

TRANSPARENCY STATEMENT – PART A

WATER AND WASTEWATER PRICES IN

METROPOLITAN AND REGIONAL

SOUTH AUSTRALIA

2009-10



**Government
of South Australia**

South Australian Government
February 2009

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OVERVIEW OF THE TRANSPARENCY STATEMENT

This Transparency Statement *on Water and Wastewater Pricing in Metropolitan and Regional South Australia 2009-10* continues to provide transparency in the setting of SA Water potable water and wastewater prices and to document and report on the matters considered by the government in its water and wastewater pricing decisions.

As the current drought continues, the government has taken steps to improve water security beyond those planned twelve months ago. Over the next four years to 2012-13, substantial investment by SA Water in critical new water supply infrastructure is planned. Progress is being made with the Adelaide Desalination Plant, which will now be commissioned one year earlier than was first anticipated, with first water to come from it in 2010. This builds on existing *Water Proofing Adelaide* demand management strategies and associated capital expenditure to 2025.

The government has also purchased a further 30 GL of temporary water allocations from other River Murray users to ensure that South Australia's water needs are able to be supplied in the short term, regardless of the drought.

These major investments need to be funded through water charges and, hence, were a major influence on the government's 2009-10 water pricing decision.

Taking into account economic efficiency, equity, social justice and regional policies, customer impacts, Council of Australian Governments, and National Water Initiative water reform and pricing obligations, the government announced a new water charging structure that will see water charges rise on average in real terms by 17.9% in 2009-10.

The government also determined that metropolitan wastewater charges will remain constant in real terms in 2009-10. Regional wastewater charges will increase by 0.5% in real terms in 2009-10, to redress over time lower average wastewater bills in country regions in comparison to the metropolitan area.

The government will refer this 2009-10 Transparency Statement (Part A) to the Essential Services Commission of South Australia to assist it in undertaking an independent inquiry into the government's pricing processes.

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

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TABLE OF CONTENTS

Overview of the Transparency Statement	i
Abbreviations	vi
1 Water security	7
1.1 Urban water security challenges	7
1.2 Water demand management	7
1.3 Water supply and security	8
2 Institutional framework and price setting process	10
2.1 Introduction	10
2.2 Institutional framework – South Australia	10
2.3 Institutional framework – national	10
2.4 Previous independent assessments	12
2.5 Price setting process 2009-10	13
2.6 Transparency Statement process 2009-10	14
3 Revenue requirements and revenue estimates	15
3.1 Efficiency	15
3.2 The Regulatory Asset Base	15
3.3 Return of assets - depreciation	17
3.4 Operating, maintenance and administrative costs	18
3.5 Return on assets	23
3.6 Externalities	24
3.7 Water planning and management costs	25
3.8 Tax equivalent regime	28
4 Efficient resource pricing	29
4.1 Water charges	29
4.2 Wastewater charges	31
4.3 Trade waste	31
4.4 Community service obligations	32
4.5 Cross-subsidies	33

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

5	Water and wastewater pricing decisions 2009-10	35
5.1	Issues considered	35
5.2	SA Water's revenue - water	36
5.3	Wastewater charges 2009-10	38
5.4	Customer impacts: water.....	39
5.5	Customer impacts: wastewater	40
5.6	Regional policies	41
5.7	Community service obligations.....	41
6	Financial details relevant to the 2009-10 pricing decisions	44
6.1	Regulatory model estimates	44
6.2	Capital expenditure	50
6.3	Budget impacts.....	53
6.4	Profitability and ongoing financial viability	54
References		56
Appendices		57
Appendix 1: COAG Strategic Framework		58
Appendix 2: National Water Initiative Clauses		60
Appendix 3: Notice of Referral, including Terms of Reference		64
Appendix 4: WACC Methodology.....		65
Appendix 5: 2007-08 Annual Efficiency Report.....		68

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

Figures and Tables

Table 1: SA Water metropolitan service performance - 2006-07	20
Table 2: SA Water metropolitan operating costs (in 2006-07 dollars).....	21
Table 3: SA Water regional service performance - 2006-07*	22
Table 4: SA Water regional service costs (in 2006-07 dollars)	22
Table 5: Save the River Murray Fund - receipts and payments update	26
Table 6: Comparison of water charges	38
Table 7: Comparison of wastewater charges.....	39
Table 8: Indicative residential wastewater charge for the average residential property	40
Table 9: Estimated CSO payments to SA Water (nominal)	41
Table 10: Adjusted infrastructure asset base (nominal)*	44
Table 11: Regulatory model estimates for SA Water	45
Table 12: Regulatory model estimates for metropolitan water	46
Table 13: Regulatory model estimates for country water.....	47
Table 14: Regulatory model estimates for metropolitan wastewater	48
Table 15: Regulatory model estimates for country wastewater	49
Table 16: SA Water estimated capital expenditure (nominal)	50
Table 17: Impact on Tax and Dividend and Net Contributions to Government (nominal) *	53
Table 18: Impact on concessions budget.....	53
Table 19: SA Water's business viability analysis	54
Table 20: Values of WACC input parameters	65
Figure 1 - Cost and revenue changes since 2008-09 pricing decision	35
Figure 2 - Water segment in principle revenue direction to 2012-13	36

ABBREVIATIONS

ADP	Adelaide Desalination Plant
ANCOLD	Australian National Committee On Large Dams
COAG	Council of Australian Governments
CSO	community service obligation
DWG	Desalination Working Group
DWLBC	Department of Water, Land and Biodiversity Conservation
EPA	Environment Protection Authority
ESCOSA	Essential Services Commission of South Australia
GFFCR	go forward full cost recovery
GL	gigalitre
kL	kilolitre (1000 litres)
LRMC	long run marginal cost
ML	megalitre
MYBR	mid year budget review
n.a.	not available
NCC	National Competition Council
NPR	National Performance Report
NRM	Natural Resources Management
NWC	National Water Commission
NWI	National Water Initiative
OMA	operating, maintenance and administrative
OWS	Office of Water Security
pa	per annum
PNFC	public non-financial corporation
RAB	regulatory asset base
RMIP	River Murray Improvement Program
SA Water	South Australian Water Corporation
TBD	to be determined
URB	upper revenue bound
WACC	weighted average cost of capital
WPA	Water Proofing Adelaide

1 Water security

1.1 Urban water security challenges

Until recently, South Australia was considered to have a reliable urban water supply. Adelaide had access to a diversified water supply with Adelaide Hills reservoirs being supplemented by pumping from the River Murray.

Typically, South Australia's extractions from the River Murray for urban water supply are small. In a normal year, total South Australian urban extractions are about 1.5% of total extractions from the Murray-Darling Basin. Those for Adelaide are about 1%. Nevertheless, 90% of South Australians depend to some extent on the River Murray for their urban water supply.

In years of normal rainfall, Mt Lofty Ranges' reservoirs are the source of about 60% of Adelaide's water supply, the remainder being sourced from the River Murray. In drought years, the River Murray is the source of up to 90% of Adelaide's water supply.

An extended drought is being experienced in the Adelaide and the River Murray region. As at October 2008, monthly inflows for the River Murray system have been below average for thirty-seven consecutive months. Murray-Darling Basin storage levels remain low and require significant above average rainfall for a long period to recover. In its recent report, *Water Availability in the Murray-Darling Basin*, the CSIRO noted that the continuation of the climate conditions of the last ten years would result in a decline in the availability of surface water from, and the health of, the River Murray (CSIRO, 2008, p 28).

The South Australian Government is progressing a portfolio of water supply and demand options to improve the sustainability and security of South Australia's urban water supply in the context of the current extended drought. The portfolio of options is discussed below.

1.2 Water demand management

The government has implemented a number of strategies either to restrict demand (water restrictions) or to encourage responsible water use. These, which are set out in *Water Proofing Adelaide: A thirst for change 2005-2025* (WPA), include the following:

- implementation of the Water Efficiency Labelling Scheme;
- ways of making homes more efficient including a range of rebates offered through SA Water for water efficient appliances;
- education and conservation programs; and
- water efficiency audits.

The summary of progress in implementing the WPA strategies designed to encourage responsible water use is available at www.waterproofingadelaide.sa.gov.au/WPA.

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

1.2.1 *Water restrictions*

On 1 October 2007, Level 3 water restrictions were introduced for domestic consumers connected to the River Murray system. Under Level 3 Water restrictions, dripper systems and hand held hoses fitted with a nozzle can be used at specific times for a maximum of three hours a week. Buckets and watering cans can be used at any time.

From 3 November 2008, domestic consumers can water on specific times twice a week so long as the maximum of three hours a week is not exceeded.

1.3 *Water supply and security*

On the supply side, the government is progressing a portfolio of measures to secure South Australia's water supply, including the following projects.

1.3.1 *Water Proofing Adelaide*

WPA improves the security and sustainability of South Australia's water supply by substituting recycled water and stormwater for potable water used for community purposes and agriculture. WPA projects designed to substitute recycled water and stormwater for potable water are:

- Glenelg to Adelaide Parklands reuse scheme; and
- Water Proofing the South.

The Glenelg to Adelaide Parklands reuse scheme aims to transport 2GL of recycled water from the Glenelg waste water treatment plant to irrigate the Adelaide Parklands each year. This recycled water will replace potable water currently sourced from the River Murray, Adelaide Hills Catchment, River Torrens and groundwater. The scheme also aims to reduce the effluent discharge into the Gulf St Vincent.

Water Proofing the South aims to substitute potable water use around the City of Onkaparinga with recycled water and stormwater. The project includes:

- greater use of the recycled water from Christies Beach and Aldinga wastewater treatment plants for irrigation and community purposes;
- potential dual reticulation for a new residential development; and
- localised stormwater capture and reuse.

1.3.2 *Acceleration of Adelaide Desalination Plant*

In December 2007, the government announced that Port Stanvac was the preferred site for its planned desalination plant.

The Adelaide Desalination Plant (ADP) will improve the security of Adelaide's potable water supply. Water sourced from desalination reduces the risk, or variability, of Adelaide's water sources, as, unlike South Australia's other water sources, it is not dependent on climate. Diversification of water sources generally tends to increase the security of the supply.

The ADP could provide about one quarter of Adelaide's potable water supply and reduce SA Water's reliance on the River Murray.

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

More recently, in September 2008, the government announced that the construction of the desalination plant would be accelerated in order to achieve first water from the ADP by December 2010, twelve months earlier than originally planned.

1.3.3 *North-South Interconnector*

The government intends to construct a north south interconnection pipeline between the Happy Valley Reservoir, the Hope Valley Reservoir and the Barossa trunk main. The North-South Interconnector would fully integrate the Adelaide metropolitan water system by connecting the northern and southern parts. This would create operating flexibility and reinforce supply security across the metropolitan area.

1.3.4 *Other water resource developments*

The government is investigating the following water resource developments, in addition to the developments in desalination and water recycling, to improve water security in South Australia.

- The purchase of an additional 30 GL of temporary River Murray entitlements in order to maintain sufficient water reserves for critical human needs.
- A pilot scheme to test the feasibility of injecting groundwater into Adelaide's mains distribution system.
- A temporary weir at Wellington, which may be built in the worst case scenario that the drought continues. The Wellington Weir would protect the River Murray as a water source by preventing saline water from the Lakes moving up the River.
- A pipeline network in the Lower Lakes to improve the availability of potable water to communities and properties in the area.

2 Institutional framework and price setting process

2.1 Introduction

This *Transparency Statement on Water and Wastewater Pricing in Metropolitan and Regional South Australia 2009-10* continues to:

- report on potable water and wastewater charges and the matters considered by the government in setting these; and
- document the government's implementation of Council of Australian Governments (COAG) and National Water Initiative (NWI) obligations relevant to water and wastewater price setting.

2.2 Institutional framework – South Australia

The Minister for Water Security is responsible for SA Water and brings to Cabinet water and wastewater pricing matters. The Minister for Water Security is also Minister for the River Murray and, as such, is also responsible for matters relating to the River Murray.

The Minister for Environment and Conservation is responsible for statewide water resource management policy.

The Treasurer is responsible for budget deliberations and monitoring SA Water's financial performance. The Treasurer presents matters relating to the budget and relevant intergovernmental agreements to Cabinet.

The Essential Services Commission of South Australia (ESCOSA) is an independent statutory authority. As the Minister responsible for ESCOSA, the Treasurer, also refers water and wastewater pricing decisions to it for a review of the price-setting process.

SA Water provides water and wastewater services to residential, commercial and industrial customers throughout metropolitan and regional South Australia. Some rural customers receive water through the urban water system and pay urban water charges. Most of SA Water's wastewater services are in the Adelaide metropolitan area, but these services are also provided to: Stirling-Aldgate-Bridgewater-Heathfield, Gumeracha, Hahndorf, Lobethal, Myponga, the Iron Triangle cities, Murray Bridge, Mannum, Mount Gambier, Naracoorte, Millicent, Port Lincoln, Victor Harbor, Angaston, Mount Burr and Nangwarry.

SA Water is established under the *South Australian Water Corporation Act 1994* and is subject to the provisions of the *Public Corporations Act 1993*. It operates in accordance with its Charter prepared by the Treasurer and the Minister for Water Security following consultation with SA Water.

2.3 Institutional framework – national

In February 1994, COAG endorsed the COAG Strategic Framework for the efficient and sustainable reform of the Australian water and wastewater industry (COAG Strategic Framework), including pricing principles. An excerpt of the COAG Strategic Framework is at Appendix 1.

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

In June 2004, the South Australian Government signed the NWI, a 10-year reform agenda to improve the management of Australia's water resources. The NWI builds on the COAG Strategic Framework. An excerpt of the NWI relevant to urban potable water and wastewater pricing is at Appendix 2.

In November 2008, COAG agreed to improve the security of urban water by adopting an enhanced national urban water reform framework, including the finalisation of draft national pricing principles.

COAG's draft national pricing principles build on 1994 COAG Strategic Framework and the NWI and include principles for:

- the recovery of capital expenditure;
- urban water tariffs;
- recovering the costs of water planning and management activities; and
- recycled water and stormwater reuse.

The key principles that relate to urban water and wastewater charges are summarised below.

Revenue adequacy

- SA Water's target revenue should move towards the upper revenue bound (URB) in accordance with paragraph 66 of the NWI and should meet go forward full cost recovery (GFFCR).
- URB is determined as:
 - efficient operational, maintenance and administrative (OMA) costs;
 - externalities attributable to and incurred by SA Water;
 - taxes or tax equivalents;
 - a provision for the return of capital (depreciation); and
 - a provision for a return on capital.

Cost recovery of capital expenditure

- For new assets, or those replaced after the legacy date of 1 July 2006, charges are set to achieve full cost recovery of capital expenditures through a return of capital (depreciation) and a return on capital calculated as the weighted average cost of capital (WACC) on the depreciated regulatory asset base (RAB).
- New and replacement assets may be initially valued at efficient actual cost.
- Assets existing as at 1 July 2006 (legacy assets) should be valued at depreciated replacement cost.

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

- The RAB, comprising new and legacy assets, is rolled forward by adding prudent capital expenditure, and deducting depreciation and asset disposals. The RAB is escalated at the expected inflation rate, consistent with the WACC.
- Contributed assets should be excluded from the RAB.
- URB is the revenue that would result if all assets earned a return on capital as per the WACC.
- GFFCR is less than the URB because at the legacy date, the return on some legacy assets was less than the WACC. As time passes and the proportion of legacy assets in the RAB decreases, GFFCR will draw closer to URB.

Urban water tariffs

- Tariffs should be set to achieve forecast target revenue, which should move to URB.
- Two-part tariffs should be used, comprising a service availability charge and water usage charge.
- The water usage charge(s) should be based on consideration of Long Run Marginal Cost.
- The service availability charge for water should be based on the difference between the target revenue and the revenue recovered through water usage charges.
- The process of setting water and wastewater charges should be transparent and subject to public scrutiny.

Ongoing business viability

SA Water's financial viability is closely monitored by management, the Board and the South Australian Government (as owner). SA Water's key financial performance and viability indicators include: profitability and returns on investment; financial capacity to finance investment including new assets and replacement of existing assets; gearing; the capacity to service and repay debt levels (interest cover); liquidity; and long term cash flows.

Performance reporting

South Australia participates in the inter-jurisdictional Roundtable Group, chaired by the NWC, that manages the national performance reporting framework. In May 2008 the Roundtable produced the *National Performance Report 2006-07 Major Urban Water Utilities* and the *National Performance Report 2006-07 Rural Water Service Providers*.

2.4 Previous independent assessments

2.4.1 NWC

The National Water Commission (NWC) was established under the NWI in March 2005. Its responsibilities include reporting to COAG on the accreditation and biennial assessment of jurisdictions' implementation plans.

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

The *South Australian NWI Implementation Plan 2005* provides details of the implementation of South Australia's NWI obligations and associated milestones. It was accredited by the NWC in August 2006.

On 22 October 2007, the NWC published its *First Biennial Assessment of Progress in Implementation* of the NWI.

In its 2008 *Update of progress in water reform* the NWC remarked that South Australia's:

in-principle revenue direction for five years to June 2012 ... will move towards upper revenue bound (NWC, 2008 p 17).

2.4.2 ESCOSA

In June 2008, ESCOSA released its independent *Inquiry into the 2008-09 Metropolitan and Regional Water and Wastewater Pricing Process Final Report* (2008-09 Final Report). The issues raised by ESCOSA are discussed in the relevant sections of this Transparency Statement.

2.5 Price setting process 2009-10

In December 2008, the government, through Cabinet, approved 2009-10 metropolitan and regional water and wastewater charges. In making its 2009-10 pricing decision, the government also indicated that it expected water revenue to increase by a similar amount until 2012-13.

While no prices have been set beyond 2009-10, for planning purposes, the government set an in-principle revenue direction for the period to 2012-13 based on the increases in 2009-10 water and wastewater charges.

In setting the 2009-10 water and wastewater charges, the government followed a methodology that was consistent with the approach taken previously and had regard to the following matters:

- the national institutional framework described and summarised above;
- ESCOSA's 2008-09 Final Report;
- the NWC's *First Biennial Assessment of Progress in Implementation and Update of progress in water reform*; and
- the need to improve water security.

The government also considered equity issues such as affordability and social justice and regional policies and customer impacts.

In accordance with the *Waterworks Act 1932*, water charges to apply to most SA Water customers in 2009-10 for water consumed from 1 July were gazetted in The South Australian Government Gazette on 5 December 2008. The commercial water property rate will be gazetted in June 2009.

Wastewater rates to apply to SA Water's wastewater customers in 2009-10 will be gazetted by June 2009, in accordance with the *Sewerage Act 1929*.

2.6 Transparency Statement process 2009-10

The Department of Treasury and Finance prepared this *Transparency Statement Water and Wastewater Prices in Metropolitan and Regional South Australia 2009-10* (2009-10 Transparency Statement) (Part A) on behalf of the Treasurer. The Office of Water Security (OWS) and the Departments of the Premier and Cabinet and Water Land and Biodiversity Conservation were consulted during the preparation of this statement. SA Water was consulted on the factual accuracy and completeness of information contained herein.

In accordance with Section 35 of the *Essential Services Commission Act 2002*, the Treasurer will refer an inquiry to ESCOSA on the 2009-10 metropolitan and regional water and wastewater price setting process. This 2009-10 Transparency Statement (Part A) will be provided to ESCOSA for its independent inquiry. The Notice of Referral, including the terms of reference to ESCOSA, is provided at Appendix 3.

ESCOSA's 2009-10 Final Report will form Part B of this 2009-10 Transparency Statement and the South Australian Government Response to ESCOSA will be Part C.

The 2009-10 Transparency Statement will be published at:

<http://www.treasury.sa.gov.au/>.

Conclusion 1

The South Australian Government remains committed to COAG pricing principles and NWI obligations.

3 Revenue requirements and revenue estimates

As discussed at 2.3 above, SA Water's revenue should be high enough to ensure business viability and cover the full cost of service delivery without being so high as to include monopoly rents. In practice, revenue should be between URB and GFFCR.

Further detail concerning each component of URB and GFFCR is set out below.

3.1 Efficiency

COAG pricing principles require that the URB should include *efficient business costs* and that new capital expenditure should be valued at *efficient actual cost*. In this context efficiency can be thought of as two related concepts.

First, the outcomes that the government seeks from SA Water should be delivered in the lowest cost way (taking account of the full range of costs, including externalities, equity and risk). This requires that the combination of sources used to supply water to South Australia should be the efficient balance of the available options or, in other words, that capital expenditure on infrastructure is prudent.

Second, efficiency should also be delivered in a more technical sense. Taking past capital decisions as given, the organisation's existing operations should be conducted at the lowest sustainable cost.

3.2 The Regulatory Asset Base

The URB includes both return of assets and return on assets. Both concepts take the RAB as a common starting point. In simple terms, SA Water's real RAB in any given year is the rolled forward RAB from the previous year plus capital expenditure less depreciation and disposal of assets, i.e.:

$$RAB_t = RAB_{t-1} + \text{prudent capital expenditure}_t - \text{depreciation}_t - \text{disposal of assets}_t$$

Note that assets that are contributed to SA Water, for example by grant of gift from a government or by customers, are excluded from the RAB where sufficient information is available to identify and value them.

Further information concerning the calculation of the RAB is provided below.

3.2.1 Capital expenditure

A significant factor in the 2009-10 decision, and the 2008-09 decision before it, was the substantial capital expenditure that the government has planned to provide improved water security.

The continuing drought has placed unprecedented pressure on the River Murray, which is integral to South Australia's water supply. In response, the government has decided to take various steps to improve South Australia's future water security, most notably the decision to build a desalination plant at Port Stanvac. In making its 2009-10 pricing decision, the government also indicated that it expected water revenue to be increased by a similar amount as the 2008-09 pricing decision (12.7% (real) per annum) until 2012-13, largely to meet the cost of these decisions.

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

In making these decisions, the government has sought to ensure that South Australia's future water supply is sufficiently secure. Given that government has determined that water security must be increased, efficiency means delivering that increase using the least cost combination of resources (given existing assets). Determining this combination was part of the role of the desalination working group (DWG).

In early 2007, the government established the DWG to consider, among other things, the way that desalination would fit with WPA, the existing water security strategy. Until that time, Adelaide's water supply was considered one of the most secure in Australia, with two separate water sources. As is discussed at 1.1 above, though, the current drought had shown that Adelaide's water supply is not as secure as had previously been thought.

The DWG considered it critical that the urban water supply has a mechanism for ensuring that it can never run out of water. Even in the most extreme drought, critical urban needs should always be maintained. The DWG considered the following means to provide this mechanism:

- purchase of additional water licences;
- increasing storage capacity in the Mt Lofty Ranges to store larger amounts of River Murray water;
- desalination;
- treatment of wastewater for reuse;
- capture storage and reuse of stormwater; and
- increased use of aquifers.

Central to the DWG's consideration of these alternatives was its view that South Australia requires a source of water supply uncorrelated with climate to ensure water security. Of the options that were available, the DWG considered desalination to be the only one that was sufficiently independent of climatic factors to provide the certainty that was desired. Ultimately, it recommended that the existing WPA strategy should be augmented with the construction of a desalination plant at Port Stanvac. Given that desalination was considered the only option for providing the increased security that was required, the government considered it also to be the lowest cost option for the next increment in South Australia's water supply.

