number of presentations were given to international delegations, including representatives from Shandong, Spain, Japan, India, Chile and Cambodia.

## **HIGH PERFORMANCE**

### **An organisation with demonstrated commitment to its people, safety and wellbeing**

#### *Manage a workplace safety and wellbeing system that meets the WorkCover performance standards for self-insurers*

The department aims to manage a work health, safety and injury management system that meets the WorkCover performance standards for self-insurers and contributes to meeting SASP Target 2.11: Greater safety at work.

The department implements its safety system through a strategic plan that addresses the four key criteria of the Safety and Wellbeing in the Public Sector 2010–15 Strategy (SWIPS).

The following are key achievements during 2011–12:

#### **Commitment to management of safety and wellbeing**

Following attainment of a Level 1C (conforming) registration with WorkCover, a partnership plan was developed to guide further improvement of the safety system through regular meetings with injury management and OHSW evaluators.

The department undertook to position itself for Level 3 WorkCover registration at its next evaluation through the development and implementation of programs for safety culture and executive engagement, as required by WorkCover. The department's executive agreed to provide a sponsor for each of the department's seven key safety programs to take part in the performance review and planning for continuous improvement.

Recognising the importance of a proactive and participative safety culture, a range of safety and wellbeing initiatives was included in the department's Corporate Culture Plan. Staff perceptions about the safety system were sought as part of the High Performance Framework (staff perspectives) survey. Responses to survey questions indicated a high rate of staff satisfaction with safety and wellbeing in the department, including communication, risk management and leadership.

#### **Accountability for safety and wellbeing performance**

Development of the executive engagement program recognises and reinforces executive responsibility for performance of the safety system. Quarterly management review meetings have been held with divisional heads to discuss safety performance. Planning for improvement of safety performance is integrated into divisional business plans.

The executive has been provided with quarterly reports on achievement against key performance indicators for the safety system and for SWIPS targets, including costs associated with work-related injuries.

The Chief Executive provided a Ministerial safety report on SWIPS performance, tabled in Cabinet, and a Responsible Officer report accounting for safety performance to WorkCover.

The department continued to invest in safety and wellbeing initiatives, such as communications systems (safety log-in) for staff required to work in remote areas, health promotion initiatives, employee assistance services and the provision of trained bullying and harassment contact officers.

### **Integrated risk management**

The department undertook a review of business continuity planning, which included a review of contingency measures for safety.

Safety management of contractors was improved through development of a standard OHSW clause for works contracts meeting Department of Planning, Transport and Infrastructure requirements for construction contracts.

In anticipation of passage of the Work Health and Safety Bill and Regulations through the Parliament, a review of the department's policies began, incorporating required changes to ensure ongoing legislative compliance.

In response to the implementation in January 2012 of the Commonwealth *Work Health and Safety Act 2012*, agreement was reached on a methodology for communication of safety processes and outcomes with Commonwealth agencies that provide funding to departmental projects.

A psychological wellbeing program was offered to assist managers to recognise and manage stress and mental health-related issues in their staff. Training sessions to help staff manage stress through lifestyle and building resilience have also been provided. All sessions were opened by an executive sponsor.

### **Effective measurement and evaluation**

A review of evaluation, reporting and management review processes resulted in the following improvements:

- measurement and reporting of key performance indicators at divisional level
- development and implementation of a 'traffic light' system for monitoring and tracking key performance indicators against targets
- design and implementation of a template for management review that captures performance measures, trends, planning and evaluation.

The executive has been provided with quarterly reports for management review of the Safety System and performance against SWIPS targets.

Internal auditing of the Safety System has been ongoing, through an annual audit schedule.

### **Consultative arrangements**

Consultation with employees occurs through the department's OHSW Committee and health and safety representatives network. The OHSW Committee met on eight occasions during 2011–12 with an attendance rate of management and employee representatives of 80 per cent.