Once the decision to build a desalination plant had been made, it remained to factor the likely efficient cost of that plant into the regulatory model. Generally, estimates of future new capital assets are based on efficient estimated costs, escalated at 6% per annum until they are expected to be incurred. The escalation reflects current construction market conditions and is consistent with an independent review by consultants, KPMG.

For the desalination plant, firmer estimates of future operating and capital expenditures will become available upon completion of all environmental and engineering studies and pilot plant testing - tender due to be completed in March. As firmer estimates become available, revisions will be made to the regulatory model and will be considered in subsequent annual price setting process, as appropriate.

3.2.2 *Rolling forward asset values*

SA Water's RAB in respect of the 2009-10 decision is established by rolling forward the asset values as at 30 June 2006. The RAB is rolled forward in nominal terms including new capital expenditure and deducting depreciation and asset disposals.

Existing asset values are escalated at 3.5% per annum consistent with the inflation forecast assumption in the real WACC calculation.

Conclusion 2

The South Australian Government's 2009-10 pricing decision is consistent with COAG pricing principles in that SA Water's RAB has been rolled forward appropriately.

3.3 Return of assets - depreciation

In its 2008-09 pricing decision the government estimated depreciation in the URB and GFFCR using the straight-line method over the estimated average useful lives of the assets.

Since then, further work has been done to improve the estimate of useful lives of the assets. Due to the different treatment of contributed assets and revaluation/escalation of assets, the regulatory depreciation is calculated using a weighted average useful life. This is based on a preliminary analysis of SA Water's asset database as at 30 June 2006 and new assets commissioned in 2006-07 and 2007-08.

The useful life estimates of assets adopted for the 2009-10 pricing decision are based on knowledge of the performance of those assets having regard to the specific materials and operating conditions.

Legacy assets, or those in existence as at 1 July 2006, are estimated to have an average useful life of 50 years. All other new or replacement assets have an estimated average useful life of 60 years except for water security related projects that are separately identifiable, for which individual depreciation schedules are used.

For new assets, this revised depreciation rate replaces the useful life assumed in the 2008-09 regulatory model, which was 100 years. This modification has resulted in a relatively minor increase in the GFFCR. For legacy assets, this revised assumption replaces a method based on a modified financial depreciation rate with no significant change to the GFFCR in the period under review.

Depreciation estimates are consistent with the escalation of the RAB at 3.5% per annum. Asset depreciation is included in the regulatory model when new assets are expected to be commissioned. Work-in-progress is not depreciated.

Conclusion 3

The South Australian Government's 2009-10 pricing decision is consistent with COAG pricing principles by including estimated straight-line depreciation in the URB and GFFCR.

3.4 Operating, maintenance and administrative costs

Given the forward looking nature of revenue determinations, and the overall intention of the NWI that water charges are efficient, the government interprets its obligation in this respect as being to ensure that revenues, and therefore water charges, reflect reasonable forecasts of efficient OMA costs.

There are two key factors in place to ensure that OMA costs are efficient, namely significant outsourcing and transparent public disclosure of costs and the basis for decisions such as that to build the desalination plant. Given these factors, the government considers SA Water's OMA costs to be reasonably efficient. The government acknowledges ESCOSA's comments in its 2008-09 Final Report that improvements could be made to increase SA Water's incentive to further improve efficiencies. While this is beyond the scope of this Transparency Statement, the government will continue to work with ESCOSA on this issue.

3.4.1 *Competitive pressure as a source of efficiency*

The 2006-07 National Performance Report (NPR) (p 41) reports a number of factors that affect the operating costs of water utilities¹, including the extent to which water is sourced from external bulk business or other services are outsourced is a source of operational efficiency.

SA Water, where possible, calls for competitive tenders for services (e.g. electricity) or supplies (e.g. chemicals) in order to promote efficient business costs. In the past, approximately 60% of all SA Water's water and wastewater OMA expenditures have been subject to competitive pressure.

SA Water's most significant contract is the United Water International contract to manage Adelaide's water and wastewater systems. This 15-year competitively tendered contract, which commenced on 1 January 1996, has provision for reviews to facilitate major price resets every five years.

This outsourcing contract has been identified by the Commonwealth Government as a case study to illustrate the potential for private sector participation in an urban water supply context. The Department of the Prime Minister and Cabinet said that:

To meet its contractual responsibilities United Water is tasked with meeting 180 performance standards. These standards relate to water quality, quality of wastewater discharged, response times to network events, restoration of interrupted service and new connections. United Water has achieved 99 per cent compliance with these standards although they are at a higher level than

¹ Further information concerning cost drivers was provided in the 2007-08 Transparency Statement.

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

previously set for SA Water prior to the commencement of the contract... Compliance with these standards has resulted in a consistently high level of customer service (Department of the Prime Minister and Cabinet, 2006, p12).

SA Water's costs are also subject to the budget process.

3.4.2 *Public disclosure as a source of efficiency*

A second factor that contributes to efficiency, which is not listed in the NPR, is the NPR itself. The NWC will publish the 2007-08 NPR in early 2009. This report includes a comparative analysis of key drivers and trends of performance of utilities in the Australian water industry.

In its 2008-09 Final Report, ESCOSA noted that:

The use of the National Performance Report makes SA Water's performance report more robust... (ESCOSA, 2008, p 26).

The tables that follow provide a précis of SA Water's performance by comparison to utilities in other jurisdictions. While there are some indicators where SA Water's performance has room for improvement, the general position is that SA Water performs well by comparison, featuring in the top half against most indicators. Care should be taken in interpreting these figures, though, as there are many factors that influence the relative performance of water utilities in terms of operating cost. Where these factors drive increases costs, this cannot necessarily be interpreted to imply inefficiency.

Metropolitan service performance

Table 1 shows a range of service performance indicators and ranks SA Water's performance against that of comparable interstate utilities². Further details are available in the National Performance Report 2006-07 urban water utilities available at <http://www.nwc.gov.au/www/html/7-home-page.asp>.

² The comparable utilities that report in the NPR 2006-07 include Sydney Water, Water Corporation – Perth, Yarra Valley Water, South East Water, Brisbane Water, City West Water, Gold Coast Water, Hunter Water, ACTEW, Barwon Water.

Table 1: SA Water metropolitan service performance - 2006-07

Performance indicator	Average	Rank* 06-07
Water resources		
Average annual residential water supplied (kL/property)	Worse	9 (11)
Asset performance		
Water main breaks (per 100 km)	Better	4 (10)
Sewer main breaks and chokes (per 1000 properties) **	Worse	10 (10)
Infrastructure leakage index	Better	5 (11)
Real water losses (litres/connection/day)	Better	5 (11)
Customer Service		
Water quality complaints (per 1000 properties)	Better	2 (11)
Average connect time to a telephone operator (seconds)	Better	3 (11)
Number of sewage odour complaints (per 1000 properties)	Same	7 (11)
Environmental performance		
Recycled water (% effluent recycled)	Better	1 (11)
Percent of sewage treated to a tertiary level	Better	1 (10)
Percent of bio-solids reused***	Worse	9 (11)
Sewer overflows to the environment (per 100 km)	Better	7 (11)
Net greenhouse gas emissions (tonnes CO2 equivalent)	Worse	11 (11)

*Ranked from best to worst of number of compared companies that provided data. Parentheses contain number in comparison group. The number of entities varies depending on the data supplied.

**The rank for this indicator is expected to change due to additional data to be published later in the year.

*** Some service providers are reducing stockpiles and hence achieving greater than 100% reuse. This is obviously unsustainable in the long run. SA Water is currently operating at its long term sustainable level of close to 100% reuse.

Source: NPR 2006-07 urban water utilities

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

Metropolitan costs

Table 2 compares SA Water's operating costs in 2006-07 dollars with interstate utilities³. It shows that SA Water's operating and total costs per property in the water segment are lower than most comparable Australian water utilities.

Table 2: SA Water metropolitan operating costs (in 2006-07 dollars)

Performance indicator	Average	Rank*
Real operating cost - water (\$/property)	Better	4 (11)
Real operating cost - wastewater (\$/property)	Better	1 (11)
Real operating cost – water and wastewater (\$/property)	Better	1(11)
Real total cost – water and wastewater (\$/property)	Better	1(8)

* The rank is from cheapest to most costly of the number of compared companies that provided data. Parentheses contain number in comparison group. The number of entities varies depending on the data supplied.

Source: *NPR 2006-07 urban water utilities*

Regional service performance

Table 3 compares SA Water's service performance in Mt Gambier and Whyalla in 2006-07 with comparable regional water utilities⁴. SA Water's performance compares well with other utilities, especially in Mt Gambier.

³ The comparable utilities that report in the NPR 2006-07 include Sydney Water, Water Corporation – Perth, Yarra Valley Water, South East Water, Brisbane Water, City West Water, Gold Coast Water, Hunter Water, ACTEW, Barwon Water.

⁴ The comparable utilities that report in the NPR 2006-07 include South Gippsland, Power and Water Authority – Alice Springs, Water Corporation – Geraldton, Kalgoorlie-Boulder, Albany, Eurobodalla, Lismore, Bathurst, Goldenfields (reticulated), Aqwest Bynbury, Tamworth, Bussellton Water, Clarence Valley, Country Energy, Kempsey, Byron, Bega Valley, Queanbeyan, Dubbo, Ballina.

Table 3: SA Water regional service performance - 2006-07*

Performance indicator	Mt Gambier		Whyalla	
	Average	Rank	Average	Rank
Asset performance				
Water main breaks (per 100km)	Better	1 (22)	Better	12 (22)
Sewer main breaks and chokes (per 1000 properties)	Better	3 (20)	n.a.	7 (20)
Customer service				
Water quality complaints (per 1000 properties)	Better	3 (18)	Better	7 (18)
Number of sewage odour complaints (per 1000 properties)	Better	7 (18)	Better	7 (18)

*The rank is from best to worst of the number of compared companies that provided data. Parentheses contain number in comparison group. The number of entities varies depending on the data supplied.

Source: NPR 2006-07 urban water utilities.

Regional costs

Table 4 compares SA Water's operating cost of regional services in 2006-07 dollars with interstate regional service providers⁵. SA Water's performance compares well to interstate utilities, although it is not as favourable as its performance in the metropolitan area. Operating costs for regional water supply are generally higher in South Australia than interstate due to poor water accessibility and quality.

Table 4: SA Water regional service costs (in 2006-07 dollars)

Performance indicator	Average	Rank*
Real operating cost – water (\$/property)	Better	6 (10)
Real operating cost – wastewater (\$/property)	Better	6 (11)

*The rank is from best to worst of the number of compared companies that provided data. Parentheses contain number in comparison group. The number of entities varies depending on the data supplied.

Source: SA Water's 2006-07 Annual Efficiency Report

Operating costs for regional wastewater services have increased over the period. This is attributable to the need to upgrade facilities to meet environmental standards,

⁵ The comparable water utilities in SA Water's 2006-07 Annual Efficiency Report are Toowoomba City Council, Water Corporation – Mandurah, Noosa Water Services, Country Energy, Fitzroy River Water, South Gippsland Water, Water Corporation – Bunbury, Power and Water Corporation – Alice Springs, East Gippsland Water, Byron Shire Council.

and the consequent higher treatment standards and an increase in preventative maintenance.

Conclusion 4

The South Australian Government's 2009-10 pricing decision is consistent with COAG pricing principles that OMA costs should be based on efficient business costs.

The South Australian Government has met its NWI obligation to report independently, publicly and annually, benchmarking of pricing and service quality for metropolitan and non-metropolitan delivery agencies in National Performance Reports.

3.5 Return on assets

The return on assets is calculated by applying the relevant rate of return to the RAB.

3.5.1 WACC

The South Australian Government continued to adopt a 6% pre tax real rate of return for all assets in the URB and for new and replacement assets in the GFFCR. Details of the calculation of WACC are in Appendix 4 below.

3.5.2 Return on legacy assets

The draft pricing principles, discussed in Chapter Two, require that legacy assets should earn a return no less than the return being achieved at the legacy date and, if that return is above the current WACC, no more than the return being achieved at the legacy date.

The return on water legacy assets is 3.1% and the return on wastewater legacy assets is 7.2%.

Conclusion 5

The South Australian Government's 2009-10 pricing decision is consistent with COAG pricing principles.

The URB includes a rate of return on capital consistent with the WACC. GFFCR includes a rate of return consistent with the WACC for new and replacement assets and a return of 3.1% and 7.2% for water and wastewater legacy assets respectively.

3.6 Externalities

There has been a delay in consideration by jurisdictions of a national regulatory treatment of externalities. Until the development of nationally consistent pricing principles for environmental externalities, the government has continued to adopt the COAG definition of externalities (i.e. only externalities that are 'both attributable to and incurred by' SA Water are included in the upper and lower revenue bounds).

3.6.1 Greenhouse gas emissions

A significant externality cost associated with SA Water's operation is the cost of greenhouse gas emissions. SA Water's greenhouse impact arises mainly from electricity use (especially for water pumping and, in future, desalination) and treatment of wastewater.

In 2004 the South Australian Government began working with other jurisdictions to design a possible emissions trading scheme to manage and reduce Australia's greenhouse gas emissions. More recently, the Commonwealth Government has committed to introducing an emissions trading scheme from 1 July 2010. This scheme will place an obligation on organisations that emit greenhouse gases to acquire and acquit permits in proportion to those emissions.

In terms of wastewater treatment, SA Water is a direct emitter of greenhouse gas and, subject to the final decisions about threshold levels, will potentially be a liable party under the emissions trading scheme. This will internalise the cost of carbon for SA Water and, through the charge setting process, to end users. In effect, this will address the externality cost of SA Water's greenhouse emissions.

For electricity use, it is the generator, not SA Water that is the direct emitter. The emissions trading scheme will cause the price that SA Water will pay for electricity to incorporate a carbon cost. As that occurs, the price setting process outlined in this submission will see the carbon price that will result from the emissions trading scheme reflected in water charges as and when it occurs, thus ensuring that the cost of the greenhouse emissions associated with water consumption is factored into the end user's consumption decisions.

3.6.2 Water extraction

Another significant externality cost relevant to SA Water is the environmental cost associated with removal of water. To understand the details of this issue, and to assist in managing it, is the role of water planning and management. There remains a lack of clarity nationally about the difference between externalities and charging for water planning and management activities, as noted in the *Stocktake of approaches to cost recovery for water planning and management in Australia*.

The key difference between the two is that water resource management and planning activities support an understanding of externalities and develop frameworks and infrastructure to address them (eg. water plans to balance consumptive use against environmental needs, trading frameworks to improve resource allocation). Charging for externalities encompasses activities that seek to internalise the cost (or benefit) of the externality to the party causing it (eg. by a specific charge or tax, or a tradeable credit (NWC, 2007b, p 8).

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

The NWC has further reported:

In some states, cost recovery for water planning and management is a proxy for externality pricing – noting that it is set on a very different basis to externality pricing. (NWC, 2007b, p 56)

While there is an overlap in some states between this [water planning and management] cost recovery and charges for externalities, more work needs to be done nationally to tease out these charges and further explore the scope for market-based responses to externalities of water use. (NWC, 2007b, p 58)

These matters are being considered at a national level. Until they are concluded, the government continues to include externality costs that are 'both attributable to and incurred by' SA Water in the URB. Using this definition, externality costs incurred by SA Water include licence fees and levies paid to Natural Resources Management (NRM) Boards (noting that these costs are included in OMA costs in the regulatory model).

Additional information on the derivation of these costs is provided below, as previously requested by the NWC (NWC, 2006, p 6.42).

3.6.3 Environment Protection Agency licence fee

The Environment Protection Authority (EPA) is responsible for setting environmental standards applicable to SA Water's activities.

SA Water paid a licence fee of around \$1.4m to the EPA in 2007-08. The licence fee is applied as fixed charges but a move to load-based fees is expected in the short to medium term.

3.6.4 Natural Resources Management Board levies

NRM Boards manage South Australia's water resources and catchment areas to ensure they are used sustainably and to balance environmental, social and economic demands for water. There are eight NRM Boards in South Australia, operating under the *Natural Resource Management Act 2004*.

SA Water's payments to NRM Boards in 2008-09 are estimated to be about \$3.4m.

Conclusion 6

The South Australian Government's 2009-10 pricing decision is consistent with COAG pricing principles by including externalities that are both attributable to and incurred by SA Water in the URB and GFFCR.

3.7 Water planning and management costs

The NWI (Clause 67) requires states and territories to bring into effect consistent approaches to pricing and attributing costs of water planning and management. In *NWI First Biennial Assessment of Progress in Implementation* the NWC noted that implementation of this specific NWI obligation for South Australian and for all other jurisdictions was dependent on timing of the development of principles through the Steering Group on Water Charges (NWC, 2007a, p 102). This remains the case. In

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

the interim, the Department of Water, Land and Biodiversity Conservation (DWLBC) has commenced an examination of costs and options for attributing appropriate water planning and management costs, and the potential attribution of those costs to water users, on the basis of benefit received or impact on the resource.

This work is expected to recognise the significant interconnections and overlap between externalities and water planning and management costs and will take into account the existing contributions to water planning and management costs already met by SA Water customers through the Save the River Murray Levy.

3.7.1 Save the River Murray Levy

Information is provided on the Save the River Murray Levy because it is a significant source of cost recovery from SA Water's water consumers for water planning and management costs in South Australia.

While SA Water collects the Levy from its customers, it does not retain the funds nor are any of the associated costs attributed to SA Water. Therefore, the regulatory model does not include any of the Levy revenue or the associated water planning and management costs.

In 2007-08, \$22m was raised for the Save the River Murray Fund (the Fund) of which \$20m was spent on a range of associated River Murray projects. At the end of 2007-08 the fund held \$14.5m, \$2m more than last year. The Fund is held by the Minister for the River Murray and administered by DWLBC on behalf of the Minister.

The Fund contributes to the River Murray Improvement Program (RMIP), which is integrated within a larger Murray-Darling Basin Initiative program of works and measures, the South Australian Murray Salinity Strategy and the South Australian Environmental Flows for the River Murray Strategy. The RMIP contributes to the delivery of three high level outcomes:

- improved environmental health of the River Murray system in South Australia;
- high security of water of acceptable quality for irrigation in South Australia at an appropriate price; and
- high security of water quality for urban water supplies.

Table 5 provides information on the receipts and payments from the Fund.

Table 5: Save the River Murray Fund - receipts and payments update

	03-04 (\$M)	04-05 (\$M)	05-06 (\$M)	06-07 (\$M)	07-08 (\$M)	Total (\$M)
Receipts	12.8	17.6*	21.8*	21.1	22.0	95.3
Payments	8.1	10.7	26.2	15.8	20.1	80.9
Balance	4.7	6.9	(4.4)	5.3	1.9	14.5

* Difference between 2004-05 and 2005-06 is due largely to timing impacts of transfers to the Fund.

Source: Save the River Murray Annual Report 2006-07 and 2007-08.

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

In 2007-08, payments were made to a number of projects and activities from the Fund, including:

- Implementation of Water Allocation Plan
- Investment in Salinity Accountability
- River Murray Act
- Murray Darling Basin Commission State Contribution
- Environmental Flows and Wetland Management
- Modelling Assessment
- Prescription of Easter Mount Lofty Ranges
- Investing in River Murray Ecology
- Upgrade of Riverland Drainage Disposal System
- Upgrade of Riverland Drainage Waste System
- River Murray Select Committee – Drought Management and recommendations
- Improved Information Management
- Water Acquisition for Environmental Flows
- Irrigation Research, Technology Diffusion and Education
- Water Quality Improvement.

Conclusion 7

The South Australian Government is progressing its NWI obligation with respect to water planning and resource management costs in accordance with the accredited South Australian NWI Implementation Plan, and taking into account general principles for nationally consistent approaches to pricing, to the extent possible, pending finalisation of national principles.

It is noted that SA Water customers already meet a range of water planning and management charges through the separately charged Save the River Murray Levy.

3.8 Tax equivalent regime

The Competition Policy Agreement (Clause 3) of 11 April 1995 requires that:

Parties will impose on the Government business enterprises...full Commonwealth, State and Territory taxes or tax equivalent systems.

SA Water is liable for the full range of rates and taxes or their equivalents as if it were not a State owned business. This includes corporate tax and a range of land tax and council rates.

It is unnecessary to include a separate taxation amount in the URB, as the return on assets, discussed above, is estimated using a pre-tax WACC.

Conclusion 8

The South Australian Government's 2009-10 pricing decision is consistent with COAG pricing principles by using a pre-tax real rate of return on assets.

3.8.1 *Regional areas*

The regional business segment, through the government's statewide uniform charging policy and the application of its Community Service Obligation policy, will achieve the URB for the regional water and wastewater business segments.

4 Efficient resource pricing

COAG pricing principles require:

the adoption of pricing regimes based on the principles of consumption-based pricing, full cost recovery and desirably the removal of cross-subsidies which are not consistent with efficient and effective service, use and provision. Where cross-subsidies continue to exist, they be made transparent (NCC, 1998, p 103).

4.1 Water charges

COAG pricing principles require the adoption of two part tariffs, including:

- a water usage charge; and
- a service availability charge based on the difference between the revenue requirement and the revenue recovered through water usage charges.

The usage charge should send an efficient resource pricing signal to consumers, while the access charge should recover remaining costs and ensure the ongoing viability of the business (Expert Group, 1995, p 45).

4.1.1 *Usage Charge: Consumption Based Pricing*

The water usage charge should have regard to the LRMC of the supply of additional water. Governments may decide to have more than one tier for the water usage charge for policy reasons, or in consideration of equity objectives.

LRMC is the cost of providing an extra unit of service when all production costs (including capital) are allowed to vary. It is equivalent to the cost that would be saved in the long term from additional water not being consumed.

In its 2008-09 Final Report, ESCOSA stated that:

The Commission supports the greater use of consumption based pricing and the move towards pricing at LRMC. However, the Commission considers that more information should be provided in relation to consumption forecasting and the calculation of LRMC.

In its 2009-10 pricing decision, the South Australian Government focuses on increasing water usage charges consistent with the estimate of LRMC. Details of 2009-10 water usage charges are provided in Chapter 5. Further information on the calculation of LRMC is discussed below.

LRMC is a forward looking concept incorporating:

- long run marginal operating costs; and
- long run marginal capital costs.

LRMC is estimated, rather than being observed in the market place. It is difficult to determine and sensitive to the range and quality of projections and assumptions underlying the estimate. The current estimate of LRMC is based on a potential future expansion of the planned Adelaide Desalination Plant from 50 GL to 100 GL.

SA Water has estimated LRMC based on Average Incremental Cost, i.e.

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

$$LRMC(\text{Average Incremental Cost}) = \frac{\text{Net Present Value Investment Program}}{\text{NPV Output from Capacity Expansion}}$$

The estimate of LRMC is based on the following assumptions:

- capital costs of \$640 million (in 2007-08 dollars) (numerator);
- operating costs of \$60 million (numerator);
- a plant life of 25 years (numerator);
- residual plant value of 25% of the initial capital cost (\$160 million) (numerator);
- WACC of 6% pre-tax real (both numerator and denominator);
- plant operating capacity of 100% for the first two years (denominator and numerator through variable portion of operating costs); and
- plant operating capacity of about 75% thereafter (denominator and numerator through variable portion of operating costs).

Based on these assumptions LRMC is estimated to be about \$2.30 per kL in 2008-09 dollars, or \$2.35 per kL in 2009-10 dollars.