Actions of the committee have focused on:

- Review and endorsement of a range of policies and procedures, notably:
  - workers' compensation claims and rehabilitation and return to work policies
  - psychological wellbeing policy
  - manual handling (manual tasks) policy and office ergonomics procedure
  - field safety, safe driving and working in extreme climatic conditions policies
  - safety and wellbeing training policy
  - aggression and personal safety policy
  - consultation and communication policy and health and safety representatives procedure
  - job safety analysis procedure
  - confined spaces policy and occupational noise management procedure.
- Review of field vehicles selection, safety equipment and vehicle inspection requirements.
- Safety system performance - KPI measurement, evaluation and management review.
- Endorsement of Level 3 WorkCover programs.
- Outcomes of staff perspectives survey – safety and wellbeing responses.
- Implementation of a SA Health smoke-free workplaces policy.

***Maintain the strategic approach to management and leadership development and the promotion of women in leadership***

The women in leadership network held a number of personal development programs designed to enhance the management and leadership skills of women in the department. These included:

- influencing and negotiation
- time management
- networking
- strategic self management in meetings
- psychological wellbeing for managers
- managing staff performance



- risk management.

The department has also delivered the following core operational development programs, as part of developing our leaders:

- working with our Minister
- effective presentation skills
- ministerial writing
- introduction and intermediate project management
- leading a team in times of change
- leading a multicultural team
- effective financial management
- Food for Thought sessions covering performance management and development, time management and fair treatment in the workplace.

Leaders have also taken part in leadership forums each quarter. These have provided an opportunity for the executive team to deliver planned strategies and update leaders on the progress of key initiatives. They have provided networking opportunities for the feeder group to meet and mix with current executives and enabled keynote speakers to share their knowledge in key leadership skills.

### Mentoring

The department launched My Mentor in 2012. This mentoring program involves DVD presentations from leading businesswomen, self-reflection and assessment via a workbook, and facilitated group mentoring. The program targets development in a number of areas including personal branding, raising your visibility, communicating to be heard, taking calculated risks and influencing and negotiating.

### Support material

A managers' handbook and a business managers' handbook have been developed to provide a reference guide for leaders. They outline roles and responsibilities in areas such as finance, human resources, business systems, IT and office accommodation.

A leaders' toolbox has been developed to assist in obtaining relevant and contemporary information via the department's intrant site. A departmental resource library has been established to provide additional development options for leaders to access. The resource materials include self-development materials in the form of books, DVDs and CDs.

**A leading performer in the South Australian public sector where people choose to work**

***Improve the strategies and processes of the department's asset management***

The department's audit and risk committee conducted an internal audit of asset management practices. As a result, a strategic asset manager was employed and several asset management policies, procedures and guidelines were created or significantly revised.

The department has prepared a draft Asset Management Strategic Plan to deliver further improvement in asset management practices. Revaluations for two of the department's asset classes were completed in accordance with Department of Treasury and Finance requirements for asset accounting.

***Offer Aboriginal Groundwater Scholarships and a cadet program***

The Department for Water, Flinders University and the National Centre for Groundwater Research and Training offered two Aboriginal Groundwater Scholarships in 2011. The scholarship recipients are studying a Bachelor of Science with majors in environmental hydrology, water resources, ecology and environmental science.

The department sponsors the Gavin Wanganeen Scholarship. The 2011 recipient undertook one week's work experience in June 2012. The department has also sponsored a recipient for 2012.

The department recruited a cadet within the human resources team for six months from late June 2012.

***Deliver a graduate program in collaboration with the Department of the Premier and Cabinet, the Department for Transport, Energy and Infrastructure and the Department of Planning and Local Government***

The department began the Graduate Development Program on 20 April 2011 with six graduates. Participating agencies included the Department of the Premier and Cabinet, the Department of Transport, Energy, Department of Planning and Local Government and Zero Waste SA. The Department for Water's graduates completed their program on 27 July 2012. Four remained in the program; one took a role with the Australian Government and another accepted a job in the private sector. Graduates received training in areas such as goal and objective setting, presentation skills, project management, innovation in Government, influencing and negotiation, Ministerial briefs and replies and career management. They were also provided with the support of a mentor working in any one of the participating agencies.

***Implement an information policy framework to support licensing of publicly available information consistent with the Australian Government's Open Access and Licensing Framework (AUSGOAL)***

A Government-endorsed creative commons attribution license was chosen as the preferred license for water information. An information classification policy was developed and an information licensing policy is being developed. Relevant website copyright statements were

updated to cater for both licensed and unlicensed content and a number of products have been published under AusGOAL license.