4.1.2 Demand forecasts

SA Water's revenue is set based on the following consumption forecasts. While these figures take account of anticipated customer growth, the forecasts recognise the likely impact of demand management initiatives and, for the first time, the likely further demand impact associated with ongoing substantial increases in water usage prices. They do not, however, take account of the reduction in consumption due to temporary water restrictions which are not considered a long term impact. These have been disregarded for price setting purposes.

	2008-09	2009-10	2010-11	2011-12	2012-13
Consumption GL	222.9	217.4	211.7	206.4	201.7

4.1.3 Service Availability Charge

COAG pricing principles require that water charges include a service availability charge that is calculated as the difference between the revenue requirement and the revenue recovered through water usage charges.

The service availability charge could also vary between customer or customer classes, depending on service demands and equity considerations according to COAG pricing principles. Unattributable joint costs should be allocated such that total customer charges must not exceed stand-alone cost or be less than avoidable costs where it is practical to do so.

In its 2009-10 decision, the South Australian Government reduced the statewide uniform residential water service availability charge. For other non-commercial customers the water service availability charge is unchanged. The service availability

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

charge for commercial customers continues to be based on property value with the same minimum charge. Any potential cross-subsidy of property based charges is discussed below.

In its 2009-10 pricing decision, the South Australian Government continues to adopt COAG pricing principles when setting service availability charges.

4.2 Wastewater charges

Although COAG pricing principles indicate a preference for wastewater charges to be based on consumption, the National Competition Council (NCC) has noted that:

Charging on a consumption basis for wastewater services provided to households and small commercial consumers is generally not efficient. (NCC, 2003, p 14)

Where usage charges are not practical, the COAG pricing principles do not stipulate how wastewater charges should be apportioned. This was confirmed by ESCOSA in its 2006-07 Final Report, where it stated:

The COAG principles do not specify the approach to be used where direct consumption charges are not cost effective; hence the tariff structure adopted is not inconsistent with the COAG principles. (ESCOSA, 2005, p 42)

SA Water does not apply consumption based pricing, other than to the largest dischargers. The Commission acknowledges that this recognises the impracticality of metering direct usage for small customers and the minor benefit that price signals of this type would generate. (ESCOSA, 2005, p 42)

Large trade waste customers are charged based on consumption (see below). Otherwise, wastewater charging is based on property value, subject to a minimum charge.

The rating scales used to calculate wastewater charges are updated every June (on the basis of the latest Valuer-General property values) to ensure that the increase in total revenue from wastewater charges does not exceed the government's pricing decision (i.e. no windfall gain passes to SA Water as a result of significant property value increases).

For regional customers, higher rating scales are applied than Adelaide metropolitan customers, to counterbalance generally lower property values in regional areas. Regional customers still pay lower average charges than metropolitan customers do.

Any potential cross-subsidies of property based charges are discussed below.

4.3 Trade waste

The largest trade waste dischargers (currently around 40) face volumetric trade waste charges, reflecting the significant avoidable costs they impose on the wastewater system.

Revenues from this source are very minor in the context of total sewerage revenues. Revision of the charges to apply for 2009-10 will be the subject of a separate review process.

4.4 Community service obligations

4.4.1 COAG obligations

COAG pricing principles require that where services are provided to customers at less than full cost, community service obligations (CSOs) should be paid to the service provider and reported transparently.

In its report *NWI First Biennial Assessment of Progress in Implementation*, the NWC acknowledged that all states have completed their commitments under the 1994 COAG framework (NWC, 2007a, p 51 and 95).

In late 2004, the government introduced a new Public Non-Financial Corporations (PNFC) ownership framework that included a new CSO policy. The new PNFC framework, as applied to SA Water, requires that CSOs resulting from new major capital projects are clearly identified and tracked.

CSO payments are reported transparently in SA Water's Charter and disclosed in SA Water's Annual Report, which is tabled in Parliament.

CSO payments are funded directly from the South Australian Government budget and are included in the revenue estimate for the 2009-10 water and wastewater pricing decisions.

Details of all CSO payments are reported at 4.4 below.

4.4.2 NWI obligations and statewide uniform pricing

The NWI recognises that the provision of water services to some small rural and regional communities 'will never be economically viable' but water services need to be maintained to meet social and public health obligations. The NWI states:

Rural and Regional...

where full cost recovery is unlikely to be achieved in the long term and a Community Service Obligation (CSO) is deemed necessary, the size of the subsidy is to be reported publicly and, where practicable, jurisdictions consider alternative management arrangements aimed at removing the need for an ongoing CSO. (clause 66(v)(c))

The government's 2009-10 pricing decision confirmed continuation of its statewide uniform pricing policy for reticulated water and wastewater. This is consistent with its view that any benefit that might accrue from locational pricing would be outweighed by the detriments of that approach.

Consistent with this policy, SA Water provides reticulated water and wastewater services to its customers in South Australian regional areas at prices similar to the metropolitan area. Given higher costs in many regional areas, water and wastewater services are provided to many regional customers at less than total economic cost, including return on assets.

The government therefore provides SA Water with a CSO payment to ensure full cost recovery. Since 2004, the CSO amount has been calculated as the shortfall between the revenue from regional customers and the URB cost of providing regional services. The URB cost consists of operating costs, depreciation and return on assets (ROA). The ROA is calculated using a pre-tax real WACC of 6%. The CSO

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

payment ensures SA Water earns a 6% rate of return on its regulated assets and, thus, the URB is achieved for its regional business.

For significant new regional investments (i.e. investments requiring approval by Cabinet under the relevant Treasurer's Instructions), the CSO amount is identified for each asset.

The government funds CSO payments from general revenue and makes CSO payments direct to SA Water.

Full cost recovery for water and wastewater services in regional areas, and therefore compliance with the NWI, has been achieved via transparently reported CSO payments.

4.4.3 Alternatives to CSOs

In its 2007-08 Final Report, ESCOSA found that:

no evidence is provided to suggest that alternative management arrangements for CSOs have been examined. (ESCOSA, 2007, p 54)

With regard to examining alternative management arrangements for statewide uniform pricing CSOs, one approach might be to write down the value of the regional RAB, similar to the 'line in the sand' approach. The regulatory asset value could, thus, be reset such that existing revenues from regional customers are equivalent to a 6% return on assets. In this way, CSO payments could be eliminated. Even though the regulatory asset value would be reset at the level of each water network that supplies an individual regional community, water charges would remain consistent across the State.

However, substantially lower asset values mean substantially lower depreciation expense. This raises fundamental concerns about identifying the true costs of supplying regional communities and the consistency of revenues with the replacement of capital assets in future.

The government reviewed its CSO policy as part of a review of its PNFC ownership framework in late 2004. Subsequently, the government introduced a new PNFC ownership framework and a new CSO policy that included a change in the methodology used to calculate the statewide uniform pricing CSO, as discussed above.

The government considers that, as a review of CSO payments to SA Water was undertaken in 2004, another review (including alternative management arrangements for CSOs) is not required at this stage.

4.5 Cross-subsidies

COAG pricing principles require that cross-subsidies should be removed in order to promote efficient pricing. Where cross-subsidies are retained they should be made transparent. (NCC, 1998, p 103)

The NWC in its 2005 NCP Assessment stated:

With regard to cross-subsidies, the Commission considers that South Australia has met its COAG commitments. South Australia has identified areas where cross-subsidies are likely to exist, and has reported that there are unlikely to be

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

significant cross-subsidies in water and wastewater pricing. (NWC, 2006, p 6.30)

In its report *First Biennial Assessment of Progress in Implementation*, the NWC acknowledged that all states have completed their commitments under the 1994 COAG framework. (NWC, 2007a, p 51 and 95)

In its 2008-09 Final Report, ESCOSA found that:

insufficient information has been provided to demonstrate that no cross-subsidies are in place. (ESCOSA, 2008, p 61)

The NCC identifies the Baumol Band as the accepted definition of cross-subsidies (NCC, 2001, p127). The Baumol test for cross-subsidies is where:

- some users are paying less than the avoidable costs (or LRM) of service provision while others are paying more; and/or
- some users are paying more than the full cost of service provision on a stand alone basis – stand alone cost (i.e. with a dedicated system).

The NCC has expressed concern in the past about the implications of property based charges for commercial water customers and residential and non-residential wastewater customers. However, it is unlikely that those customers paying significant property based charges would be paying more than the stand alone cost.

SA Water's LRM has been significantly revised upwards over the past two years in the context of the rapid deterioration of the security of the supply from the River Murray and the planned ADP. No SA Water customer currently pays less than \$1.38 per kL on average after access charges are factored into the calculation. This would be less than the revised estimate of LRM of \$2.30 per kL. Although this could imply some potential cross subsidy, it is really a transitional issue as water usage prices increase to meet the revised LRM and the ADP is being constructed.

Given the Baumol Band definition identified by the NCC, the NWC's assessment of this issue above and information detailed in earlier Transparency Statements, the government considers that it has met its obligations in respect of cross-subsidies to the extent possible.

Conclusion 9

The South Australian Government's 2009-10 pricing decision is consistent with COAG pricing principles for urban water tariffs.

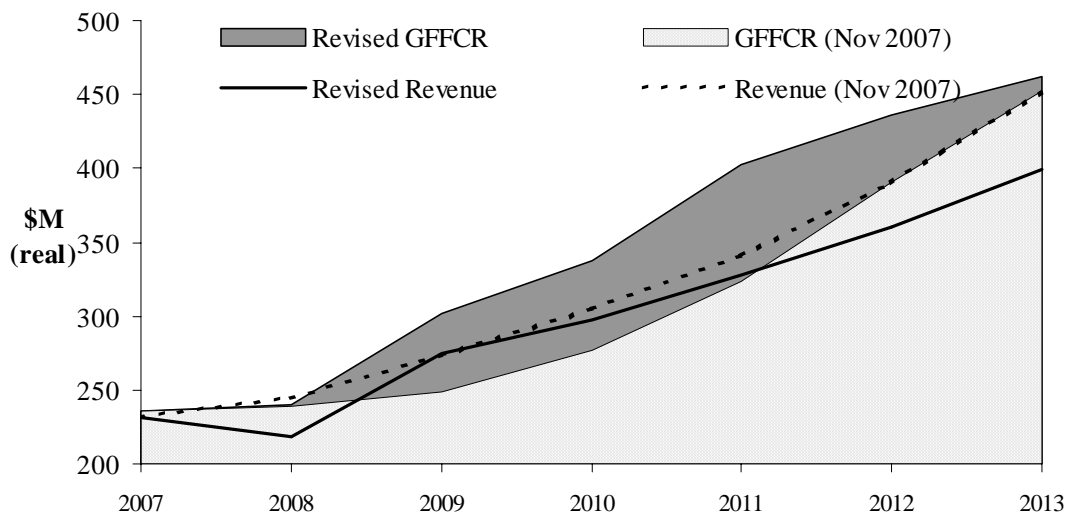
5 Water and wastewater pricing decisions 2009-10

This chapter outlines the issues considered by the government in reaching its 2009-10 water and wastewater pricing decisions, and the balance achieved between regulatory pricing principles and customer impacts. The CSO outcomes arising from the government's pricing decision are also identified.

5.1 Issues considered

The 2008-09 revenue direction reflected the estimated cost of the government's water security measures as they were planned at the time it was made. Since then, though, further water security decisions have been taken, such as the decisions to accelerate the Adelaide desalination plant and the purchase of additional water allocations⁶. These decisions have caused the cost of water security to rise above what was expected when the 2008-09 decision was made. Simultaneously, SA Water's revenue estimates have been revised down due to the decision to apply water prices to water consumed after 1 July each year and to estimates of the effect that rising prices may have on demand levels (i.e. elasticity of demand effects). The combined effect of these changes is shown in Figure 1 below where GFFCR and revenue as it was estimated in November 2007 are shown by the lightly shaded area and the dashed line respectively. The increased estimate of GFFCR is shown by the darker shaded area, while the reduced estimate of revenue is shown by the solid line.

Figure 1 - Cost and revenue changes since 2008-09 pricing decision



As Figure 1 shows, the changes in cost and revenue forecasts are such that, if the revenue direction determined last year was followed, revenue would not cover costs. Given this, the principle of full cost recovery requires that revenue, and therefore water charges, is increased by more than the 12.7% (real) anticipated in late 2007.

⁶ Note that the purchase of additional temporary water allocations is actually an operating expense unless the water is carried over to a future year.

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

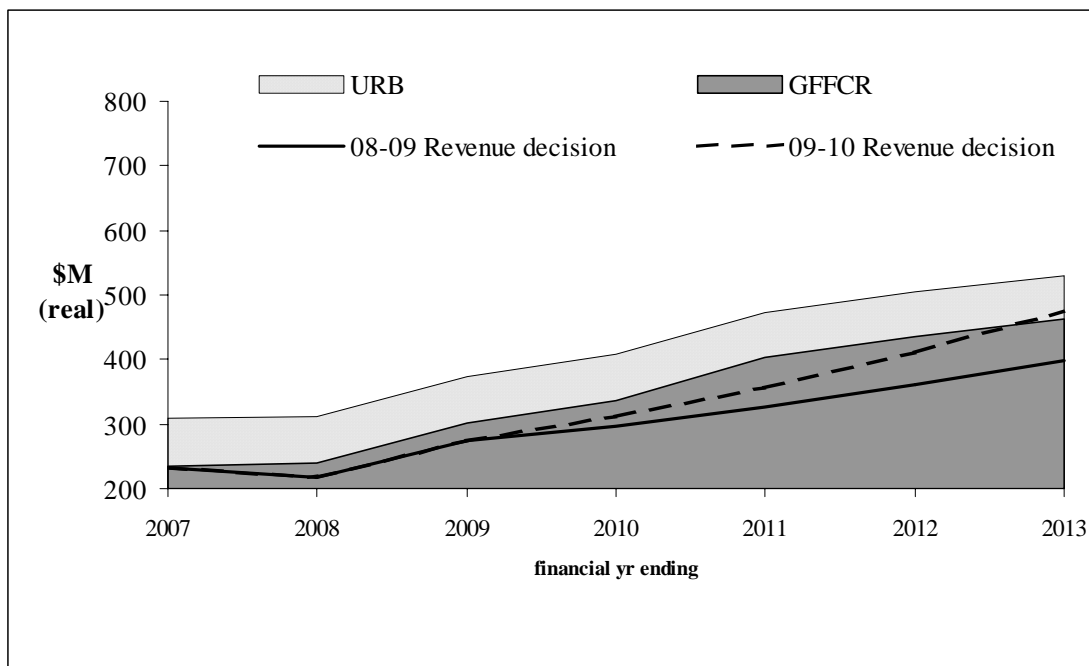
The government's pricing decisions for 2009-10 involved consideration of many inter-related and complex economic, equity, social and environmental variables in the context of a comprehensive, multi-faceted strategy to address urban water security challenges, including:

- regulatory pricing obligations;
- the need to make new capital investments to improve water security; and
- customer impacts such as:
 - affordability (ability to pay), equity and social justice issues;
 - concessions for vulnerable groups; and
 - regional (statewide uniform pricing) policy.

5.2 SA Water's revenue - water

Balancing the above issues, the government decided to increase SA Water's average water charges by 17.9% (real) in 2009-10. Given current costs, annual increases of this amount will see revenue rise towards the URB each year. At that rate of increase, it will be approaching GFFCR in 2011-12 and is estimated to be marginally above that level in 2012-13. This is demonstrated in Figure 2 below.

Figure 2 - Water segment in principle revenue direction to 2012-13



5.2.1 Usage charges

Given its decision that water rates and charges should increase by 17.9% (real) in 2009-10, the government determined the following specific water usage charges, which were gazetted on 5 December 2008:

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

- a first tier charge of \$0.97 per kL for water usage up to 120kL;
- a second tier charge of \$1.88 per kL for water usage above 120kL; and
- a third tier charge of \$2.26 per kL for usage above 520kL (applicable only to single dwelling residential properties).

5.2.2 *Service availability (supply) charge*

The increase in usage charges was taken into consideration when setting the service availability (supply) charge.

For residential customers the service availability (supply) charge will decrease to \$137.60. This balances the economic efficiency of cost reflective pricing with the equity implications of rising water bills. Increasing the weighting on usage charges sends a strong price signal to avoid unnecessary water use and enables consumers to reduce their water bills by being more water wise.

For commercial customers, the service availability (supply) charge is based on property value, subject to a minimum charge. This minimum charge will also have a real decrease in value, but remain constant in nominal dollars at \$174.60. The average increase in property based service availability charges for commercial customers will be around 1.9% in nominal terms (i.e. less than inflation).

5.2.3 *Comparison of water charges*

Table 6 compares the government's 2009-10 water charges with charges applicable in 2008-09. By virtue of the government's statewide uniform pricing policy, these charging arrangements apply to both metropolitan and regional customers.

Table 6: Comparison of water charges

Description	2008-09	2009-10
Non-Commercial		
Service Availability (supply) charge		
Residential	\$157.40	\$137.60
Other non-residential (industry)	\$174.60	\$174.60
Water usage charge		
First tier (<120 kL)	\$0.71	\$0.97
Second tier (>120kL)	\$1.38	\$1.88
For single residential dwellings only		
Third tier (>520kL)	\$1.65	\$2.26
Commercial		
Service Availability (supply) charge		
Property rating scale	0.079%	TBD*
Commercial Minimum	\$174.60	\$174.60
Water usage charge		
First tier (<120 kL)	\$0.71	\$0.97
Second tier (>120kL)	\$1.38	\$1.88

* Rating scales for 2009-10 are to be determined and will be gazetted in June 2009, when the latest information on property values is available from the Valuer General

5.3 Wastewater charges 2009-10

Wastewater charging is based on property value, subject to a minimum charge.

The government approved the metropolitan wastewater charge to remain constant in 2009-10 in real terms (i.e. a 2.5% increase in nominal terms) and a 0.5% real increase in the regional wastewater charge (i.e. a 3.0% increase in nominal terms).

The minimum charge for all customers has remained constant in real terms, resulting in an increase of 2.4%⁷ in nominal terms to \$298 (increased from \$291 in 2008-09).

5.3.1 Comparison of wastewater charges

Table 7 compares wastewater charges applicable in 2008-09 with the government's 2009-10 decision.

⁷ Difference to assumed 2.5% due to rounding.

Table 7: Comparison of wastewater charges

Description	2008-09		2009-10	
	Property rating scale (%)	Min (\$)	Property rating scale (%)	Min (\$)
Metropolitan				
Residential	0.1242%	\$291	TBD*	\$298
Non-residential	0.1389%	\$291	TBD*	\$298
Regional				
Residential	0.1537%	\$291	TBD*	\$298
Non-residential	0.1894%	\$291	TBD*	\$298

* Rating scales for 2009-10 are to be determined and will be gazetted in June 2009, when the latest information on property values is available from the Valuer General.

The rating scales used to calculate wastewater charges are updated every June (on the basis of the latest Valuer-General property values) to ensure that the increase in total revenue from wastewater charges does not exceed the government's pricing decision (i.e. no windfall gain passes to SA Water as a result of significant property value increases).

Higher rating scales are applied to regional customers than Adelaide metropolitan customers counterbalancing generally lower property values in regional areas. Regional customers still pay lower average charges than metropolitan customers do, even after the marginally higher increase in wastewater charges.

5.4 Customer impacts: water

5.4.1 *Affordability and equity*

The average real increase in water charges of 17.9% (real) in 2009-10 is consistent with South Australia's obligation to ensure that water charges provide for full cost recovery for new investments, as represented by the GFFCR principle. The proposed Adelaide desalination plant will be the most significant capital investment over the coming five years and, for planning purposes, it was assumed that the desalination plant would deliver its first water in December 2010.

The immediate nature of some of the government's water security decisions, in particular the decision to purchase temporary water licences, means that GFFCR will increase sharply in the years before 2011-12. It could be argued that revenue should follow GFFCR and increase sharply as well. Although prices have not been set beyond 2009-10, the government has planned to smooth the increases in the target revenue over the next four years through an in-principle revenue direction. If average charges continue to increase at 17.9% p.a. (real), revenue will be below annual cost levels until 2011-12, rising marginally above it in 2012-13. This will provide increased certainty and predictability for customers, and GFFCR would be met in approximately 2011-12.

Each tier of the usage charge will move significantly closer to LRM in 2009-10. Increases in the estimated LRM reinforced the need for an increase in water usage

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

charges. This decision builds upon the 2008-09 water charges decision by continuing to move towards meeting the new LRMC estimates in the water usage charge. Further examination will be undertaken in subsequent annual price setting process.

To manage the transitional impacts to higher usage charges which are moving towards LRMC, the first tier usage charge was retained at a level below LRMC, although it was increased significantly.

To improve the price signal to customers further, the government is intending to introduce quarterly, rather than semi-annual meter reading, and further improvements to billing information.

The increased charge for the average residential customer consuming 191 kL pa will be approximately \$46.90 in 2009-10.

5.5 Customer impacts: wastewater

5.5.1 *Affordability and equity*

The increase in the minimum wastewater charge from \$291 to \$298 in 2009-10 (2.4% increase) will affect approximately 25% of metropolitan residential customers and 46% of regional residential customers, being those who pay the minimum rate.

Table 8 illustrates the indicative wastewater charges for the average residential property in the metropolitan and regional areas.

Table 8: Indicative residential wastewater charge for the average residential property

	Average property value (June 2008)	Indicative charge (2008-09)	Indicative charge (2009-10)	Change	Change
	\$	\$	\$	\$	%
Metropolitan	\$349,600	\$434	\$445	\$11	2.7%
Regional	\$224,000	\$352	\$364	\$12	3.4%*

* The increase in the wastewater charge for the average regional residential customer will be above 3.0%, indicatively 3.4%.

Source: SA Water.

Based on June 2008 average property values, the wastewater charge will increase by approximately \$11 and \$12 in 2009-10 for metropolitan and regional households respectively.

5.5.2 *Further increase to concessions*

In setting water charges in 2008-09, the government established new, enhanced concessions targeted at specific vulnerable customers. These concessions will continue to be available to assist pensioners and Commonwealth low income health care card holders with the transition to fully cost reflective water pricing. In 2009-10, the government will extend the eligibility criteria for the \$95 sewerage concession to match that for the water concession.

5.6 Regional policies

The NWI (clause 66(v)) acknowledges that some small regional community water services will not achieve full cost recovery and ‘will never be economically viable’. Nevertheless, water services to small regional communities need to be maintained to meet social and public health obligations.

Statewide uniform pricing remains a key element of the government’s social policies. This aims to ensure that non-metropolitan customers do not face unreasonable charges by virtue of their location within the State. Accordingly, metropolitan water charging arrangements apply to regional water customers.

There is also a significant disparity between average residential wastewater revenue per customer in the metropolitan and regional areas of around 12% (\$391 in regional areas compared to \$447 in the city in 2007-08) despite higher costs per customer in regional areas. The higher increase in regional wastewater rates, compared to the metropolitan area, is consistent with a very gradual move in regional wastewater charges towards charges applicable in the metropolitan area.

The higher increase in regional wastewater rates is also consistent with the intention that regional wastewater charges be adjusted annually by 0.5% more than for metropolitan customers to very gradually move toward charges equivalent to those that apply in the metropolitan area.

5.7 Community service obligations

Table 9 provides estimates of CSO payments to SA Water, taking into account the 2009-10 pricing decision. The statewide uniform pricing CSO is discussed above. A brief discussion of each of the other CSOs follows.