An education package of presentations and fact sheets, including an Intranet section are being finalised to support implementation of licensing.

## **Appendix A: Management of Human Resources**

### **Gender reporting**

#### **Employee numbers, gender and status**

<b>Total number of employees</b>		
Persons	346.0	
FTEs	331.7	<i>(FTEs shown to 1 decimal place)</i>

<b>Gender</b>	<b>% Persons</b>	<b>% FTEs</b>
Male	57.51	58.87
Female	42.49	41.13

<b>Number of persons during 2011-12</b>	
Separated from the agency	75
Recruited from the agency	55

<b>Number of Persons at 30 June 2012</b>	
On leave without pay	17

#### **Number of employees by salary bracket**

<b>Salary Bracket</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
\$0 - \$51 599	25	12	37
\$51 600 - \$65 699	38	45	83
\$65 700 - \$84 099	76	55	131
\$84 100 - \$106 199	50	31	81
\$106 200+	10	4	14
<b>Total</b>	<b>199</b>	<b>147</b>	<b>346</b>

Note: Salary details relate to pre-tax income excluding super and FBT. Non-executive employees on salary sacrifice arrangements are shown as pre-sacrifice values. Executive employees are shown as the value of the financial benefits component of their Total Remuneration Package Value excluding super. Non-financial benefits and allowances are excluded for all employees.

### Status of employees in current position

FTEs	Ongoing	Short-term contract	Long-term contract	Other (casual)	Total
Male	125.0	25.5	44.3	0.5	195.3
Female	80.43	32.0	23.99	0	136.42
<b>TOTAL</b>	<b>205.43</b>	<b>57.5</b>	<b>68.29</b>	<b>0.5</b>	<b>331.72</b>

PERSONS	Ongoing	Short-term contract	Long-term contract	Other (casual)	Total
Male	126	26	45	2	199
Female	86	36	25	0	147
<b>TOTAL</b>	<b>212</b>	<b>62</b>	<b>70</b>	<b>2</b>	<b>346</b>

### Executives by gender, classification and status

Classification	Term tenured		Term untenured		Total				
	Male	Female	Male	Female	Male	%	Female	%	Total
CEO			1		1	7			1
SAES1			6	4	6	43	4	29	10
SAES2			3		3	21			3
<b>Total</b>			<b>10</b>	<b>4</b>	<b>10</b>	<b>71</b>	<b>4</b>	<b>29</b>	<b>14</b>

### Average days leave per full-time equivalent employee

Leave Type	2008-09	2009-10	2010-11	2011-12
Sick leave	6.25	7.35	7.95	7.42
Family carer's leave	0.91	0.83	1.20	1.22
Miscellaneous special leave	0.80	1.00	1.15	1.10

### Aboriginal and/or Torres Strait Islander employees

Salary Bracket	Aboriginal employees	Total employees	% Aboriginal employees	Target*
\$0 - \$51 599	6	37	16.22	2%
\$51 600 - \$65 699	1	83	1.2	2%
\$65 700 - \$84 099		131		2%
\$84 100 - \$106 199		81		2%
\$106 200+		14		2%
<b>Total</b>	<b>7</b>	<b>346</b>	<b>2.02</b>	<b>2%</b>

\*Target from SASP

### Number of employees by age bracket by gender

Age bracket	Male	Female	Total	% of Total	2012 workforce benchmark*
15-19					5.6%
20-24	5	2	7	2.02	9.9%
25-29	14	17	31	8.96	10.6%
30-34	33	32	65	18.79	10.4%
35-39	28	25	53	15.32	10.7%
40-44	22	24	46	13.29	11.7%
45-49	28	13	41	11.85	11.4%
50-54	22	20	42	12.14	11.0%
55-59	31	9	40	11.56	9.2%
60-64	15	4	19	5.49	5.6%
65+	1	1	2	0.58	4.0%
<b>TOTAL</b>	<b>199</b>	<b>147</b>	<b>346</b>	<b>100.0</b>	<b>100.0</b>

\*Source: Australian Bureau of Statistics Australian Demographic Statistics, 6291.0.55.001 Labour Force Status (ST LM8) by sex, age, state, marital status – employed – total from Feb78 Supertable, South Australia at May 2012. Percentages are rounded.

### Cultural and linguistic diversity

	Male	Female	Total	% of agency	SA community*
Number of employees born overseas	24	27	51	14.74	20.3%
Number of employees who speak language(s) other than English at home	6	11	17	4.91	16.6%

*\*Benchmarks from ABS Publication Basic Community Profile (SA) Cat. No. 2001.0, 2006 census.*

**Total number of employees with disabilities (according to Commonwealth DDA definition)**

Male	Female	Total	% of Agency
6	4	10	2.9

**Types of disability (where specified)**

Disability	Male	Female	Total	% of agency
Disability requiring workplace adaptation	6	2	8	2.3
Physical	1	1	2	0.6
Intellectual		1	1	0.3
Sensory	1		1	0.3
Psychological/psychiatric				0

**Voluntary flexible work arrangements by gender**

	Male	Female	Total
Purchased leave	2	2	4
Flexitime	132	111	243
Approved day off	26	42	68
Compressed weeks	12	5	17
Part-time	11	31	42
Job share		4	4
Working from home	1	7	8

**Documented review of individual performance management**

Employees with ...	% of total workforce
A review within the past 12 months	73.99
A review older than 12 months	17.92
No review	8.09

### Accredited training packages by classification

Classification	Number of accredited training packages
ASO2	3
ASO3	2
ASO4	5
ASO5	4
ASO6	6
ASO7	5
ASO8	1
MAS3	1
OPS2	3
OPS3	1
OPS4	1
OPS5	1
PO1	3
PO2	4
PO3	6
PO4	2
PO5	1
TGO0	3
<b>TOTAL</b>	<b>52</b>

### Leadership and management training expenditure

Training and development	Total cost	% of total salary expenditure
Total training and development expenditure	474 907.39	1.5

Total leadership and management development expenditure	59 103.60	0.18
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### **Responsible Officer Report**

No potential or alleged breaches of sections 58B and 58C of the *Workers Rehabilitation and Compensation Act 1986* were identified during 2011–12. A new partnership plan with WorkCover was developed reflecting the terms of DFW renewal of registration.

### **OHS Notices and Corrective Action taken**

Number of notifiable occurrences pursuant to OHS&W Regulations Part 7 Division 6	0
Number of notifiable injuries pursuant to OHS&W Regulations Part 7 Division 6	0
Number of notices served pursuant to OHS&W Act s35, s39 and s40 (default, improvement and prohibition notices)	0

### ***Whistleblowers Protection Act 1993***

The department appointed two new responsible officer for the purposes of the *Whistleblowers Protection Act 1993* (WPA) pursuant to Section 7 of the *Public Sector Act 2009*. A joint partnership of whistleblower contact officer training was established by the department with the participation of other government agencies. The training program was tailored to specifically meet the needs of government and to ensure all contemporary information and updates to legislation was included. There have been no instances of disclosure of public interest information to a responsible officer of the department under the Act.



## Appendix B: Account payment performance

	No of accounts paid	% of total accounts paid (by number)	Value in \$A of accounts paid	% of accounts paid (by value)
<b>Paid by due date</b>	7064	90.3%	83,227,494	63.7%
<b>Paid late but paid within 30 days of the due date</b>	446	5.7%	39,167,157	30.0%
<b>Paid more than 30 days from the due date</b>	309	4.0%	8,347,469	6.4%
	7819	100.0%	130,742,120	100.0%

## Appendix C: Fraud

No instances of fraud or suspected fraud were reported during the financial year ending 30 June 2012.

## Appendix D: Consultants

*Note: Table cannot be finalised until GL is closed off on 30 June 2012.*

<b>Consultants: 2011-12</b>		
<b>Consultants to 30 June 2012</b>	<b>Service Provided</b>	<b>Expenditure</b>
<i>Below \$10,000</i>		
8 minor consultancies		\$ 15,081
<i>\$10,000 to \$50,000</i>		
Coffey Geotechnics	Review of recommendations for the long-term management options for riverbank collapse (high-risk sites).	\$ 47,254
Catchment Management Consulting	Pike River & Katfish Reach environmental works, salinity impact assessment expert panel & hydrological/hydro-geological data collection and	\$ 24,357

	interpretation.	
<i>Over \$50,000</i>		
Sinclair Knight Merz	Currency Creek Regulator - removal investigation.	\$ 200,541
Essential Media Communications	Communications retainer and conduct of face-to-face and online focus groups sessions.	\$ 77,800
<b>Total Expenditure</b>		<b>\$ 365,033</b>

## Appendix E: Overseas travel

Staff from the department undertook the following business-related overseas travel.