Table 9: Estimated CSO payments to SA Water (nominal)

CSO payments (in nominal terms)	2008-09	2009-10
	Budget (\$M)	Budget (\$M)
Statewide Uniform Pricing		
- Water Business	141.83	116.52
- Wastewater Business	24.63	25.43
Exemptions and Concessions	11.45	11.87
Water Proofing Adelaide	3.44	5.79
Emergency Functional Services	0.58	0.60
Rain Water Tank Rebate	0.04	0.04
River Murray Levy Administration	0.06	0.06
Government Radio Network	0.42	0.43
Administration of Pensioner Concessions	0.52	0.52
Total CSO payments	182.97	161.26

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

5.7.1 Exemptions and concessions

SA Water receives a CSO payment, calculated as an estimate of payments forgone, for providing service charge exemptions to certain customers, such as places of worship, charitable organisations and sporting clubs.

5.7.2 Water Proofing Adelaide

In 2007-08 the government introduced a small CSO to SA Water to compensate for the non-commercial activities in the metropolitan area that SA Water is likely to be required to undertake. The increased CSO for 2009-10 has been determined on the same *Water Proofing Adelaide* budget profile as used in the 2007-08 South Australian Budget.

5.7.3 Emergency Functional Services

SA Water is a sponsor for the EFS and is required to coordinate the response and recovery of infrastructure following a major incident, emergency or disaster.

5.7.4 Administration of the pensioner concession scheme

SA Water administers pensioner entitlement applications and the distribution of concessions to local government for pensioners who are SA Water customers. SA Water receives a CSO payment only for the costs of administration of the pensioner concession scheme.

The actual pensioner concession payments will continue to be funded through a subsidy from the Department for Families and Communities calculated as the amount of the concessions paid.

5.7.5 Government Radio Network

SA Water receives a CSO for the Government Radio Network. SA Water was required to enter into a non-commercial agreement for use of the Government Radio Network for both operational and emergency communications within SA Water, as well as for use of Government Radio Network pagers.

5.7.6 Administration of the Save the River Murray Levy

SA Water will continue to administer the Save the River Murray Levy in 2009-10. The estimated cost is based on actual administration costs incurred by SA Water.

It should be noted that SA Water does not retain funds raised by the Levy.

5.7.7 Rain Water Tank Rebate

As part of the *Water Proofing Adelaide* strategy, the South Australian Government introduced, from July 2006, a rainwater tank plumbing rebate scheme. The CSO payment would be \$0.5m per annum for four years. Rebates of up to \$600 will be offered to plumb existing rainwater tanks into existing homes and up to \$800 to plumb new rainwater tanks into existing homes. It is expected that plumbed rainwater tanks to new homes will save 4 GL per annum by 2025 and that savings of up to 18 GL per annum could be achieved by 2025 if rainwater tanks were plumbed into all existing homes

SA Water costs incurred to administer the scheme (approximately \$40,000-\$50,000 per annum) are also to be funded from the CSO amount.

Conclusion 10

The government's 2009-10 pricing decision involved consideration of, and a balance between, COAG pricing principles, NWI obligations (clauses 65, 66(i) and 66(v)) general principles for nationally consistent approaches to pricing and broader policy matters, viz, equity, social justice and regional policies and sustainable water management initiatives, in the context of a multi-faceted strategy to guarantee urban water security for the long term.

The government's 2009-10 pricing decision is consistent with NWI obligations and with general principles for nationally consistent approaches to pricing, to the extent possible, particularly with respect to the principle of go-forward full cost recovery.

6 Financial details relevant to the 2009-10 pricing decisions

This chapter tables the regulatory model estimates that the government reviewed in making its 2009-10 pricing decision. Details of SA Water's capital program and a discussion of the financial viability of SA Water are also provided.

6.1 Regulatory model estimates

6.1.1 Regulatory Asset base

An important step in the regulatory model process is determining the regulatory asset base. The URB and the GFFCR both include asset depreciation derived from the RAB as a component in their estimates. Table 10 below shows the depreciation of assets and illustrates the annual increases and decreases in the capital base. The table includes total figures for SA Water and figures for water and wastewater separately.

Table 10: Adjusted infrastructure asset base (nominal)*

	SA WATER ASSETS (nominal \$M)						
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Opening balance	6,754	7,000	7,325	8,051	9,054	9,790	10,231
Capital Expenditure	149	227	629	892	636	328	534
Inflation adjustment	232	240	251	276	310	335	350
Depreciation	(135)	(142)	(154)	(165)	(209)	(222)	(234)
Closing balance	7,000	7,325	8,051	9,054	9,790	10,231	10,882
	WATER ASSETS (nominal \$M)						
Opening balance	4,411	4,596	4,848	5,429	6,215	6,743	7,025
Capital Expenditure	122	188	517	710	464	207	479
Inflation adjustment	151	158	166	186	212	231	240
Depreciation	(88)	(93)	(103)	(110)	(148)	(156)	(163)
Closing balance	4,596	4,848	5,429	6,215	6,743	7,025	7,581
	WASTEWATER ASSETS (nominal \$M)						
Opening balance	2,343	2,404	2,476	2,622	2,839	3,047	3,206
Capital Expenditure	27	39	112	182	172	121	56
Inflation adjustment	80	82	85	90	97	104	110
Depreciation	(47)	(49)	(51)	(55)	(61)	(66)	(71)
Closing balance	2,404	2,476	2,622	2,839	3,047	3,206	3,301

* excludes post-corporatisation contributed assets

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

6.1.2 Estimates of URB, GFFCR, and revenue

The following tables show the regulatory models estimates for regulated asset values, URB, GFFCR and revenue for each of SA Water's four segments (metropolitan water, country water, metropolitan wastewater and country wastewater) as well as total for SA Water.

SA Water's OUTCOMES – Asset Values, URB, GFFCR and Target Revenue

Table 11: Regulatory model estimates for SA Water

	SA WATER (real \$M)						
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Regulated Asset Values							
Legacy Assets	7,022	6,946	6,868	6,787	6,704	6,619	6,532
New Assets	153	379	987	1,831	2,387	2,650	3,086
Asset Values	7,175	7,325	7,854	8,618	9,091	9,269	9,618
URB							
Operating Expenditure	277	287	344	334	346	368	377
Depreciation	138	142	150	157	194	201	207
Return On Assets (All 6%)	431	439	471	517	545	556	577
Total URB	846	869	966	1,008	1,086	1,125	1,161
GFFCR							
Operating Expenditure	277	287	344	334	346	368	377
Depreciation	138	142	150	157	194	201	207
Return on Assets (3.1%/6%)	357	367	399	446	475	487	509
GFFCR	773	796	894	937	1,016	1,056	1,093
Revenue							
Water Rates	119	125	142	169	200	238	284
Water Sales	203	185	236	262	299	342	392
Wastewater Rates	270	273	277	280	284	287	291
CSOs	159	164	179	172	151	128	104
Other	31	29	40	38	37	33	34
Total Revenue	782	775	874	921	971	1,028	1,104

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

Table 12: Regulatory model estimates for metropolitan water

	Metropolitan Water (real \$M)						
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Regulated Asset Values							
Legacy Assets	2,537	2,509	2,481	2,452	2,422	2,391	2,360
New Assets	35	102	512	1,156	1,520	1,660	1,982
Asset Values	2,571	2,612	2,993	3,608	3,942	4,051	4,342
URB							
Operating Expenditure	105	105	138	134	147	171	177
Depreciation	50	51	55	58	90	92	94
Return On Assets (All 6%)	154	157	180	216	237	243	260
Total URB	309	312	373	408	473	505	531
GFFCR							
Operating Expenditure	105	105	138	134	147	171	177
Depreciation	50	51	55	58	90	92	94
Return on Assets (3.1% / 6%)	81	84	108	145	166	174	192
GFFCR	235	240	301	337	403	436	462
Revenue							
Water Rates	88	93	106	125	149	177	211
Water Sales	130	114	148	163	186	213	244
Wastewater Rates	0	0	0	0	0	0	0
CSOs	1	3	7	8	8	8	9
Other	12	9	14	14	13	12	12
Total Revenue	232	218	274	311	357	410	475

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

Table 13: Regulatory model estimates for country water

	Country Water (real \$M)						
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Regulated Asset Values							
Asset Values	2,140	2,237	2,303	2,308	2,319	2,314	2,359
URB							
Operating Expenditure	82	88	99	96	94	93	94
Depreciation	40	42	45	47	48	49	50
Return On Assets (All 6%)	128	134	138	138	139	139	142
Total URB	251	264	282	281	281	281	286
Revenue							
Water Rates	31	32	36	43	51	61	72
Water Sales	73	71	89	98	113	129	148
Wastewater Rates	0	0	0	0	0	0	0
CSOs	128	131	142	132	110	84	58
Other	8	5	8	8	8	7	7
Total Revenue	240	239	275	281	281	281	286

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

Table 14: Regulatory model estimates for metropolitan wastewater

Metropolitan Wastewater (real \$M)							
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Regulated Asset Values							
Asset Values	2,051	2,060	2,125	2,258	2,366	2,410	2,400
URB							
Operating Expenditure	73	75	86	83	84	83	86
Depreciation	40	41	42	43	47	50	52
Return On Assets (All 6%)	123	124	128	136	142	145	144
Total URB	236	239	255	262	274	278	282
Revenue							
Water Rates	0	0	0	0	0	0	0
Water Sales	0	0	0	0	0	0	0
Wastewater Rates	242	244	248	251	254	258	261
CSOs	8	7	6	7	7	7	6
Other	9	12	14	14	14	13	14
Total Revenue	260	263	269	272	275	277	281

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

Table 15: Regulatory model estimates for country wastewater

Country Wastewater (real \$M)							
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Regulated Asset Values							
Asset Values	413	417	433	444	463	495	518
URB							
Operating Expenditure	18	20	21	21	21	21	21
Depreciation	8	8	8	9	9	10	11
Return On Assets (All 6%)	25	25	26	27	28	30	31
Total URB	51	53	56	56	58	60	63
Revenue							
Water Rates	0	0	0	0	0	0	0
Water Sales	0	0	0	0	0	0	0
Wastewater Rates	28	29	29	29	29	30	30
CSOs	21	23	25	25	26	28	30
Other	1	3	3	3	2	2	2
Total Revenue	50	55	56	56	58	60	63

6.2 Capital expenditure

SA Water's estimated capital expenditure for 2008-09, as per the government budget, is presented in Table 16. The values in are in nominal terms.

Table 16: SA Water estimated capital expenditure (nominal)

SA Water	Proposed expenditure 2008-09 (\$'000)	Total (\$'000)
New Works		
Aldinga Wastewater Treatment Plant Capacity Upgrade Project to increase capacity to meet demands of population growth and to improve environmental outcomes.	5 200	22 800
Desalination Plant Project to diversify and secure metropolitan Adelaide's water supply and to offset reduced inflows from the Mt Lofty Ranges and Murray Darling Basin.	96 500	n.a.
Greenacres – Muellers Road Water Trunk Main Relay Project to renew water trunk to prevent water main leak/burst and water interruptions.	8 000	8 700
Morgan to Whyalla Pipeline Project to replace Port Augusta underground pipe sections due to major bursts.	1 000	4 000
Mount Pleasant Water Treatment Plant Increase Capacity Project to increase capacity to meet increasing demand in the area.	1 100	6 200
South Para Reservoir Dam Safety Project to comply with the Australian National Committee on Large Dams (ANCOLD) dam safety guidelines, by building flood control, increasing flood capacity and increasing resistance to a major leak forming the embankment.	3 500	5 300
Southern Urban – Reuse Project Project to increase our capability to supply re-use water to southern suburbs.	23 000	n.a.
Woolpunda Filtered Water Project (Water Treatment Plant) Project to supply the Moorook country lands with filtered River Murray water.	6 500	7 300

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

SA Water	Proposed expenditure 2008-09 (\$'000)	Total (\$'000)
Works in Progress		
Bolivar Waste Water Treatment Plant — Energy Use Optimisation	1 000	17 300
Project to optimise the use of digester gas produced at Bolivar to generate electricity and to meet renewable energy and greenhouse emission targets.		
Christies Beach Waste Water Treatment Plant — Capacity Upgrade	26 300	270 000
Project to upgrade the plant's capacity to meet demands of population growth and to improve environmental outcomes.		
Environment Program	21 000	n.a.
Projects aimed at meeting changes in external environmental regulations, standards or internal targets.		
Glenelg to Adelaide Parklands Project	21 000	74 900
Project to improve the sustainability of water resources in the state, and prevent the discharge of effluent into the Gulf. The provisional project estimate is based on a pre-concept design with full financial approval expected in mid-June 2008.		
Improve Business Program	6 800	n.a.
Projects aimed at improving the management and coordination of existing infrastructure and business services within current service standards.		
Information Technology Program	25 600	n.a.
Projects aimed at improving information technology based customer and business systems.		
Little Para Reservoir Dam Safety	7 400	15 000
Project to comply with the ANCOLD dam safety guidelines by increasing flood capacity and strengthening the outlet tower anchor to improve its stability in the event of an earthquake.		
Maintain Business Program	84 362	n.a.
Replacement or rehabilitation of existing SA Water infrastructure components in order to maintain current service levels and capacity.		
Morgan to Whyalla Pipeline — Replace High Voltage Switchboards	6 500	10 550
Replacement of high voltage switchboards at the eight pumping stations on the Morgan to Whyalla Pipeline.		
Myponga Water Treatment Plant — Improve Water Quality	13 300	20 000
Project to improve the water quality at the Myponga Water		

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

SA Water	Proposed expenditure 2008-09 (\$'000)	Total (\$'000)
Treatment Plant.		
Records Management Program	3 600	7 600
To improve SA Water's business records management and comply with the <i>State Records Act 1997</i> .		
Safety Program	13 100	n.a.
Projects relating to managing safety issues of the business, employees or the community.		
Strategic Accommodation	13 000	46 080
Project to provide fixtures and fittings for SA Water's new head office and laboratory accommodation.		
System Growth Program	29 800	n.a.
Projects relating to the expansion (extension and/or capacity increase) of water and wastewater systems.		
Tod River Reservoir Dam Safety	1 000	10 500
Project to comply with ANCOLD Guidelines with respect to flood capacity and increasing resistance to a major leak forming through the embankment.		
Torrens System Upgrade	3 100	21 500
Project to replace/upgrade the open channel aqueduct which transports water from the Torrens Gorge Weir to Hope Valley Reservoir.		
Virginia Angle Vale Reuse Extension	4 100	6 600
Project to extend the existing Virginia reclaimed water irrigation to increase irrigation reuse and reduce nitrogen discharge to Gulf St Vincent.		
Water Quality Program	15 700	n.a.
Projects relating to meeting changes in external water quality standards or regulations, and/or internal water quality targets.		
Water Security Program	32 200	n.a.
Investigation and development works associated with the long-term water security of South Australia.		
Total	473 662	n.a.

n.a denotes ongoing programs and projects

Source: 2008-09 Capital Investment Statement Budget Paper 5.

6.3 Budget impacts

Table 17 indicates the government budget impacts from the decision to increase charges along with the water security and other decisions that have impacted SA Water since the 2008-09 budget.

Table 17: Impact on Tax and Dividend and Net Contributions to Government (nominal) *

	2009-10 \$M	2010-11 \$M	2011-12 \$M	2012-13 \$M	Total \$M
Tax	(4.1)	(6.7)	(11.6)	2.9	(19.5)
Dividend	(9.2)	(14.5)	(25.4)	6.3	(42.8)
Contribution (tax plus dividend)	(13.3)	(21.2)	(37.0)	9.1	(62.3)
CSO	10.7	(2.6)	14.6	41.8	64.6
Net Contribution (tax plus Dividend less CSO)	(2.6)	(23.8)	(22.3)	51.0	2.2

* Note totals may not add due to rounding

At the same time that it determined the 2009-10 water and wastewater charges, the Government decided to extend the eligibility for the sewer concession. This has an impact on the budget. Also, the decision to increase water and waste water charges has an impact on the forecast cost of the water concession because the original forecast relied on the 2008-09 revenue direction. These two impacts are shown in Table 18 below.

Table 18: Impact on concessions budget

Impact on concessions	2009-10 \$M	2010-11 \$M	2011-12 \$M	2012-13 \$M	Total \$M
Sewer	1	1	1	1	4
Water	0.2	0.8	1.8	4.3	7.1

6.4 Profitability and ongoing financial viability

Table 19: SA Water's business viability analysis

	2008-09	2009-10	2010-11	2011-12	2012-13
Net profit before tax (\$m)	238.2	271.4	312.3	288.9	359.9
Return on assets (%)	3.8	4.3	4.7	4.3	4.8
Return on equity (%)	2.7	2.9	3.2	2.8	3.3
Total debt (\$m)	1 990.5	2 678.2	3 089.1	3 238.6	3 560.1
Gearing ratio - debt to assets (%)	21.1	25.3	27.1	27.1	28.0
Interest cover (times)	2.8	2.5	2.4	2.2	2.5
Current ratio (%)	60.6	53.9	52.8	54.2	58.8
Leverage ratio (%)	130.3	139.4	143.0	142.7	144.3

SA Water's current Ownership Framework, approved by Cabinet in March 2005, set a target gearing ratio (calculated as total debt divided by total assets) of 15 to 25 per cent for the following four to five years, with an annual review process to form part of the annual Budget process from 2006-07.

The Ownership Framework also provides for a review of the target gearing ratio to accommodate changes in SA Water's operational environment.

As a result of SA Water's significant capital program, including the Adelaide Desalination Plant and other water security projects, SA Water's debt is estimated to increase by \$688 million from 2008-09 to 2009-10, and by a total of \$1.570 billion from 2008-09 to 2012-13.

of SA Water's significant capital program, The current target gearing range is under review with the potential for the upper limit to increase during this period of significant capital investment.

SA Water is expected to exceed the upper limit of its current target gearing range in 2009-10, with a forecast gearing ratio of 26.7 per cent. SA Water's gearing ratio is forecast to increase further to 28.9 per cent by 2012-13.

SA Water's net profit before tax is estimated to be \$271 million in 2009-10, \$33 million higher than the estimate for 2008-09, and is forecast to increase to \$360 million by 2012-13.

Under this pricing path, SA Water's return on assets and return on equity are forecast to increase slightly from 2009-10 to 2012-13.

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

SA Water's interest cover is estimated to be 2.5 in 2009-10. Interest cover is calculated as net profit before tax and interest divided by total borrowing costs, and provides an indication of SA Water's ability to generate sufficient profits to meet its interest obligations. Despite the significant increase in debt, interest cover is forecast to remain relatively stable from 2009-10 to 2012-13. This indicates that SA Water's forecast profit growth is sufficient to maintain its interest cover at around 2.5, which is enough to meet borrowing costs of more than double the current forecast.

Although SA Water's debt is forecast to increase, there is only a minor deterioration in SA Water's liquidity ratios, the current ratio and leverage ratio, over the period from 2009-10 to 2012-13. This indicates that SA Water's increased borrowings are being used to fund capital investment rather than recurrent operating expenditure. Furthermore, part of SA Water's capital expenditure is being funded by increased operating revenue generated from increased water and sewerage prices. SA Water's asset base is forecast to increase by around \$3.251 billion from 2008-09 to 2012-13, more than double the forecast increase in debt of around \$1.570 billion over the same period.

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APPENDICES

Appendix 1: COAG Strategic Framework

Relevant clauses from the COAG Strategic Framework 1994

In relation to water resource policy, COAG agreed:

- 1 to implement a strategic framework to achieve an efficient and sustainable water industry comprising the elements set out in (3) ... below.
- 2 In relation to pricing:
 - (a) in general —
 - i. to the adoption of pricing regimes based on the principles of consumption-based pricing, full-cost recovery and desirably the removal of cross-subsidies which are not consistent with efficient and effective service, use and provision. Where cross-subsidies continue to exist, they be made transparent,...;
 - ii. that where service deliverers are required to provide water services to classes of customers at less than full cost, the cost of this be fully disclosed and ideally be paid to the service deliverer as a community service obligation;
 - (b) urban water services —
 - i. to the adoption by no later than 1998 of charging arrangements for water services comprising of an access or connection component together with an additional component or components to reflect usage where this is cost-effective;
 - ii. that in order to assist jurisdictions to adopt the aforementioned pricing arrangements, an expert group, on which all jurisdictions are to be represented, report to COAG at its first meeting in 1995 on asset valuation methods and cost-recovery definitions, and
 - iii. that supplying organisations, where they are publicly owned, aiming to earn a real rate of return on the written down replacement cost of their assets, commensurate with the equity arrangements of their public ownership;

Source: NCC, 1998, Compendium of National Competition Policy Agreements, 2nd Edition, p 103–104, available at www.ncc.gov.au

Guidelines for applying Section 3 of the Strategic Framework and Related Recommendations in Section 12 of the Expert Group Report

1. Prices will be set by the nominated jurisdictional regulators (or equivalent) who, in examining full cost recovery as an input to price determination, should have regard to the principles set out below.
2. The deprival value methodology should be used for asset valuation unless a specific circumstance justifies another method.
3. An annuity approach should be used to determine the medium to long-term cash requirements for asset replacement/refurbishment where it is desired that the service delivery capacity be maintained.
4. To avoid monopoly rents, a water business should not recover more than the operational, maintenance and administrative costs, externalities, taxes or TERs (tax equivalent regime), provision for the cost of asset consumption and cost of

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

capital, the latter being calculated using a Weighted Average Cost of Capital (WACC).

5. To be viable, a water business should recover, at least, the operational, maintenance and administrative costs, externalities, taxes or TERs (not including income tax), the interest cost on debt, dividends (if any) and make provision for future asset refurbishment/replacement (as noted in (3) above). Dividends should be set at a level that reflects commercial realities and stimulates a competitive market outcome.
6. In applying (4) and (5) above, economic regulators (or equivalent) should determine the level of revenue for a water business based on efficient resource pricing and business costs.
7. In determining prices, transparency is required in the treatment of community service obligations, contributed assets, the opening value of assets, externalities including resource management costs, and tax equivalent regimes.

Source: NCC, 1998, Compendium of National Competition Policy Agreements, 2nd Edition, p 112–113, available at www.ncc.gov.au

Appendix 2: National Water Initiative Clauses

Best Practice Water Pricing and Institutional Arrangements

Outcomes

64. The Parties agree to implement water pricing and institutional arrangements which:
- i) promote economically efficient and sustainable use of:
 - a) water resources;
 - b) water infrastructure assets; and
 - c) government resources devoted to the management of water;
 - ii) ensure sufficient revenue streams to allow efficient delivery of the required services;
 - iii) facilitate the efficient functioning of water markets, including inter-jurisdictional water markets, and in both rural and urban settings;
 - iv) give effect to the principles of user-pays and achieve pricing transparency in respect of water storage and delivery in irrigation systems and cost recovery for water planning and management;
 - v) avoid perverse or unintended pricing outcomes; and
 - vi) provide appropriate mechanisms for the release of unallocated water.

Actions

Water Storage and Delivery Pricing

65. In accordance with NCP commitments, the States and Territories agree to bring into effect pricing policies for water storage and delivery in rural and urban systems that facilitate efficient water use and trade in water entitlements, including through the use of:
- i) consumption based pricing;
 - ii) full cost recovery for water services to ensure business viability and avoid monopoly rents, including recovery of environmental externalities, where feasible and practical; and
 - iii) consistency in pricing policies across sectors and jurisdictions where entitlements are able to be traded.
66. In particular, States and Territories agree to the following pricing actions:

Metropolitan

- i) continued movement towards *upper bound pricing* by 2008;

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

- ii) development of pricing policies for recycled water and stormwater that are congruent with pricing policies for potable water, and stimulate efficient water use no matter what the source by 2006;
- iii) review and development of pricing policies for trade wastes that encourage the most cost effective methods of treating industrial wastes, whether at the source or at downstream plants by 2006; and
- iv) development of national guidelines for customers' water accounts that provide information on their water use relative to equivalent households in the community by 2006;

Rural and Regional

- v) full cost recovery for all rural surface and groundwater based systems, recognising that there will be some small community services that will never be economically viable but need to be maintained to meet social and public health obligations:
 - a) achievement of *lower bound pricing* for all rural systems in line with existing NCP commitments;
 - b) continued movement towards *upper bound pricing* for all rural systems, where practicable; and
 - c) where full cost recovery is unlikely to be achieved in the long term and a Community Service Obligation (CSO) is deemed necessary, the size of the subsidy is to be reported publicly and, where practicable, jurisdictions consider alternative management arrangements aimed at removing the need for an ongoing CSO.

Cost Recovery for Planning and Management

67. The States and Territories agree to bring into effect consistent approaches to pricing and attributing costs of water planning and management by 2006, involving:
- i) the identification of all costs associated with water planning and management, including the costs of underpinning water markets such as the provision of registers, accounting and measurement frameworks and performance monitoring and benchmarking;
 - ii) the identification of the proportion of costs that can be attributed to water access entitlement holders consistent with the principles below:
 - a) charges exclude activities undertaken for the Government (such as policy development, and Ministerial or Parliamentary services); and
 - b) charges are linked as closely as possible to the costs of activities or products.

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

68. The States and Territories agree to report publicly on cost recovery for water planning and management as part of annual reporting requirements, including:
- i) the total cost of water planning and management; and
 - ii) the proportion of the total cost of water planning and management attributed to *water access entitlement* holders and the basis upon which this proportion is determined.

Investment in new or refurbished infrastructure

69. The Parties agree to ensure that proposals for investment in new or refurbished water infrastructure continue to be assessed as economically viable and ecologically sustainable prior to the investment occurring (noting paragraph 66 (v)).

Release of unallocated water

70. Release of unallocated water will be a matter for States and Territories to determine. Any release of unallocated water should be managed in the context of encouraging the sustainable and efficient use of scarce water resources.
71. If a release is justified, generally, it should occur only where alternative ways of meeting water demands, such as through water trading, making use of the unused parts of existing entitlements or by increasing water use efficiency, have been fully explored.
72. To the extent practicable, releases should occur through market-based mechanisms.

Environmental Externalities

73. The States and Territories agree to:
- i) continue to manage environmental externalities through a range of regulatory measures (such as through setting extraction limits in water management plans and by specifying the conditions for the use of water in water use licences);
 - ii) continue to examine the feasibility of using market based mechanisms such as pricing to account for positive and negative environmental externalities associated with water use; and
 - iii) implement pricing that includes externalities where found to be feasible.

Institutional Reform

74. The Parties agree that as far as possible, the roles of water resource management, standard setting and regulatory enforcement and service provision continue to be separately institutionally.

Benchmarking Efficient Performance

75. The States and Territories will be required to report independently, publicly, and on an annual basis, benchmarking of pricing and service quality for metropolitan, non-metropolitan and rural water delivery agencies. Such reports will be made on the basis of a nationally consistent framework to be developed by the Parties by 2005, taking account of existing information collection including:
- i) the major metropolitan inter-agency performance and benchmarking system managed by the Water Services Association of Australia;
 - ii) the non-major inter-agency performance and benchmarking system managed by the Australian Water Association; and
 - iii) the irrigation industry performance monitoring and benchmarking system, currently being managed by the Australian National Committee of Irrigation and Drainage (ANCID).
76. Costs of operating the above performance and benchmarking systems are to be met by jurisdictions through recovery of water management costs.

Independent pricing regulator

77. The Parties agree to use independent bodies to:
- i) set or review prices, or price setting process, for water storage and delivery by government water service providers, on a case-by-case basis, consistent with the principles in paragraphs 65 to 68 above; and
 - ii) publicly review and report on pricing in government and private water service providers to ensure that the principles in paragraphs 65 to 68 above are met.

Source: COAG, 25 June 2004, *Intergovernmental Agreement on a National Water Initiative*, available at www.coag.gov.au/meetings/250604/#water_initiative

Appendix 3: Notice of Referral, including Terms of Reference

**NOTICE OF REFERRAL FOR AN INQUIRY INTO WATER AND
WASTEWATER PRICING IN METROPOLITAN AND REGIONAL
SOUTH AUSTRALIA**

**PURSUANT TO PART 7 OF THE ESSENTIAL SERVICES
COMMISSION ACT 2002**

FROM: Kevin Foley, Treasurer

TO: The Essential Services Commission of South Australia

RE: Water and Wastewater Prices in Metropolitan and Regional South Australia July 2009 to June 2010 and In Principle Revenue Direction to June 2013.

BACKGROUND:

1. Pursuant to section 35(1) of the *Essential Services Commission Act, 2002* (**the Act**), the Commission must conduct an inquiry into any matter that the Minister, by written notice, refers to the Commission.
2. The Act is committed to the Treasurer by way of *Gazettal* notice dated 12 September 2002 (p. 3384).
3. The South Australian Government proposes to publish the attached Transparency Statement on SA Water's water and wastewater prices.
4. The Transparency Statement links Cabinet's decision on water and wastewater prices to the 1994 CoAG pricing principles, certain National Water Initiative obligations and four sets of draft pricing principles which have been developed under the auspices of the National Water Initiative Committee (the NWIC draft urban water pricing principles). It provides information on SA Water's financial performance in the context of pricing decisions and past and future expenditures, and addresses details of estimates of revenues, community service obligations, capital expenditure program, profit and its distribution.

REFERRAL:

I, Kevin Foley, Treasurer, refer to the Commission the matter described in paragraph (a) of the Terms of Reference for inquiry, in accordance with those matters in paragraphs (b), (c) and (d) of the Terms of Reference and subject to the Directions set out in this Notice.

TERMS OF REFERENCE:

The following are the Terms of Reference for the inquiry referred pursuant to section 35(1) of the Act:

- (a) The Commission is to inquire into price setting processes undertaken in the preparation of advice to Cabinet, resulting in Cabinet making its decision on the level and structure of SA Water's water and wastewater prices in metropolitan and regional South Australia in 2009-10 and an in principle revenue direction to June 2013 having regard to:
 - a. the adequacy of the application of 1994 CoAG pricing principles;
 - b. the National Water Initiative, specifically, Clause 65 with respect to the continued application of pricing principles to urban areas, Clause 66(i) with respect to water and wastewater pricing in the metropolitan area and Clause 66(v) with respect to water and wastewater pricing in regional (urban) areas; and
 - c. the NWIC draft urban water pricing principles, to be considered by COAG.
- (b) In undertaking this inquiry, the Commission is to take into account:
 - a. the accredited *South Australian National Water Initiative Implementation Plan* with respect to Clauses 65, 66(i) and 66(v)
 - b. the National Water Commission *First Biennial Assessment of the National Water Initiative*, August 2007, Attachment 1 'Summary progress on implementing NWI actions' with respect to Clauses 65, 66(i) and 66(v);
 - c. the National Water Commission *Update of progress in water reform*, February 2008, Attachment A with respect to Clauses 65, 66(i) and 66(v);
 - d. the attached *Transparency Statement Metropolitan and Regional Water and Wastewater Prices in South Australia 2009-10 (Part A)* dated January 2009;
- (c) In considering the processes undertaken for the preparation of advice to Cabinet, the Commission is to advise on the extent to which information relevant to the 1994 CoAG pricing principles, the National Water Initiative and the NWIC draft urban pricing principles was made available to Cabinet.
- (d) These terms of reference specifically do not extend to additional information on alternative approaches to setting prices.

REQUIREMENTS FOR INQUIRY:

The following requirements are made pursuant to section 35(5) of the Act:

- (a) I require that the Commission undertake its inquiry and submit a Draft Report to the Treasurer and the Minister for Water Security by no later than three months after receipt of these Terms of Reference;
- (b) I require that the Commission submit a Final Report on the inquiry to the Treasurer and the Minister for Water Security by no later than six weeks after submitting the Draft Report;
- (c) In conducting the inquiry, the Commission is not required to hold public hearings, public seminars or workshops but may receive and consider any written submissions as it thinks appropriate and it must advertise to call for written submissions to be lodged no later than 28 days from the date of publication of the Notice of Inquiry;
- (e) SA Water is to meet the reasonable costs of the Commission in undertaking the inquiry.

If the Commission requires further information in relation to this inquiry, it may contact the Director, Economic Regulation, Revenue and Economics Branch, Department of Treasury and Finance.

DIRECTIONS:

The following directions are made pursuant to section 35(5)(f) of the Act:

I direct that in undertaking its inquiry the Commission must preserve the confidentiality of any information, material or documentation provided by the Government to enable the Commission to undertake its inquiry, and to that end must enter into a Deed of Non-Disclosure with the Crown in right of the State of South Australia. I hereby authorise the Under Treasurer to act as agent for and on behalf of the Crown for that purpose. Further, the Commission must require any consultant firm or person providing consultancy services to the Commission in relation to the inquiry to be made a party to that Deed. A copy of the Deed will be made available to the Commission for comment.



Kevin Foley
TREASURER

Appendix 4: WACC Methodology

The government also adopted a 6% pre-tax real WACC for SA Water in 2007-08 and 2008-09. The WACC input parameters for the 2008-09 pricing decision, including updated market observations for inflation and the risk free rate of interest are outlined in **Table 20** below. Detailed information on the derivation of the WACC is below.

Table 20: Values of WACC input parameters

Assumptions	Low	High	Average
Market premium risk	6%	6%	6%
Risk free rate of interest (real)*	2.54%	2.54%	2.54%
Risk free rate of interest (nominal)*	6.17%	6.17%	6.17%
Corporate tax rate	30%	30%	30%
Gamma	0.5	0.5	0.5
Inflation forecast*	3.54%	3.54%	3.54%
Debt margin	1.00%	1.2%	1.1%
Cost of debt (pre tax nominal)	7.17%	7.37%	7.27%
Debt to entity value	50%	60%	55%
Equity beta	0.6	1.0	0.8
Cost of equity (post-tax nominal)	9.77%	12.17%	10.97%
WACC Results			
Nominal post tax WACC	6.53%	7.10%	6.86%
Real pre tax WACC	5.59%	6.38%	6.05%

* Estimated as at 24 October 2007

Post-tax nominal WACC

The following formula was used to estimate the post-tax nominal WACC.

$$WACC = \frac{K_e * (1 - t)}{[1 - t * (1 - \gamma)]} * \left(\frac{E}{D + E} \right) + K_d * (1 - t) * \left(\frac{D}{D + E} \right)$$

where:

K_d = cost of debt

K_e = cost of equity

D = amount of debt in capital structure

E = amount of equity in capital structure

γ = gamma

t = tax rate

Pre-tax real WACC

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

The forward transformation was then adopted to convert the post-tax nominal WACC to the pre-tax real WACC.

Forward Transformation

Step 1 — convert post-tax nominal into pre-tax nominal using an appropriate tax rate

Step 2 — convert pre-tax nominal into pre-tax real using the Fisher equation.

Input Values

The input values used to calculate the post-tax nominal WACC and the pre-tax real WACC are described below.

Cost of Debt

The cost of debt is a significant component of the WACC and is the sum of the risk-free rate and the debt margin.

Risk-free Rate

The nominal risk-free rate is estimated using the 20-day average of the yield on 10-year Government Bonds.

Debt Margin

The debt margin is the interest margin above the risk-free rate of interest, which would be incurred by an efficient water business.

Cost of Equity

The cost of equity is estimated, using the CAPM, as the sum of the risk-free rate of interest and a premium considered sufficient to compensate equity holders for systematic risk.

Market Risk Premium

The market risk premium (MRP) represents the rate of return required by equity holders above the risk-free rate of interest.

Equity Beta

The equity beta represents the responsiveness of the return on equity to the market (or systematic risk). An equity beta of 1 indicates that the variability of returns is consistent with the market portfolio.

Gearing ratio

The gearing ratio adopted is the proportion of the total asset value attributable to debt, the remainder being attributable to equity.

Other inputs to the Post-tax nominal WACC

TRANSPARENCY STATEMENT – 2009-10 WATER & WASTEWATER

Gamma

Gamma represents the value of franking credits under the dividend imputation system as a proportion of tax payments.

Tax Rate

The tax rate represents tax payable as a proportion of taxable income.

Expected Inflation

Expected inflation is estimated using the Fisher equation on the basis of the 20-day average of the nominal and inflation indexed 10-year Government Bond yields.

Appendix 5: 2007-08 Annual Efficiency Report



ANNUAL EFFICIENCY REPORT

November 2008

Contents Page

<u>EXECUTIVE SUMMARY</u>	<u>II</u>
CUSTOMER SERVICE AND WATER QUALITY	III
SYSTEM PERFORMANCE	III
SUSTAINABLE FUTURE	IV
COMMERCIAL SUCCESS	V
VALUE FOR MONEY	VI
<u>1. INTRODUCTION.....</u>	<u>1</u>
1.1 AIM	1
1.2 SCOPE AND STRUCTURE	1
1.3 SOURCE DATA	2
1.4 SELECTION OF COMPARATOR WATER UTILITIES	4
<u>2. CUSTOMER SERVICE AND WATER QUALITY</u>	<u>5</u>
2.1 CUSTOMER SERVICES	5
2.2 WATER QUALITY.....	13
<u>3. SYSTEM PERFORMANCE.....</u>	<u>19</u>
3.1 WATER SERVICES.....	19
3.2 SEWER SERVICES	22
<u>4. SUSTAINABLE FUTURE.....</u>	<u>26</u>
4.1 WATER	26
4.2 SEWERAGE	29
4.3 CLIMATE.....	36
<u>5. COMMERCIAL SUCCESS</u>	<u>39</u>
5.1 OPERATING COSTS	39
5.2 TOTAL COSTS.....	58
5.3 CAPITAL EXPENDITURE	59
<u>6. VALUE FOR MONEY</u>	<u>64</u>
6.1 INTRODUCTION	64
6.2 CUSTOMER FEEDBACK	65
6.3 COMPARATIVE LEVELS OF SERVICE.....	67

6.4	COMPARATIVE LEVEL OF COSTS OF SERVICES AND CUSTOMER BILLS	69
6.5	CUSTOMER ASSIST PROGRAM	71

EXECUTIVE SUMMARY

The *2009-10 Annual Efficiency Report* is a key component of the Government's annual determination of SA Water's water and wastewater prices. The Report aims to demonstrate that the Corporation's activities are undertaken efficiently and effectively within the requirements of the legislative and operating environment of the Corporation.

The principal legislative instrument bearing on the Corporation's efficiency is the *Public Corporations Act 1993* where the SA Water Board is charged with the responsibility to 'secure continuing improvements of performance' (section 14). The Corporation's operations are also specifically bound by the *Waterworks Act 1932* and the *Sewerage Act 1929* and their extensive sub-ordinate legislation.

As a public corporation SA Water through its Board, is directly responsible to its Minister, the Minister for Water Security, for its operations. Also, as part of the wider public sector, must comply with the suite of governance and accountability processes established to assure the community that public services are provided appropriately and efficiently. Some of these include the annual Parliamentary estimates and review process, the Parliamentary Committees (e.g. the Economic and Finance Committee, Public Works Committee, the Environment, Resources and Development Committee) and the independent investigative and audit processes of the South Australian Auditor-General.

In addition to this legislative framework the Corporation is also bound by an array of operational legislative instruments, Federal, State and local, that directly impact on the manner in which the Corporation provides its services. For example, the Federal *Environment Protection and Biodiversity Conservation Act 1999*, and *Trade Practices Act 1974*, and the South Australian *Environment Protection Act 1991*.

In addition to this overlay of public accountability and scrutiny, in response to the reforms arising from the National Competition Policy of 1993 since 1995 the urban water industry in Australia, including SA Water, has published a comprehensive annual performance report, *WSAAfacts*. This publication, the most detailed performance report of any industry sector in the nation, presented information about each participating water utility's performance in a range of customer service, system, water quality, environmental and financial indicators. Since 2004-05 this document has been subsumed by a larger performance report required as part of the National Water Initiative (NWI). The National Performance Report (NPR) now includes a greater range of performance criteria and also encompasses the non-urban water sector. SA Water has actively participated in the industry performance reporting. It should be noted that while the NPR provides a comparison of performance for all significant water service providers in Australia, it does not take into account the differences in operational environments and hence must be used with caution. That is, it does not necessarily indicate a level of comparative efficiency.

Recognising the need to drive the Corporation's operations in a holistic and sustainable manner, in 2006 SA Water developed a set of strategic objectives and targets that guide the decisions and planning processes of the business and these are incorporated into a Strategic Map. The Strategic Map is built on five core pillars:

Executive Summary

- Customer Service and Water Quality;
- System Performance;
- Sustainable Future;
- People and Culture; and
- Commercial Success.

The Strategic Map is an active part of the business's activities. Actual performance is compared to performance targets and reported to the SA Water board monthly.

The *2009-10 Annual Efficiency Report* includes for the first time results of this internal performance reporting. This is combined with information from the NPR.

The remainder of this Executive Summary provides a summary of the full report.

Customer Service and Water Quality

The performance review reveals that when measured against a range of indicators SA Water is achieving a high level of service to metropolitan customers and a moderate level of service to regional customers. Regional service levels have been improving over the last 12 – 18 months and SA Water will continue to seek further improvements.

Water restrictions and a new rebates program led to unprecedented levels of customer contact in 2007-08. Housing development activity exceeded expectations and was at the highest level for 14 years. These factors meant the Corporation was unable to meet some of its high internal customer contact and new connections targets.

Annual surveying of customers reveals that customers are very satisfied with the Corporation's services. SA Water is aiming to further improve its customer services targets by 2012-13.

SA Water is achieving a very high level of service to metropolitan and regional customers in water quality as reflected in compliance with the Australian Drinking Water Guidelines. This is despite the water quality challenges of generally poor source water quality and the current dry climatic conditions. The Corporation's performance relative to other water utilities has been strong in terms of the number of water quality complaints and in microbiological compliance.

SA Water is aiming to improve or maintain these already high levels of service. Due to current climate conditions, SA Water will take an increased focus on source water monitoring which may increase costs in the short-term.

System Performance

When benchmarked against other water utilities for system performance SA Water is achieving a high level of service in the provision of water services in the metropolitan area and a moderate level in Whyalla and Mt Gambier.

Internal and external reporting in several areas is still in its infancy, but as data quality improves the Corporation has strategies in place to improve system performance.

Executive Summary

SA Water is closely monitoring its performance in sewer overflows and is seeking to reduce its metropolitan targets by 2012-13 while maintaining its regional targets.

While SA Water's sewer assets are experiencing an increasing trend in breaks and chokes due to dry conditions, abatement programs as well as targeted preventative maintenance have been put in place to manage the impact of these incidents on customers.

SA Water is seeking to further reduce metropolitan sewer overflows by 2012-13 while maintaining its regional service levels.

Sustainable Future

The implementation of water restrictions has had a positive impact on water consumption with levels being markedly reduced in recent years. The Corporation is undertaking several initiatives to continue this trend.

The Corporation has maintained compliance with its water licences despite the significant challenges presented by the current drought conditions. Maintaining compliance imposes cost pressures on SA Water in the form of investments in water security initiatives.

SA Water has generally performed at a high level in wastewater services. In particular, it has continued as a national leader in recycling water and maintained a strong performance in re-using bio-solids. In addition, the Corporation has significantly increased its rate of sewerage treated to the tertiary level from 2001-02 to 2004-05, maintained compliance with EPA licence conditions, and reduced the number of serious wastewater notifications to the EPA.

The Corporation will continue to closely monitor the risks associated with overflows to the environment where its performance is at the average of compared utilities in the metropolitan area.

Going forward SA Water is aiming to improve wastewater service levels by increasing the percentage of wastewater recycled and reducing the number of Type 1 and Type 2 wastewater notifications to the Department of Health. Where performance is already high, SA Water will aim to maintain service levels into the future.

For its metropolitan sector, SA Water's net greenhouse gas emissions in recent drought years are high compared to other utilities due to its electricity use caused by the need to pump water from the River Murray. For example, very high levels of water were sourced from the River Murray in 2006-07 and 2007-08 (about 91% and 85% respectively).

SA Water is seeking to reduce its greenhouse gas emissions going forward to comply with the Kyoto Protocol and several initiatives are being implemented to enhance electricity efficiency as well as reduce the Corporation's environmental impact.

Executive Summary

Commercial Success

All metropolitan entities reported an increase in real operating cost per property for water supply in 2006-07 as utilities worked to secure additional water supplies and manage customer demand in the current drought conditions. Despite these challenges, the Corporation maintained a comparative cost efficiency rating (operating cost per property) for metropolitan water at the lower bounds of industry performance.

The Corporation's metropolitan operating cost per property for water supply has increased marginally over the period with notable temporary increases in 2002-03 and 2006-07.

Drought conditions resulted in increased pumping costs, in particular in 2002-03 and 2006-07. The Corporation has reduced the cost per kilolitre for major pumping and is undertaking focused work to actively improve electricity efficiency going forward.

Other cost pressures relating to the climatic conditions have been incurred in maintaining service levels and responsiveness to customers, ensuring water licences are not exceeded and planning for future water security measures.

SA Water's regional operating cost per property for water is in the midrange of the compared companies for both 2005-06 and 2006-07. SA Water's operating costs per property for regional water supply display a marginal increasing trend since 2003-04 largely associated with several key regional water initiatives which increased the amount of treated water delivered to customers.

The Corporation continued its high performance for wastewater services in comparison to other entities and had the lowest metropolitan operating cost per property in 2006-07. Since 2002-03 costs have increased marginally, due mainly to the Environmental Improvement Program that has delivered significant improvements in environmental compliance and performance.

SA Water's regional operating cost per property for sewerage is in the midrange of the compared companies for both 2005-06 and 2006-07. The Corporation's real operating costs for regional sewerage services have increased marginally over the period 2000-01 to 2006-07. This is largely due to increased operating costs associated with the new Victor Harbour waste water treatment plant and upgrades to several regional wastewater treatment plants. These upgrades have had a positive impact on service standards including increasing the percentage of sewerage treated to a tertiary level, increasing the percentage of water recycled and helping to ensure the Corporation continues to be EPA compliant.

Historically, the Corporation's level of capital expenditure for metropolitan water supply has been low, compared with other utilities. Going forward this is set to increase significantly as enhanced levels of water security are delivered.

SA Water has delivered a number of significant water supply projects in regional South Australia from 2001-02 to 2007-08. These projects have significantly improved the level of service to several areas.

Executive Summary

For the wastewater side of its business the Corporation's capital expenditure has been focused predominantly on meeting enhanced environmental standards. Delivery of these projects has increased the levels of water recycled as well as reduced the environmental impacts of the Corporation's wastewater treatment plants.

Value for Money

The Customer Satisfaction Survey conducted by the Corporation in 2007 indicates customers are generally very satisfied with the range and quality of services provided by the Corporation. Eighty-four per cent (84%) of responses to the survey consider that the price of water represents good value.