<b>No. of Employees</b>	<b>Destination</b>	<b>Reason for Travel</b>	<b>Total cost to Agency</b>
1	California, USA	Deliver presentation to the International Workshop on Hydrometry for the World meteorological Organization	\$ -*
1	Manaus, Brazil	Attend the Inaugural Comparative Law and Policy Workshop on Groundwater – surface water connectivity and groundwater dependent ecosystems.	\$ -*

\* All travel and accommodation expenses were met by the host party.

## Appendix F: Asbestos management

### ANNUAL ASBESTOS MANAGEMENT REPORT 2011 -12

<b>Category</b>	<b>Number of Sites</b>		<b>Category Description</b>	<b>Interpretation</b>
	<b>At start of year</b>	<b>At end of</b>		
				<b>One or more items at these sites ...</b>

year				
1	0	0	Remove	Should be removed promptly.
2	0	0	Remove as soon as practicable	Should be scheduled for removal at a practicable time.
3	3	3	Use care during maintenance	May need removal during maintenance works.
4	0	0	Monitor condition	Has asbestos present. Inspect according to legislation and policy.
5	0	0	No asbestos identified / identified asbestos has been removed	All asbestos identified as per OHS&W Regulations 2010 (Division 2 – Asbestos) has been removed.
6	0	0	Further information required	These sites not yet categorised or some asbestos items do not have recommended actions.

Definitions:

Category: The site performance score, determined by the worst item performance score at each site.

Number of Sites in Category: A count of how many sites have the corresponding site performance score, with separate counts done at the start and the end of each year.

Category Description: Indicates the recommended action corresponding to the worst item performance score (recorded in the asbestos register by a competent person, as per OHS & W Regulations 2010 (Division 2 – Asbestos)).

Interpretation: A brief real-world example of what each category implies for a site.

## Appendix G: Energy efficiency action plan reports

	<b>Energy Use (GJ)</b>	<b>GHG Emissions (Tonnes CO<sub>2</sub>)</b>	<b>Business Measure (FTEs)</b>
<b>Base Year 2000–01*</b>	<b>1815</b>	<b>560</b>	<b>203.3</b>
<b>Base Year 2000–01 (MJ/FTE)</b>	<b>8928</b>		
<b>2011–12</b>	<b>1534</b>	<b>468</b>	<b>332</b>
<b>2011–12(MJ/FTE)</b>	<b>4624</b>		
<b>Portfolio Target 2011–12 (MJ/FTE)</b>	<b>7588</b>		
<b>Final Portfolio Target 2014 (MJ/FTE)</b>	<b>6696</b>		

\* Data is for the former Department of Water Resources

The department has consolidated metropolitan and CBD operations and CBD sites have been reduced to two central buildings, both of which have energy efficiency programs in place.

Energy-efficient preventative maintenance upgrades were implemented where applicable.

Proposed achievements against the Energy Efficiency Action Plan include continuing to install energy-efficient appliances when equipment is replaced, ongoing assessment of opportunities to consolidate tenancies, and further investigations into the replacement of lighting in department-owned offices with T5 lighting.

## **Appendix H: Greening of government operations**

### **Energy**

The department has minimal ability to achieve further energy reduction and has already surpassed South Australia's Strategic Plan Target 61: Energy efficiency-government buildings – *“Improve the energy efficiency of government buildings by 30% by 2020 (baseline 2000-01) Milestone of 25% by 2014”*

The department continues to review best practice in energy saving measures and implement new and improved saving initiatives where possible and financially viable.