The standard of service offered by the Corporation to its customers is predominately at the mid-to-high range in the metropolitan area and in the mid range in the regional areas when compared with the service levels offered to customers by the other water bodies.

While SA Water's operating costs for water supply and wastewater services are comparatively low in Adelaide when compared with other Australian cities, water and wastewater bills are comparatively high. To some extent this level of contribution may reflect the relative quality of assets which provided a generally high level of service.

1. Introduction

1.1 *AIM*

The primary purpose of this report is to review the efficiency of the operations of the South Australian Water Corporation (herein referred to as SA Water or the Corporation). The review is undertaken as a key input into processes for:

- The annual pricing submission – to demonstrate that water and wastewater prices are based on “efficient resource pricing and business costs for a given or improving level of service” and accordingly are compliant with CoAG pricing principles;
- Business planning – to identify key trends, strengths, weaknesses, opportunities and threats. These are factored into strategy setting processes; and
- Budgeting – to demonstrate to the Government (as owner) that the Corporation’s budgets and financial targets are reflective of an efficient business.

1.2 *SCOPE AND STRUCTURE*

The report firstly focuses on the Corporation’s performance to date. It assesses service levels provided by the Corporation and how much it has cost the Corporation to deliver these services to customers. The Corporation’s past performance for both metropolitan and regional areas is also benchmarked against comparable Australian utilities for service levels and cost of delivery.

The report then builds a bridge from past performance to future performance to clearly show where the Corporation is aiming to maintain or improve its service levels to customers. The report assesses whether the cost pressures affecting the Corporation allow these increased levels of service to be delivered and whether the remaining cost base is efficient.

Finally, the report provides an analysis of the value for money that customers obtain from using the Corporation’s services. This is also benchmarked against the value for money of other utilities based upon publicly available information.

For presentation purposes, the report is structured on four of the five Strategic Objectives of the Corporation, namely:

- Customer Service & Water Quality (Chapter 2);
- System Performance (Chapter 3);
- Sustainable Future (Chapter 4); and
- Commercial Success (Chapter 5).

The fifth Strategic Objective of the Strategic Map, People & Culture, is not included as it is more focused towards culture and safety rather than efficiency.

Chapter 1 - Introduction

Chapter 6 details the Value for Money analysis.

1.3 SOURCE DATA

The data contained in this report has been sourced from several key performance measurement tools described below.

Strategic Map

The Corporation's Strategic Map provides the overarching theme of the Corporation, including its vision, core business and values. The Strategic Map provides an overview of the Corporation's strategy via the Strategic Objectives which are supported by key performance indicators (KPI's) and the associated targets that SA Water is aiming to achieve by 2012-13. The Corporation has been using the Strategic Map to monitor its performance in key areas since 2006-07 and to also guide its planning into the future.

In assessing performance, the Annual Efficiency Report discusses 2006-07 and 2007-08 Strategic Map results and any prevailing trends. The report also refers to the Strategic Map targets in 2012-13 to assess where the Corporation is aiming to improve its service levels.

Reference to Strategic Map KPI's throughout the report is indicated by the abbreviation "SM".

National Performance Report

Since 2005-06, the National Water Commission (NWC) in association with the Water Services Association of Australia (WSAA) and various state regulatory entities (such as IPART, ESC Victoria and Department of Treasury and Finance (SA)), has published a National Performance Report (NPR). The NPR replaces the former WSAA *facts*, issued by WSAA, which only reported on urban water industry performance.

The NPR seeks to improve performance reporting of the Australian urban water utilities by ensuring definitions are consistent and data is accurate. The NPR highlights the trends in the performance of each utility and enables comparisons between utilities. The NPR is based on the principles of comparability, accuracy and consistency and covers all the critical performance areas in the provision of water services including health, customer service, asset management, environment, finance and pricing. The accuracy of information is ensured by a rolling 3 year auditing regime and to ensure consistency, the NPR is based on a nationally consistent framework of definitions developed and agreed by NWC, the NWI parties (i.e. state regulators) and WSAA.

Data used in the Annual Efficiency Report has been sourced from the NPR 2006-07 as the NPR 2007-08 had not been published at the time of preparing this report. For metropolitan operations, the NPR 2006-07 includes data for the period 2001-02 to 2006-07.

For regional operations, the NPR 2006-07 includes data for only 2005-06 and 2006-07. Earlier data is not readily available as WSAA *facts* did not include regional performance data. For South Australia, the NPR only includes regional data for Mt Gambier and Whyalla. This is consistent with the reporting requirements of the NWC that utilities reporting in the NPR

Chapter 1 - Introduction

must have more than 10,000 connections. To publish data in the NPR, utilities are required to have the data audited by an independent party. Due to the costs of auditing and demands on the resources of data providers, in 2006-07 SA Water focussed on data for the metropolitan area with the intention to introduce more detailed data for the regional centres in 2007-08. Consequently, data provided for Mt Gambier and Whyalla is minimal for 2006-07. Further, for both Mt Gambier and Whyalla, regional cost data is not provided in the NPR at this stage.

Reference to NPR KPI's throughout the Annual Efficiency Report is indicated by the abbreviation "NPR".

Despite the efforts of the NWC and WSAA to ensure comparability between the performance of utilities, several factors need to be considered when analysing trends. For example, the performance of utilities will be affected by structural and geographical factors such as 'functional responsibility, water/sewerage network characteristics, customer base composition, physical operating environment'¹, demand management initiatives, etc. Financial factors such as the level of capital in a certain financial and the asset valuation methodology adopted may also affect comparability.

Financial Data

The financial analysis of past performance presented in the Commercial Success chapter (Chapter 5) is as far as possible based on data reported in the NPR 2006-07 which has been sourced from the Corporation's financial accounts. As previously noted, the Corporation did not provide regional financial data for the 2006-07 NPR. Reporting regional financial data remains a priority within the Corporation in the medium term. Work is currently underway to upgrade computer systems to improve the rigour and reliability of regional financial reporting. Until this is completed in 2010, financial data for major regional centres will not be reported. Where available, total regional financial data, consistent with the Corporation's Annual Report segment reporting, has been included in Chapter 5. Note there are limitations in terms of analysing segmented data due to the allocation of in-direct costs.

¹ Introduction of the 2006-07 National Performance Report (p8)

1.4 SELECTION OF COMPARATOR WATER UTILITIES

The 82 water utilities that reported in the NPR 2006-07 have been arranged into the following classifications for analytical and presentation purposes:

- Major utilities (large), greater than 100,000 connected properties;
- Major utilities (other), those between 50,000 and 100,000 connected properties;
- Non-Major utilities (large), those between 20,000 and 50,000 connected properties;
- Non-major utilities (other), those between 10,000 and 20,000 connected properties; and
- Bulk utilities.

SA Water is represented as a major urban utility (large) for metropolitan operations and a non-major utility (other) for its Mt Gambier and Whyalla operations.

For the purpose of this Report, comparisons for metropolitan operations are made with nine similar metropolitan (capital cities) water and wastewater utilities as follows:-

ACTEW Corporation (ACT)	Sydney Water (NSW)
SA Water (SA)	Water Corporation (WA)
South East Water Ltd (Vic)	Brisbane Water (Qld)
Yarra Valley (Vic)	Power and Water Corporation – Darwin (NT)
City West Water (Vic)	

For regional operations, comparisons of performance are made with twelve other regional water and wastewater utilities as follows:-

Power and Water Corporation – Alice Springs (NT)	SA Water – Mt Gambier (SA)
Toowoomba City Council (Qld)	SA Water – Whyalla (SA)
Noosa Water Services (Qld)	Byron Shire Council (NSW)
South Gippsland Water (Vic)	Country Energy (NSW)
East Gippsland Water (Vic)	Water Corporation - Bunbury (WA)
Fitzroy River Water (Vic)	Water Corporation – Mandurah (WA)

For the benchmarking analysis where a utility has not reported data the utility's name is not shown in the Table.

2. Customer Service and Water Quality

2.1 CUSTOMER SERVICES

SA Water is achieving a high level of service to metropolitan customers and a moderate level of service to regional customers. Regional service levels are improving and SA Water is continuing to seek further improvements.

Water restrictions and a new rebates program led to unprecedented levels of customer contact in 2007-08. Housing development activity exceeded expectations and is at the highest level for 14 years. These factors meant the Corporation was unable to meet some of its high internal customer contact and new connections targets.

Annual surveying reveals that customers are very satisfied with the Corporation's services. SA Water is aiming to further improve its customer services targets by 2012-13.

The Strategic Map contains a series of key performance indicators and targets for customer service, including compliance with the Draft Customer Charter. The Draft Customer Charter contains 73 criteria, which are used by the Corporation to internally monitor service standards provided to customers.

Compliance with Draft Customer Charter – Metropolitan Water & Sewer Service (SM)

This KPI measures compliance against the following service standards in the Draft Customer Charter for the metropolitan area: restoration of unplanned water supply interruptions; restoration of unplanned sewer interruptions; and attendance and clean up times of sewer overflows.

Strategic Targets (internal targets)		2006-07 Actual	2007-08 Actual	2012-13 Target
Achieve Compliance with Draft Customer Charter				
Water & Sewer Services	Metro	19/20 (19/20)	31/32 (30/32)	95%

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result. The number of criteria reported has increased from 2006-07 to 2007-08 and is subject to change due to the draft nature of the Customer Charter.

Performance

Of the 32 criteria reported in 2007-08, 31 met their associated target (97%). The one criterion not achieved in 2007-08, was '100% attendance to an internal building wastewater overflow within 1 hour'. There were 385 events for this criterion in 2007-08, of which 2 failed to meet the attendance target (99% achieved). While the target was not achieved the level of service provided was still of a very high standard.

Chapter 2 – Customer Service & Water Quality

Going Forward

Performance going forward is expected to remain at a very high level through to 2012-13.

Compliance with Draft Customer Charter – Regional Water & Sewer Service (SM)

This KPI measures compliance against the following service standards in the Draft Customer Charter in regional areas: restoration of unplanned water supply interruptions; restoration of unplanned sewer interruptions; and attendance and clean up times of sewer overflows.

Strategic Targets (internal targets)		2006-07 Actual	2007-08 Actual	2012-13 Target
Achieve Compliance with Draft Customer Charter				
Water & Sewer Services	Regional	20/31 (29/31)	22/33 (31/33)	95%

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result. The number of criteria reported has increased from 2006-07 to 2007-08 and is subject to change due to the draft nature of the Customer Charter.

Performance

In the regional areas approximately 3,300 out of 3,400 of all jobs met all criteria targets. Of the 11 out of the 33 criteria not achieved, 9 required 100% compliance. These criteria were not achieved due to either:

- conflicting priorities when other events occurred at the same time;
- knowingly missing events for occupational health and safety reasons; and
- scheduling process failures, whereby the priority event was not called through to the field within the prescribed timeframe.

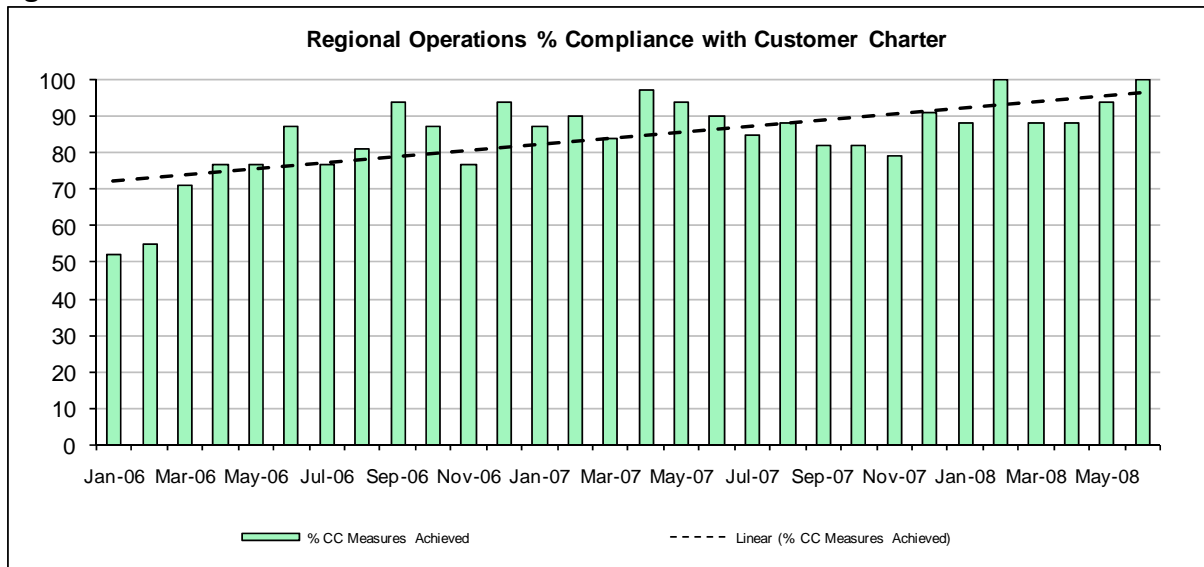
The Draft Customer Charter was reviewed during the year and several new measures were introduced for regional operations. These are aligned to the metropolitan measures and are associated with water quality, system performance and wastewater odour complaints.

Actions taken during the year to improve performance include: ongoing performance reporting and management; improved awareness and training of field staff in targets and processes; compulsory exception reporting at all levels of management; improved online reporting and data capture; and centralised work scheduling trials.

While the performance against the Draft Customer Charter criteria is reported on a rolling-12 month basis Figure 2.1 shows an improving trend when criteria are reported on a monthly basis.

Chapter 2 – Customer Service & Water Quality

Figure 2.1



Going Forward

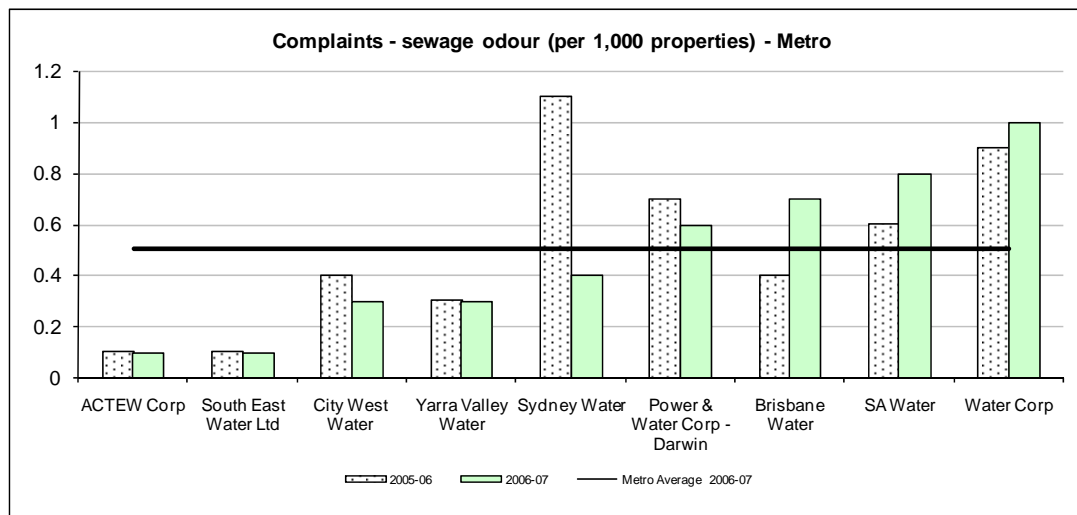
The performance target for 2012-13 (95%) represents a significant increase on current performance. As indicated by Figure 2.1 above, actions taken by the Corporation have had a positive impact on performance, with performance expected to continue to trend upwards.

Complaints – sewer odour (per 1,000 properties) (NPR)

This KPI measures the total number of sewer odour complaints received in a year relative to 1,000 properties.

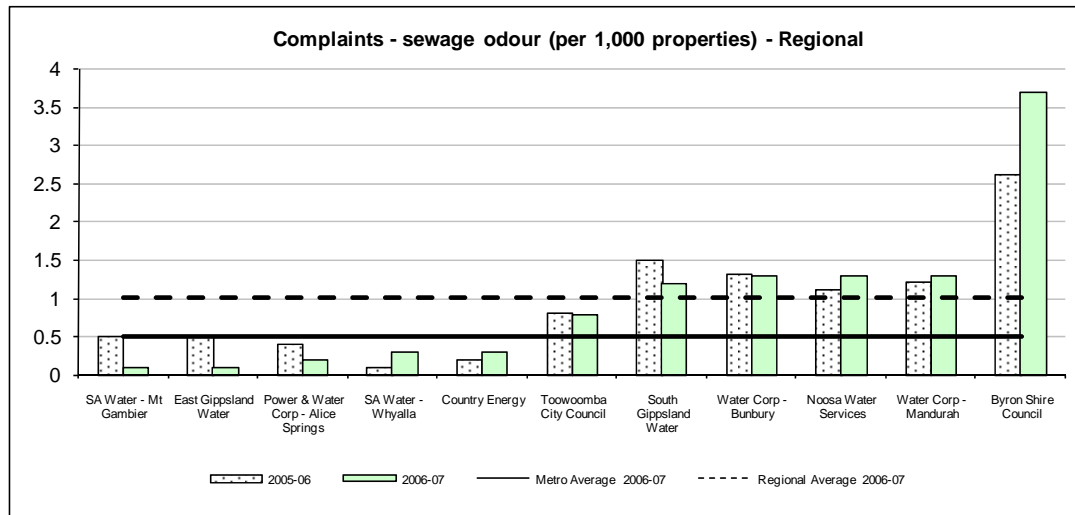
Figure 2.2 and Figure 2.3 show the metropolitan and regional sewer odour complaints per 1,000 properties for 2005-06 and 2006-07.

Figure 2.2



Chapter 2 – Customer Service & Water Quality

Figure 2.3



Performance

SA Water's metropolitan performance was below average when compared with the level of service offered by most other utilities in 2005-06 and 2006-07. Of the utilities compared, only Water Corporation reported a higher level of sewer odour complaints per 1,000 properties in 2006-07.

As SA Water has only collected this information for NPR purposes for two years, a trend is not viable. Adelaide experienced an increase in the number of sewer odour complaints from 2005-06 to 2006-07.

The performance of Mt Gambier and Whyalla is not only better than the regional average but also better than the metropolitan average indicating a very high level of service in these regional areas.

Going Forward

Over the next 2-3 years SA Water will be involved in a joint research project with WSAA in relation to odour management. This research aims to address odour management by examining areas of service quality and reliability.

A key strategy for odour management at SA Water's wastewater treatment plants is to ensure there is sufficient land around the plant to provide an effective odour buffer. When this buffer has been compromised by encroaching development alternative strategies must be considered. These include capturing potentially odorous gas and cleaning it before it discharges to the atmosphere.

As part of the ongoing review of the NPR performance measures 'sewer odour complaints' will be included as part of a new overall measure 'sewerage service complaints' for 2007-08 reporting.

Chapter 2 – Customer Service & Water Quality

Compliance with Draft Customer Charter – Customer Contact (SM)

This KPI measures compliance against the following customer contact standards in the Draft Customer Charter: average time to answer a telephone call to the Corporation's Customer Contact Centre; percentage of all routine written enquiries responded to within 10 working days; percentage of complaints responded to within 5 working days; percentage of all investigative correspondence resolved within 20 working days; percentage of enquiries resolved at first point of contact face to face or via the telephone; and percentage of applications to discharge trade waste into the sewer system processed within 10 working days.

Strategic Targets (internal targets)	2006-07 Actual	2007-08 Actual	2012-13 Target
Achieve Compliance with Draft Customer Charter			
Customer Contact	3/4 (4/4)	3/6 (6/6)	100%

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result. The number of criteria reported has increased from 2006-07 to 2007-08 and is subject to change due to the draft nature of the Customer Charter.

Performance

A record 800,000 enquiries and requests were managed by the Customer Contact Centre over 2007-08 with responses to customers, either in person, in writing or by phone. Water restrictions and a new rebates program were the key issues that led to the unprecedented levels of customer contact.

In 2007-08, 3 of the 6 Customer Contact criteria were met. These were:

- percentage of all investigative correspondence resolved within 20 working days;
- percentage of applications to discharge trade waste into the sewer system processed within 10 working days; and
- percentage of complaints responded to within 5 working days.

Reasons for not meeting remaining criteria are as follows:

- on average telephone customers waited no longer than 21.9 seconds for their call to the Customer Contact Centre to be answered. This was slightly above the target of 20.0 seconds and was due to significantly increased call volumes;
- percentage of all routine written enquiries responded to within 10 working days was missed marginally due to resources being diverted to handle the increased call volumes; and
- percentage of enquiries resolved at first point of contact, face to face or via the telephone, which was reported for the first time in July 2008 and was only missed marginally.

These non-conforming criteria are all heavily impacted by Customer Contact Centre call volumes, which were 20% higher than the previous 3 year average in 2007-08. This is still considered to be a strong result.

Chapter 2 – Customer Service & Water Quality

Going Forward

Customer Contact performance is expected to improve going forward, as reflected by the Strategic Map target of 100% in 2012-13.

Average connect time to a telephone operator (seconds) (NPR)

This KPI measures the average time taken for a telephone caller to be connected to an operator. It does not include calls that are resolved by an automated system, or hang-ups.

Table 2.1 shows the average connect time to a telephone operator from 2001-02 to 2006-07 as reported in the 2006-07 NPR. The NPR measures all calls to the utility whereas the Strategic Map measures only calls received by the Customer Contact Centre.

Table 2.1

Average connect time to a telephone operator (seconds)							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Yarra Valley Water	Vic						11.0
SA Water	SA	18.0	27.0	26.0	20.0	20.0	20.0
South East Water Ltd	Vic	30.0	25.8	26.1	22.0	22.0	20.0
Sydney Water	NSW					20.1	21.1
Water Corporation	WA	15.6	18.4	19.9	21.0	24.1	23.5
Brisbane Water	Qld		21.0	24.3	15.6	17.9	25.8
ACTEW Corporation	ACT					26.4	59.1
City West Water	Vic					62.6	152.6
Power & Water Corp - Darwin	NT						
Average		21.2	23.1	24.1	19.7	27.6	41.6

Performance

The Corporation's performance over the six year period has been solid, achieving three consecutive years of 20 seconds, from 2004-05. The increases in 2002-03 and 2003-04 are due to significant increases in volumes of calls due to the introduction of restrictions. Of the entities compared, only Yarra Valley Water achieved a better result in 2006-07.

Going Forward

Given strong performance to date, SA Water is seeking to maintain this level of service. It is anticipated that the average connect time to a telephone operating will return to the Corporation's target of 20 seconds going forward.

As part of ongoing review of the NPR performance measures this indicator will change to 'Per cent of calls answered by operator within 30 seconds'. SA Water will consider the implications of this for its business and customers.

Chapter 2 – Customer Service & Water Quality

Compliance with Draft Customer Charter – New Connections (SM)

This KPI measures compliance against the following connection services in the Draft Customer Charter; percentage of standard water connections installed within 15 working days of processing the application and receiving the fees; and percentage of properties with a standard connection to sewer within 20 working days of processing the application and receiving the fees.

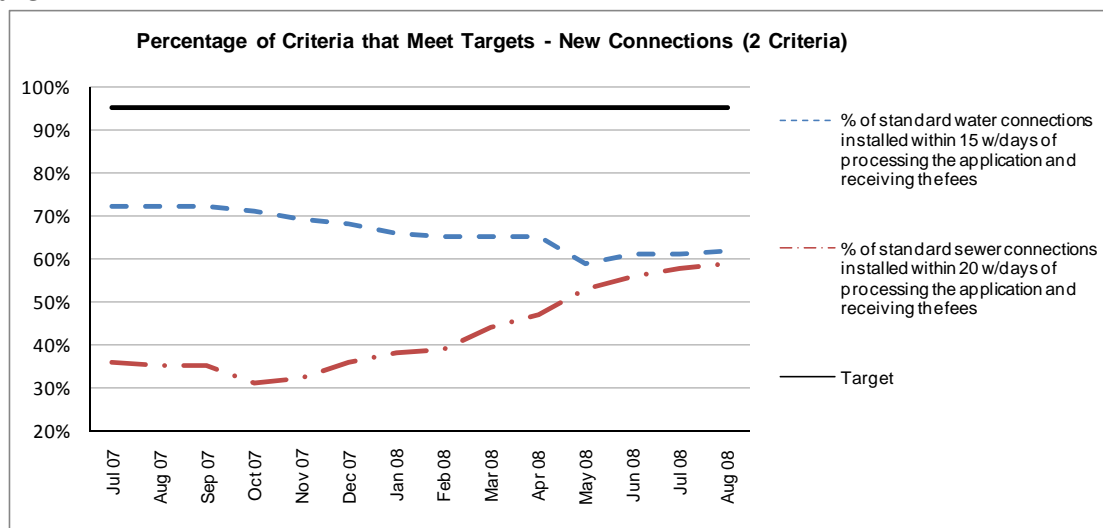
Strategic Targets (internal targets)	2006-07 Actual	2007-08 Actual	2012-13 Target
Achieve Compliance with Draft Customer Charter			
New Connections	0/4 (4/4)	0/2 (2/2)	100%

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result. The number of criteria reported has decreased from 2006-07 to 2007-08 and is subject to change due to the draft nature of the Customer Charter.

Performance

High levels of land development activity have continued for the past five years and showed a further upward trend in 2007-08. Connection applications are on average the highest level for 14 years (on an annual basis), with a 15% increase on the previous year. As a result SA Water did not achieve its targets for new connection applications however; strategies have been put in place to manage these gaps. Figure 2.4 illustrates the significant improvement in standard sewer connections installed within 20 days of processing the application and receiving the fee.

Figure 2.4



Going Forward

SA Water is aiming for improved service levels for new connections going forward to 2012-13.

Now that performance for water and sewer connections is consistent, SA Water will focus on improving overall business processes to ensure performance is improved. One of the main challenges is the time between scheduling the work and engaging a contractor.

Chapter 2 – Customer Service & Water Quality

Customer Satisfaction Index (SM)

This index is the mean response from the Random Household, Customer Contact Sample and Business Customer satisfaction scores in the annual SA Water Customer Satisfaction Survey.

Strategic Targets (internal targets)	2006-07 Actual	2007-08 Actual	2012-13 Target
Customer Satisfaction Index	8.2 (8.2)	8.0 (8.2)	8.4

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result.

Performance

The annual customer satisfaction survey measures satisfaction with SA Water as a service provider and the Corporation's attributes such as reliability, value for money, responsiveness and water quality.

The 2007-08 customer satisfaction survey was conducted in June 2008 and, on a 0 to 10 scale, SA Water achieved overall satisfaction ratings of 8.0 (residential customers) and 7.8 (commercial customers). These excellent results demonstrate SA Water is continuing to meet the expectations of the overwhelming majority of customers, despite the impacts of drought and water restrictions.

However, the scores have fallen from 2006-07, when overall satisfaction ratings were 8.2 (residential customers) and 8.3 (commercial customers). Results were also short of the Strategic Map target of 8.2 overall. Analysis of the findings is now underway to determine areas where improvement is required.

SA Water's customers rated the Corporation highly in terms of customer service, both over the phone and on-site and the Corporation was regarded as efficient, knowledgeable, professional and responsive. SA Water also scored well in the areas of high importance for consumers, namely, in the reliable supply of safe drinking water and good response times to problems.

Many customers hold strong concerns regarding the health of the River Murray and indicated the development of alternate water sources was a high priority.

Since the establishment of the in-house Community Involvement team in 2006, SA Water has been working with communities and other stakeholders across the State to help the Corporation better understand issues, risks and opportunities for the business – in particular, the extensive capital program.

Going Forward

The Customer Satisfaction Index is targeted to improve to a level of 8.4 by 2012-13.

SA Water will soon implement a customer satisfaction measurement system using the Common Measurement Tool (CMT). This will enable the Corporation's customer satisfaction levels of performance to be compared with all State government departments and agencies.

Chapter 2 – Customer Service & Water Quality

Based on results currently being achieved by other parts of Government, it is expected that the Corporation's results will compare favourably.

SA Water has commissioned a corporate reputation monitor, which will involve qualitative customer research and provide an opportunity for the Corporation to better understand customer and community requirements.

2.2 WATER QUALITY

SA Water is achieving a very high level of service to metropolitan and regional customers in water quality as reflected in compliance with the Australian Drinking Water Guidelines. This is despite the water quality challenges of generally poor source water quality and the current dry climatic conditions. The Corporation's performance relative to other water utilities has been strong in terms of the number of water quality complaints and in microbiological compliance.

SA Water is aiming to improve or maintain these already high levels of service. Due to current climatic conditions, SA Water will take an increased focus on source water monitoring which may increase costs in the short-term.

Compliance with Australian Drinking Water Guidelines (SM)

This KPI measures compliance with the Australian Drinking Water Guidelines (ADWG) as measured by SA Water's Drinking Water Quality Index (Customer Taps) for metropolitan and regional supplies. The index assesses water quality at customer taps using the health-related criteria of the ADWG, in the following parameters: coliforms, E.Coli, disinfection by-products, free and total chlorine, heavy metals and other health related chemicals.

Strategic Targets (internal targets)	2006-07 Actual	2007-08 Actual	2012-13 Target
Achieve Australian Drinking Water Guidelines Compliance	99.8% (99.5%)	99.7% (99.5%)	99.8%

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result.

Performance

Although drought conditions yielded some challenges, the Corporation's increased focus on water quality issues ensured performance was within target. ADWG compliance of 99.7% was achieved in 2007-08 for both metropolitan and regional supplies. This result was 0.2 percentage points above SA Water's internal target of 99.5% target.

The small reduction in performance from 2006-07 to 2007-08 is mainly due to an increased number of detections of disinfection by-products in regional systems. This occurred because the Corporation expanded its monitoring regime for this parameter as part of its overall process of continuous improvement.

Chapter 2 – Customer Service & Water Quality

For the first time in SA Water's monitoring history 100% *E.coli* compliance at all customer taps in regional South Australia for a complete financial year was achieved. In 2007-08 there were no *E.coli* detections in the 7,890 samples taken from the 69 regional systems.

This achievement is testimony to the improved focus on drinking water quality management through the Drinking Water Quality Management System established with the implementation of the ADWG Framework.

Going Forward

The Corporation's performance is forecast to continue to improve to 2012-13 to a target of 99.8% compliance.

Maintaining this high level of end-point compliance will be only part of the challenge. In line with the principles of the ADWG Framework the Corporation will strive to continue to be proactive, to improve key systems and to improve aesthetic (in addition to the 'health-related' criteria) water quality for customers.

The continuation of the Country Water Quality Improvement Program (CWQIP) to bring filtered water to selected regional areas is expected to have a positive impact on water quality results going forward.

Type 1 Drinking Water Quality (SM)

This KPI measures, and seeks to reduce, the number of Type 1 drinking water quality notifications to the Department of Health. Type 1 incidents are defined as incidents that could cause serious risk to human health.

The Incident Response Index (IRI) is a ratio of the number of Department of Health reportable incidents with a response within the required target time as a percentage of the total number of incidents. This is a composite index of response effort within predetermined targets against the following parameters: incident entered into Incident Management System; report incident to Department of Health by telephone; written report to Minister for SA Water; initial corrective actions taken; Root Cause Analysis performed; and preventative actions implemented.

Strategic Targets (internal targets)	2006-07 Actual	2007-08 Actual	2012-13 Target
Type 1 Drinking Water Quality			
Reduce Type 1 Drinking Water Quality Notifications to Department of Health	50 (60)	80 (54)	n/a
Improve Incident Response Index (IRI)	57% (50%)	67% (60%)	84%

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result.

Chapter 2 – Customer Service & Water Quality

Performance

During 2007-08, the number of Type 1 drinking water quality incidents reported to the Department of Health increased as a result of improvements made to the way drinking water quality incidents are defined, captured and reported. In addition, an increased detection of blue-green algae at the River Murray water treatment plant inlets was experienced due to low flows.

Although drought conditions created challenges for water quality management, an increased focus on source water quality enabled the Corporation to adequately manage water quality risks.

SA Water has in place an extensive routine monitoring program covering all of the Corporation's water supply offtakes along the River Murray to detect any changes in the River's water quality. As a response to the drought SA Water has been proactive in implementing new water quality monitoring strategies including initiating an enhanced river monitoring program from mid-2007. This included the addition of further routine monitoring sites along the River and an increased sampling frequency for parameters such as amoebae, salinity and phytoplankton. This elevated level of monitoring provides an improved early warning to any impending water quality issues.

The Corporation also uses high-resolution digital aerial imagery to provide an early detection of algal blooms in the River Murray and assist in the management of related floodplain issues. From late October 2007 to April 2008, aerial surveys were undertaken every two to three weeks. During this period, the aerial photography proved useful in identifying algal blooms in the main River channel as well as in side lagoons outside SA Water's jurisdiction, and determining the connectivity of wetlands to the River – information which has also been valuable for other Government agencies.

The River Murray Drought Response Field Team was established in September 2007 to identify and investigate any potential water quality issues in the River. The specialist field team has been on call to provide immediate on-the-ground assessments and a heightened awareness of areas of elevated water quality risks along the South Australian reaches of the River Murray.

Due to drought related source water quality issues the Corporation has continued to make improvements to algal management strategies for reservoirs and the River Murray, including:

- Construction in 2007 of floating algal scum booms to protect water quality at five of SA Water's offtakes along the River Murray; and
- Installation of state-of-the art water quality probes in reservoirs and the River Murray to provide real-time, in-situ data on cyanobacterial numbers. These probes are a new tool used successfully over the 2007-08 summer to provide important information on the possible onset of cyanobacterial blooms and track the progress of any blooms.

Chapter 2 – Customer Service & Water Quality

Unlike the cause of occurrence of certain Type 1 incidents, the Corporation does have control over the response to these incidents, which is measured by the IRI. The IRI result has been better than target for 2006-07 and 2007-08 and has improved since 2006-07. These results are particularly positive given the recent increases in the occurrence of Type 1 events.

Going Forward

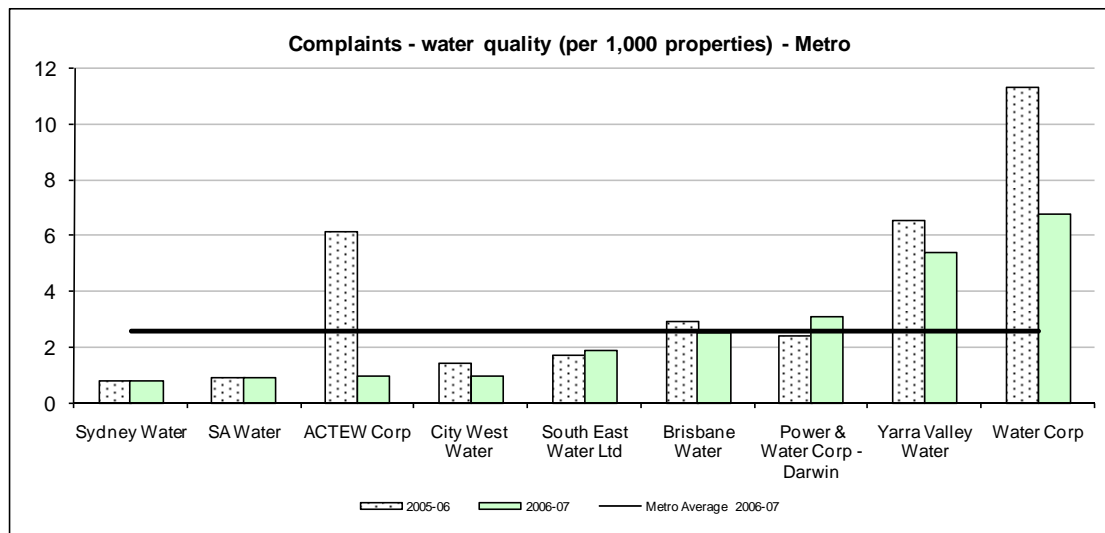
The Corporation will continue to monitor the number of Type 1 notifications. The key focus moving forward will be an intensified focus on pro-active water quality management, to ensure that incidents are responded to appropriately and that corrective actions are implemented which prevent future controllable incidents from occurring. The Corporation's performance of the IRI is expected to continue to improve to 2012-13.

Complaints – Water Quality (per 1,000 properties) (NPR)

This KPI measures the total number of complaints received by the water business that relate to water quality, including water quality complaints resulting from operational practices. With respect to water quality, this is any complaint regarding: discolouration; taste; odour; stained washing; illness; or cloudy water (e.g. caused by oxygenation), etc. Any contact that results in a water quality issue is counted as a complaint. It does not include complaints relating to: service interruption; adequacy of service; restrictions, or pressure, etc.

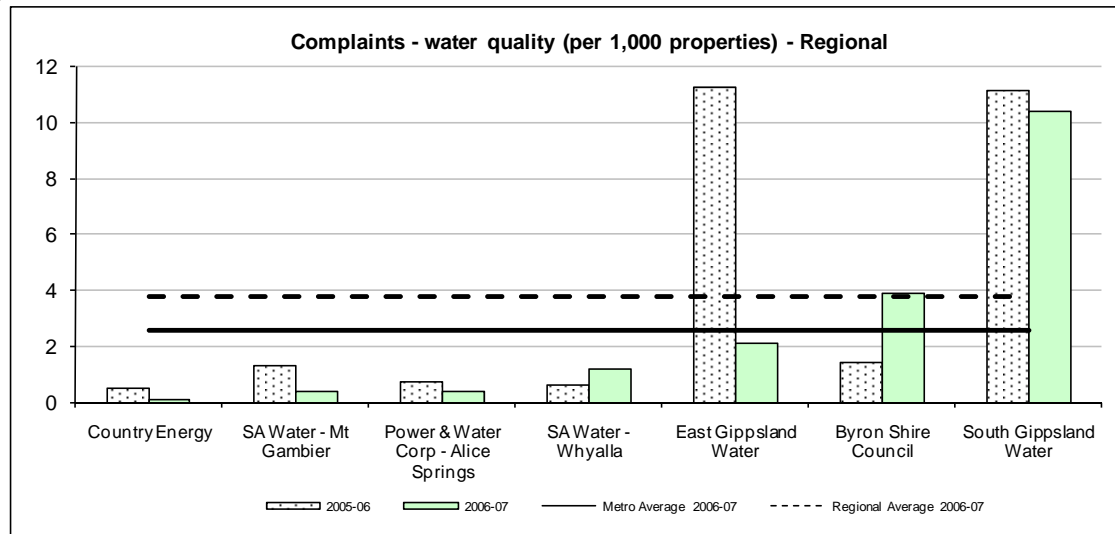
Figure 2.5 and Figure 2.6 show metropolitan and regional water quality complaints per 1,000 properties for 2005-06 and 2006-07.

Figure 2.5



Chapter 2 – Customer Service & Water Quality

Figure 2.6



Performance

SA Water's has consistently reported relatively low water complaint numbers in metropolitan operations, which have been below the average of all major utilities in 2005-06 and 2006-07. In 2007-08 metropolitan Adelaide experienced a decrease in complaints to 0.6 complaints per 1,000 properties.

Only Sydney Water, for both years, outperformed the Corporation by 0.1 complaints per 1,000 properties.

The Corporation's reported performance in Mt Gambier and Whyalla are not only lower than the regional average, they are both lower than the metropolitan average. This indicates a very high level of service in these regions.

As SA Water has only reported this information for NPR purposes for two years, a trend is not viable. Across the two years water quality complaints per 1,000 properties remained stable in metropolitan Adelaide, decreased in Mt Gambier and increased in Whyalla.

The increase for Whyalla complaints was from 0.6 per 1,000 properties to 1.2 per 1,000 properties. This is still considered to be a high standard of performance compared with the regional average. The increase can be attributed to discoloration of water supplied to customers, due to the nature of the burst main events at the time.

The preliminary results for 2007-08 for Mt Gambier and Whyalla were 2.5 and 0.9 complaints per 1,000 properties respectively. The increase in Mt Gambier is attributed to the need to use bore water when the pumping station was not functioning due to unplanned maintenance. As the water quality from the bores differs from that of the water sourced from the Blue Lake, particularly in taste, there was a resulting increase in water quality complaints during this period.

Chapter 2 – Customer Service & Water Quality

Going Forward

The Corporation's Strategic Map target to increase its compliance with the Australian Drinking Water Guidelines to 99.8% by 2012-13 will assist in ensuring high standards of water quality going forward.

Percentage of Population where Microbiological Compliance was Achieved (NPR)

This KPI measures (as a percentage of the customer base) compliance of the microbiological quality of water supplied with the ADWG.

Performance

All metropolitan utilities compared (except Yarra Valley Water in 2006-07) have consistently reported 100% microbiological compliance for 2005-06 and 2006-07, including metropolitan Adelaide.

In 2007-08, SA Water continued to report 100% compliance for metropolitan Adelaide and the regional areas of Mt Gambier and Whyalla.

Going Forward

The Corporation aims to maintain its microbiological compliance at 100%.

3. System Performance

3.1 WATER SERVICES

SA Water is achieving a high level of service in the provision of water services in the metropolitan area and a moderate level of service in regional areas reported.

Internal and external reporting in several areas is still in its infancy, but as data quality improves the Corporation has strategies in place to improve system performance.

Number of Properties with ≥ 3 Unplanned Water Interruptions per year (SM)

This KPI measures the number of customers (properties) that are subject to 3 or more unplanned water interruptions in a year. An unplanned water interruption is an interruption to a customer's water supply that is not planned or as part of organised maintenance. This does not include a reduction in flow or pressure where normal activities (e.g. showering is still possible).

Strategic Targets (internal targets)		2006-07 Actual	2007-08 Actual	2012-13 Target
No Increase in the Number of Properties with ≥ 3 Unplanned Water Interruptions per year	Metro	1,733 (3,100)	1,606 (2,000)	2,000
	Regional	830 (1,100)	599 (830)	830

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result.

Performance

The reported performance for both metropolitan and regional areas was better than target for both 2006-07 and 2007-08 and performance has improved in both metropolitan and regional areas over this period. SA Water has also improved data capture in this area.

Going Forward

Reporting on this measure is still in its infancy but as data quality improves the Corporation has strategies in place to improve overall system performance. For example, SA Water has a strategy of preventing the failure rate of water mains from increasing. To achieve this, the Corporation has analysed historical performance to predict future performance under various renewal strategies. To maintain performance at present levels a program of steadily increasing the water main renewals program has been established. Actual pipes are selected for replacement by closely monitoring performance. Renewal priority is assigned on the basis of value for money achieved in reducing the number of customer interruptions and repair costs.

In this context while the Corporation is aiming to maintain targets until 2012-13, it is seeking to continue at actual levels of performance, which are better than the targets. Targets will continue to be reviewed as data improves.

Chapter 3 – System Performance

Water Main Breaks per 100 km of Water Main (NPR)

This KPI measures the total number of water main breaks, bursts and leaks in all diameter mains for the reporting period. Breaks exclude those in the property service (i.e. mains to meter connection) and weeps or seepages associated with above ground mains that can be fixed without shutting down the main.

Table 3.1

Water main breaks per 100 km of water main							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Metro							
Water Corporation	WA	12.9	13.2	13.6	13.8	14.7	13.1
South East Water Ltd	Vic					18.4	23.5
SA Water	SA					21.3	27.0
Sydney Water	NSW	37.2	50.1	37.5	37.3	34.5	34.5
Power & Water Corp - Darwin	NT					55.2	41.5
ACTEW Corporation	ACT						47.4
Brisbane Water	Qld	36.5	36.7	34.5	40.0	36.9	49.7
Yarra Valley Water	Vic					42.8	57.3
City West Water	Vic						85.7
Metro Average		28.9	33.3	28.5	30.4	32.0	42.2
Regional							
SA Water - Mt Gambier	SA					4.6	2.1
Noosa Water Services	Qld					3.7	5.1
Water Corporation - Mandurah	WA					5.0	5.9
East Gippsland Water	Vic						9.0
SA Water - Whyalla	SA					19.7	13.1
Toowoomba City Council	Qld					15.5	16.9
Fitzroy River Water	Qld					42.6	34.0
Power & Water Corp - Alice Springs	NT						56.9
South Gippsland Water	Vic						93.0
Regional Average						15.2	26.2

Performance

Over the two year period SA Water has reported on this indicator the Corporation has been a strong performer in the metropolitan area with only Water Corporation and South East Water achieving a better result in 2006-07. The Corporation's performance is significantly better than the average.

The metropolitan area has seen an increase in main breaks consistent with the trend across many major utilities.

Regional performance is very good with Mt Gambier a clear leader and Whyalla better than the average for 2006-07.

Chapter 3 – System Performance

These results are attributed in large to an increasing focus on planned preventative maintenance work carried out on these assets.

Going forward

There is a strong relationship between the increased rate of water main breaks and the continued dry seasonal conditions experienced into the 2006-07 year. Ground movement and soil types are the two major causes of burst water mains. Adelaide soil types are such that seasonal changes in soil moisture greatly affect ground movement, which place pressure on the pipe causing it to fail.

SA Water is reviewing the forward investment program in light of the ongoing drought conditions to enable improved performance to be achieved in the future.

Infrastructure Leakage Index (ILI) (SM & NPR)

The ILI measures how effectively real water losses from the system are being managed at current operating pressure while accounting for other influential factors like length of mains and customer meter location. The ILI is calculated as the ratio of Current Annual Real Loss (includes leaks, bursts & overflows) to Unavoidable Annual Real Loss.

Strategic Targets (internal targets)		2006-07 Actual	2007-08 Actual	2012-13 Target
Infrastructure Leakage Index	Metro	1.0 (1.2)	1.0 (1.1)	1.1

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result.

Table 3.2

Infrastructure Leakage Index (ILI)							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Metro							
ACTEW Corporation	ACT	1.2	1.3	0.9	1.0		0.5
South East Water Ltd	Vic	1.5	1.4	1.3	1.0	1.0	0.9
SA Water	SA	1.2	1.2	1.2	1.2	1.1	1.0
Yarra Valley Water	Vic	1.3	1.3	1.0	1.4	1.2	1.1
City West Water	Vic	1.7	2.0	1.4	1.2	1.3	1.2
Sydney Water	NSW	2.8	2.9	2.1	1.8	1.6	1.5
Water Corporation	WA	1.3	1.5		1.6	1.7	1.5
Brisbane Water	Qld	2.0	2.3	2.4	2.4	2.2	1.7
Power & Water Corp - Darwin	NT	4.6	5.5	4.9	5.8	1.7	4.0
Metro Average		2.0	2.2	1.9	1.9	1.5	1.5

Performance

The ILI is used by utilities around the world to report leakage and takes into account factors such as accuracy of meters, water used for fire fighting, theft, length of mains, number of connections and system pressure. The Water Services Association of Australia considers an ILI in the range of 1.0 to 1.5 to be “Excellent” and 1.5 to 3.5 to be “Good to Fair”.