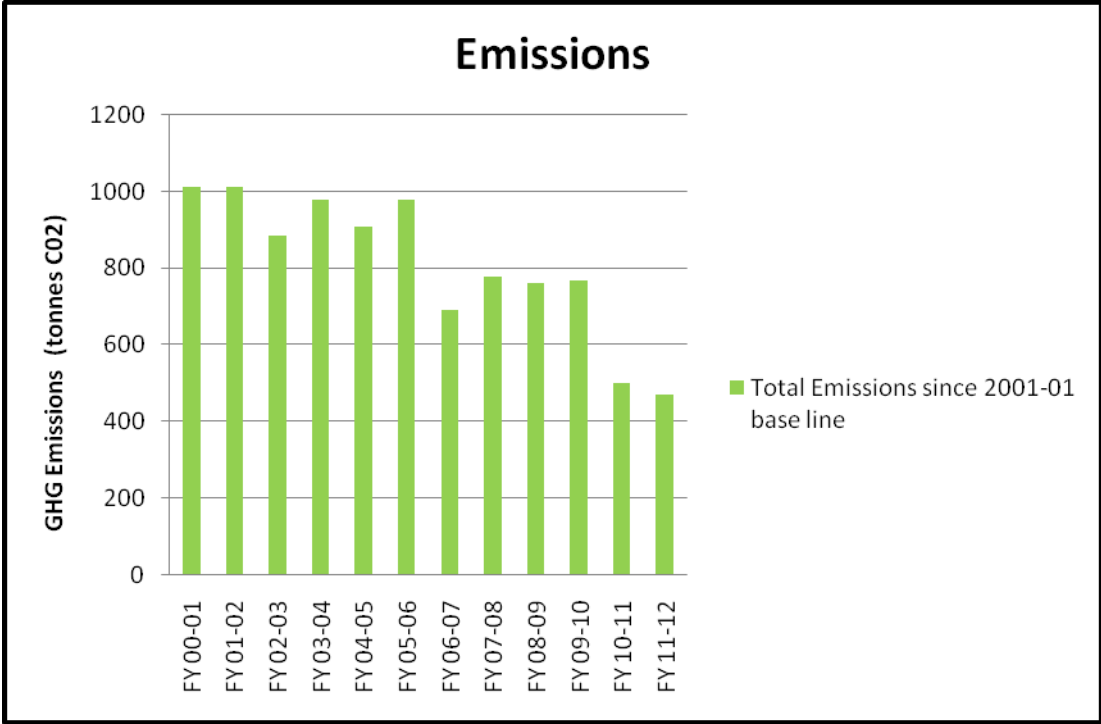
Office accommodation has been reviewed and a Strategic Accommodation Plan endorsed. This plan ensures a sustainable accommodation portfolio until 2015.

### **Water**

Office accommodation sites can make minimal additional savings from those already achieved. There has been fitting of new water efficient tapware and shower heads where required with low flow and aerating models.

### **Built Environment**

The department has implemented a trial to compare the ongoing operational costs of maintaining one (or two) large printing devices versus multiple devices across a floor. This has resulted in a reduction in waste paper, reduced the ratio of colour to black and white prints. It has also reduced the number of print devices across the agency.



**Appendix I: Financial performance**

## **Glossary**

AMLR NRM	Adelaide and Mt Lofty Ranges Natural Resources Management Board
BOC	Basin Officials Committee
CBD	Central business district
CEWH	Commonwealth Environmental Water Holder
COAG	Council of Australian Governments
CRC	Cooperative Research Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DENR	Department of Environment and Natural Resources
DFW	Department for Water
DWLBC	Department of Water, Land and Biodiversity Conservation
EMLR	Eastern Mt Lofty Ranges
EPA	Environment Protection Authority
GL	Gigalitre (one billion litres)
Hydrostratigraphic	Mapping of subsurface porous materials in reference to the flow of groundwater
KPI	Key Performance Indicator
LGA	Local Government Association
MDBA	Murray-Darling Basin Authority
ML	Megalitre (one million litres)
NABERS	National Australian Built Environment Rating System
NRM	Natural Resources Management
OHS&IM	Occupational health, safety and injury management
Ramsar	The Convention on Wetlands, a treaty signed at Ramsar, Iran, in 1971
SIS	Salt interception scheme
SMA	Stormwater Management Authority
TLM	The Living Murray
WAP	Water allocation plan
WILMA	Water Information and Licensing Management Application
WMLR	Western Mt Lofty Ranges