Chapter 3 – System Performance

Metropolitan Adelaide reported a value of 1.0 for 2006-07, which was better than the internal target. The ILI level of 1.0 in 2006-07 was an improvement on previous years.

Adelaide's reactive soils are a major cause of leakage as soil movement pulls pipe joints apart and, in extreme cases, can crack the pipes. Over the six year period SA Water has reported on this indicator the Corporation has been a strong performer, with performance consistently better than the average. Of the entities compared, only ACTEW and South East Water have consistently achieved a better result.

SA Water did not report any regional indicators associated with water loss for the 2006-07 NPR, (i.e. ILI or real losses) as the data is still being developed at this stage. SA Water is working to improve the standard of reporting for this indicator in regional areas and has set a Strategic Map target of 1.9 for all regional towns to be achieved by 2012-13.

Going Forward

SA Water aims to maintain its 2007-08 target levels in the metropolitan area, and achieve its leakage targets in regional areas.

Scheduled to start in 2009, SA Water will engage Australia's leading leak detection contractors to survey the entire metropolitan area to identify small point sources of leakage across the system. Once located the leaking assets will be repaired on a priority basis where it is cost effective. A similar leak detection survey will be undertaken in Mount Gambier.

3.2 SEWER SERVICES

SA Water is closely monitoring its performance in sewer overflows and is seeking to further reduce sewer overflows in the metropolitan area by 2012-13 while maintaining its regional service levels.

While SA Water's sewer assets are experiencing an increasing trend in breaks and chokes due to dry conditions, abatement programs as well as targeted preventative maintenance have been put in place to manage the impact of these incidents on customers.

SA Water is seeking to reduce the impact of sewerage asset failures on customers by 2012-13.

Sewer Main Breaks and Chokes (NPR)

This measure records the number of sewer main breaks and chokes relative to the sewerage system. A break or choke is a failure of the sewer main which results in an interruption to the service.

Table 3.3

Sewer main breaks and chokes (per 100 km)							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Metro							
Power & Water Corp - Darwin	NT	1.6	2.0	1.5	2.1	6.2	5.2
South East Water Ltd	Vic	11.5	16.6	18.1	15.3	16.4	21.3
Water Corporation	WA	19.4	21.3	19.1	18	17.8	22.5
ACTEW Corporation	ACT	22.8	26.5	23.3	28.5	23.1	24.1
City West Water	Vic	27.9	35.1	31.8	28	27	27.2
Brisbane Water	Qld	34.2	31.2	22.9	28	26.3	32.0
Yarra Valley Water	Vic				41.2	40.1	49.3
SA Water ¹	SA	40.4	49.7	46.4	53.3	52.8	65.7
Metro Average		22.5	26.1	23.3	26.8	26.2	30.9
Regional							
Noosa Water Services	Qld					9.3	7.4
SA Water - Mt Gambier	SA					1.5	7.5
Power & Water Corp - Alice Springs	NT					9.0	7.9
Water Corporation - Mandurah	WA					11.3	12.7
South Gippsland Water	Vic					14	13.7
Water Corporation - Bunbury	WA					11.8	15.4
East Gippsland Water	Vic					12.7	16.1
SA Water - Whyalla	SA					4.8	22.8
Toowoomba City Council	Qld					100.0	123.0
Regional Average						19.4	25.2

1. Previously the interpretation of the indicator was not clear and SA Water reported data for 'per 1000 properties' instead of 'per 100km'. This has been amended in the Table.

Performance

In the past six years SA Water's metropolitan performance has experienced a deteriorating trend, particularly since 2004-05. This trend is also evident for other utilities.

Metropolitan Adelaide has reactive clay soils which are prone to movement. This creates problems for the metropolitan sewerage network, especially where earthenware (clay based) pipes are still used. Furthermore, over 80% of sewer main breaks and chokes can be attributed to tree root intrusion. This is more prevalent in times of drought when underground roots search for water sources. Vapour rooting is the most efficient method to deter roots from invading sewer pipes (mainly through the connections). SA Water has an ongoing strategy that involves a cleaning program of about 700-800km of pipes a year.

Chapter 3 – System Performance

SA Water's regional operations at Whyalla and Mt Gambier, have only reported for two years. Mt Gambier's performance was very strong. Both regions have shown an increase in reported cases from 2005-06 to 2006-07.

As the sewerage networks for the regional areas are smaller and generally younger than the water networks, asset replacement has not begun as yet. However, through preventative maintenance, such as cleaning programs and increased SCADA monitoring, further increases in the rate of breaks and chokes have been restrained.

The Corporation continually evaluates and identifies sewer overflow risks and implements measures such as system upgrades as a part of the Overflow Abatement Program and targeted preventative sewer maintenance programs. Incidences of chokes are given the highest priority as they are more frequent than breaks.

The Corporation has invested \$15m over 5 years to establish an Overflow Abatement Program (established in late 2005). The program targets overflows from pump stations, the replacement of high risk pumping mains and extending SCADA networks to all wastewater treatment plants. The aim of this program is to target high profile flows from pumping stations as they have the highest impact. Through this abatement program there has been a reduction in the number of chokes in pumping stations, however, the impact on the overall figure reported is low.

Going Forward

The Corporation is seeking to reduce the number of sewer main breaks and chokes by the continuation of the Overflow Abatement Program and additional sewer cleaning and preventative maintenance.

Chapter 3 – System Performance

Number of properties per year with a sewer overflow caused by a sewer mains choke

This measure records the number of sewer overflow incidents on a customer's property caused by a sewer mains choke. A sewer overflow is an untreated wastewater spill or discharge from the wastewater system into a customer's property.

Strategic Targets (internal targets)		2006-07 Actual	2007-08 Actual	2012-13 Target
Number of Properties per year with a Sewer Overflow caused by a Sewer Mains Choke				
Inside building	Metro	67 (85)	52 (80)	75
	Regional	1 (6)	1 (3)	3
Outside building	Metro	675 (617)	558 (650)	598
	Regional	14 (52)	22 (26)	26

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result.

Performance

Metropolitan performance for these KPI's has improved following concerted efforts to reduce internal overflows due to the impact they have on customers.

In regional areas, there are relatively few choke incidences that result in an overflow inside the customers' property, as indicated by the results for the last two years. However, there was an increasing trend in the number of chokes causing outside overflows during the year.

Going Forward

For sewer overflows, where possible, SA Water is aiming to improve its metropolitan targets by 2012-13 and continue its better than target performance. The Corporation is seeking to maintain its regional targets to 2012-13 and improve performance where necessary to meet this target.

To meet these objectives, the Corporation is increasing its sewer cleaning program in an attempt to further improve service levels. As part of the 2008-09 Budget, ongoing funding was provided to increase metropolitan sewer cleaning in order to reduce the metropolitan sewer results from 2009-10.

In the regional areas, and in addition to the rolling maintenance regime, further funding was allocated in the 2008-09 Budget for specific preventative sewer maintenance aimed at reducing choke events.

4. Sustainable Future

4.1 WATER

The implementation of water restrictions has had a positive impact on reducing average water consumption and the Corporation is undertaking several initiatives to continue this trend.

The Corporation has maintained compliance with its water licences despite the significant challenges presented by the current drought conditions. Maintaining compliance imposes cost pressures on SA Water in the form of investments in water security initiatives.

10 year Average Consumption (SM)

This KPI records the annual volume of metropolitan and regional water supplies delivered to the distribution network. This is measured using master meter flows. This KPI is calculated from a base 10 year average which is adjusted for growth and savings from the Water Proofing Adelaide and water restrictions initiatives. A focus on encouraging conservation is considered important particularly in the current climatic conditions where the availability of additional supplies is limited or where additional supplies would be costly and/or timely to source. It is also an important part of managing the Corporation's impact on the environment.

Strategic Targets (internal results)		2006-07 Actual	2007-08 Actual	2012-13 Target
Reduce 10 year Average Consumption	Metro	173.7GL (175.6GL)	169.5GL (175.2GL)	166.8GL
	Regional	83.9GL (87.5GL)	84.5GL (88.3GL)	87.1GL

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result.

Performance

Water consumption in both metropolitan and regional areas fell in 2007-08 primarily responding to the effects of water restrictions. The 2007-08 reported result is within SA Water's internal targets.

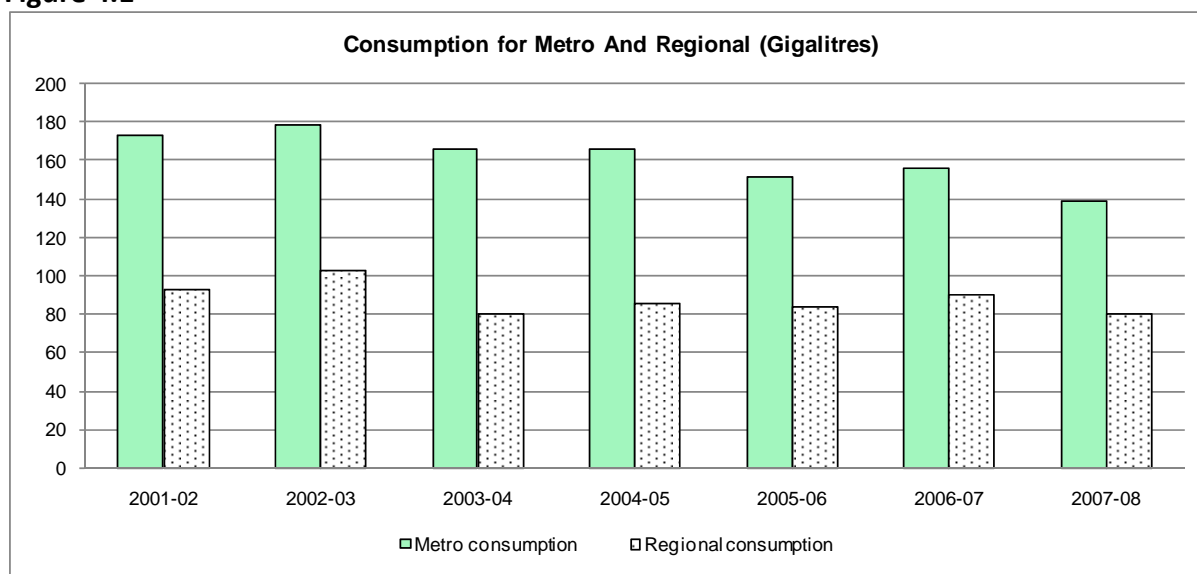
Figure 4.1 demonstrates a real reduction in annual water consumption with a particularly strong response in metropolitan Adelaide. Metropolitan Adelaide's consumption per property has reduced from a high of 252k/L per property in 2001-02 to 235k/L per property in 2006-07². Historically, SA Water has reported relatively high figures compared to some interstate counterparts such as Queensland and New South Wales where restrictions have been in place for longer and were more severe. SA Water's reduction is a result of customer commitment to water conservation measures over the drought period.

²

NPR 2006-07, page 207

Meeting these targets in the current climatic conditions has caused the Corporation to incur costs associated with managing water restrictions and water efficiency rebate schemes.

Figure 4.1



Going Forward

The Corporation is targeting further reductions in the 10 year average consumption over 2007-08 targets. Where performance has exceeded targets to date, the Corporation will aim to maintain these performance levels where possible.

In the short term, it is likely that water restrictions will forcibly reduce consumption and the short term targets are adjusted.

SA Water is undertaking a number of initiatives to continue the reduction in per capita consumption on a more permanent basis. This includes undertaking significant recycling water schemes, storm water and aquifer recharge schemes, commercial and industrial water audits, and providing rebates for items such as, rain water tanks, AAA shower heads and water wise garden products.

Compliance with Water Licences (SM)

The KPI measures SA Water's compliance (as a %) with its water licences issued by the Department of Water, Land and Biodiversity Conservation. These licences are issued for specified volumes of water extraction. The licences cover allocations for metropolitan Adelaide, River Murray regional areas, the Eyre Peninsula and the South East.

Strategic Targets (internal results)	2006-07 Actual	2007-08 Actual	2012-13 Target
Compliance with Water Licences			
Water Extraction Within Allocation	100% (100%)	100% (100%)	100%
Compliance with Licence Conditions	100% (100%)	100% (100%)	100%

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result.

Performance

SA Water drew approximately 91% and 85% of South Australia's drinking water supply from the River Murray in 2006-07 and 2007-08 respectively. This is much higher than previous years due to River Murray water being pumped into metropolitan Adelaide's reservoirs to supplement low water storage levels resulting from the low rainfall in the Mount Lofty Ranges.

Despite this, SA Water maintained 100% compliance with water licence allowances and conditions in both years. Where there was a possibility of licences being exceeded, corrective action was taken.

Maintaining these service levels in current drought conditions has been challenging and cost pressures associated with this have arisen such as strategic pumping costs, additional water purchases and the cost of managing restrictions and rebate schemes which encourage adoption of water efficient technology.

Going Forward

SA Water is aiming to maintain its 100% compliance for this KPI despite the challenging climatic conditions.

To meet this challenging target and ensure an enhanced level of water security for its customers, SA Water is investing in both short term water security measures including additional pumping and temporary water purchases and longer term water security measures such as non-climate dependent water sources and increased storage capacity. Whilst these initiatives will increase the Corporation's operating costs, enhanced levels of water security will be provided for customers and the impact on the existing sources of supply should be eased.

4.2 SEWERAGE

SA Water has generally performed at a high level in sewerage services. In particular, it has continued as a national leader in recycling water and maintained a strong performance in re-using bio-solids. The Corporation also has significantly increased its volume of sewerage treated to the tertiary level from 2001-02 to 2004-05, complied with EPA licence conditions, and has reduced the number of serious wastewater notifications to the EPA.

The Corporation will continue to closely monitor the risks associated with overflows to the environment where its performance is at the average of compared utilities in the metropolitan area.

Going forward SA Water is aiming to improve wastewater service levels by increasing the percentage of wastewater recycled and reducing the number of Type 1 and Type 2 wastewater notifications to the EPA. Where performance is already high, SA Water will be seeking to maintain service levels into the future.

Percentage of Water Recycled (SM & NPR)

This KPI measures (as a %) the quantity of all metropolitan/regional wastewater that is collected, treated and reused by either the water business itself or a customer supplied by the water business.

Strategic Targets (internal results)		2006-07 Actual	2007-08 Actual	2012-13 Target
Percentage of Water Recycled	Metro	30% (24%)	31% (25%)	31%
	Regional	19% (18%)	24% (20%)	26%

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result.

Table 4.1

Recycled water (% of effluent recycled)							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Metro							
SA Water	SA	15.1%	19.2%	21.4%	20.0%	18.1%	29.6%
South East Water Ltd	Vic					19.4%	28.7%
Yarra Valley Water	Vic					0.0%	9.2%
ACTEW Corporation	ACT	5.5%	7.3%	8.1%	7.9%	6.7%	7.4%
Brisbane Water	Qld	4.0%	3.5%	3.2%	5.0%	4.8%	7.2%
Water Corporation	WA	3.8%	4.1%	3.6%	3.6%	5.2%	6.0%
Sydney Water	NSW					3.5%	4.3%
Power & Water Corp - Darwin	NT					2.9%	3.2%
City West Water	Vic					0.0%	0.0%
Metro Average		7.1%	8.5%	9.1%	9.1%	6.7%	10.6%

Performance

SA Water supplies recycled water from some of its wastewater treatment plants for use in the irrigation of crops (primarily in the Virginia and McLaren Vale horticulture areas) and for golf courses, council parks, gardens and wetlands. Recycled water is also mixed with stormwater for use in the Mawson Lakes residential development for toilet flushing and outdoor use.

In 2006-07 metropolitan Adelaide recycled 29.6% of water. During 2007-08, SA Water recycled approximately 25,660 ML (30.7%) of metropolitan treated wastewater and 2,140ML (23.8%) of regional treated wastewater. The dry conditions experienced in 2007-08 had a significant impact on re-use results. The drought saw reduced inflows to the wastewater treatment plants through a reduction in water use and therefore wastewater. Lower groundwater levels also resulted in a reduction in groundwater infiltration to the sewerage system further reducing wastewater treatment plant inflows. In addition, demand for re-use increased as growers sought to satisfy increased irrigation demand.

The improving trend in performance over time for SA Water is related to significant upgrades to wastewater treatment plants (refer to Chapter 5.3 regarding Capital Expenditure for further details). For metropolitan operations, over the six year period SA Water has been a strong performer and is consistently better than the average. Of the utilities compared, only South East Water has reached similar levels.

For the purposes of NPR, SA Water's regional areas of Mt Gambier and Whyalla will be reporting recycled information for the first time in 2007-08.

Going Forward

The South Australian Government has made a commitment to achieve a target of 45% water recycling for the long term. In line with this commitment, SA Water is seeking to improve its service levels in this area and has adopted a target of 31% by 2012-13. A range of projects have commenced or are planned to achieve this target including, the pipeline from Glenelg to the Adelaide parklands, the Southern Urban Reuse Project and the Angle Vale pipeline extension.

Sewerage Treated to a Tertiary Level (NPR)

There are typically three levels of sewage treatment, primary, secondary and tertiary. Tertiary treatment is the most complex and sophisticated process. It is principally designed to remove nutrients, such as phosphorus (typically <2 mg/L) and/or nitrogen (typically <15 mg/L). A high percentage of effluent suspended solids (typically >95 per cent) are also removed. Tertiary treatment may additionally target other contaminants of concern, (e.g. toxicants and salt) for discharges into sensitive waterways or reuse applications where high quality recycled water is required.

Table 4.2

Sewage treated to a tertiary level (%)							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Metro							
ACTEW Corporation	ACT	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
SA Water	SA	54.6%	81.6%	91.0%	97.0%	100.0%	99.9%
Yarra Valley Water	Vic	100.0%	100.0%	100.0%	100.0%	98.1%	95.4%
Water Corporation	WA	14.4%	40.5%	40.4%	39.0%	94.5%	94.3%
Brisbane Water	Qld	67.0%	76.0%	66.5%	66.3%	67.6%	68.2%
City West Water	Vic	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%
South East Water Ltd	Vic				55.9%	21.3%	22.8%
Sydney Water	NSW	17.3%	22.7%	17.0%	17.7%	21.8%	21.9%
Power & Water Corp - Darwin	NT					2.3%	2.5%
Metro Average		50.5%	60.1%	59.3%	59.5%	56.2%	61.7%

Performance

SA Water aims to treat 100% of sewerage to the tertiary level. ACTEW has achieved this over several years and Yarra Valley Water is also a strong performer.

The trend for SA Water has shown a significant improvement over the reporting period primarily due to major upgrades of wastewater treatment plants in Adelaide over the last 5-10 years to reduce environmental impacts. SA Water did not achieve 100% for 2006-07 due to an incident at the Bolivar Wastewater Treatment plant which necessitated a very small amount of sewage needed to bypass the tertiary treatment to avoid congestion in the system.

For 2007-08 the Corporation treated 100% of metropolitan Adelaide's sewage to a tertiary level.

SA Water's regional performance was not reported for 2006-07 NPR benchmarking.

Going Forward

SA Water is continuing to target 100% sewerage treatment to the tertiary level in its metropolitan area and will manage operating and capital investments with this objective in mind. In line with SA Water's target of increasing recycling in regional areas, SA Water will also seek to treat a greater percentage of its sewerage to tertiary level in regional areas.

Bio-solids reused (NPR)

This KPI measures (as a %) the quantum of bio-solids that a reused. Reuse involves managing biosolids safely and sustainably to beneficially utilise their nutrient, energy, or other values. This may include biosolids used for agriculture (e.g. fertiliser), soil conditioning, mine rehabilitation, and other applications recognised as reuse. The dry weight of biosolids reused may be greater than the dry weight of biosolids produced if the business is also reusing existing stockpiles.

Table 4.3

Biosolids reused (%)							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Metro							
South East Water Ltd	Vic	58.0%	177.2%	121.7%	33.4%	321.5%	218.0%
ACTEW Corporation	ACT	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Brisbane Water	Qld			100.0%	99.5%	99.6%	100.0%
Sydney Water	NSW	99.0%	100.0%	99.9%	100.0%	100.0%	100.0%
Water Corporation	WA	86.0%	97.7%	93.2%	96.0%	99.9%	100.0%
SA Water	SA	158.0%	144.0%	168.0%	129.0%	95.0%	94.1%
City West Water	Vic						60.0%
Yarra Valley Water	Vic				0.0%	0.0%	0.0%
Power & Water Corp - Darwin	NT						
Metro Average		100.2%	123.8%	113.8%	79.7%	116.6%	96.5%

Performance

Until 2005-06 SA Water had a stockpile of bio-solids that was gradually being reduced. This has now been largely completed and the Corporation is only able to provide bio-solids for re-use as they are produced.

SA Water did not report this measure for its regional operations as part of the 2006-07 NPR but it is intended that reporting of performance for Mt Gambier and Whyalla will commence in 2007-08.

Going Forward

SA Water will continue to seek at least 100% reuse of its bio-solids in the metropolitan area. It is expected that if fertiliser costs continue to be high that there will be high demand for the bio-solids.

Sewer overflows to the environment (NPR)

This KPI reports the number of sewer overflows to the environment relative to the length of sewer main (100km). Overflows are those caused by system faults originating in the system under the water utility's responsibility.

Table 4.4

Sewer overflows to the environment (per 100 km of main)							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Metro							
Sydney Water	NSW		5.4	6.0	3.3	3.7	2.5
City West Water	Vic					5.8	5.1
Power & Water Corp - Darwin	NT	6	8.6	6.8	6.7	5.6	5.7
South East Water Ltd	Vic				4.0	4.8	6.9
Brisbane Water	Qld	16	19.5	20.3	12.3	8.7	7.8
Water Corporation	WA	9.7	10.4	8.6	9.1	9.4	11.4
SA Water	SA	12.2	14.2	13.7	14.9	12.7	19.4
Yarra Valley Water	Vic				30.9	27.6	33.9
ACTEW Corporation	ACT	93.5	102.8	96.6	107.2	76.8	81.5
Metro Average		27.5	26.8	25.3	23.6	17.2	19.4

Performance

This is the first year that SA Water has not reported better than the average of all metropolitan utilities. The Corporation is on par with the average, with 2 utilities performing worse than SA Water.

The trend over the five years to 2005-06 has been relatively stable with an increase in 2006-07. The increasing trend has continued into 2007-08 with SA Water reporting a result of 23 overflows per 100km. This increase can be attributed to the increased incidence of breaks and chokes discussed at 3.2. This is primarily a result of the very dry conditions impacting on sewer mains.

Going Forward

The Corporation will continue evaluating and identifying sewer overflow risks and implementing measures such as system upgrades, as identified in our overflow abatement program, and targeted preventative sewer maintenance programs.

EPA licence compliance (SM)

SA Water's wastewater treatment plants are separately licensed by the EPA in order to manage discharges to the environment. The Corporation also has licenses for other processes such as abrasive blasting, transferring of treated water, dealing with specified (listed) waste, and discharging stormwater to aquifers. This KPI measures compliance (as a %) with these licences.

Strategic Targets (internal results)	2006-07 Actual	2007-08 Actual	2012-13 Target
EPA Licence Compliance	100% (100%)	100% (100%)	100%

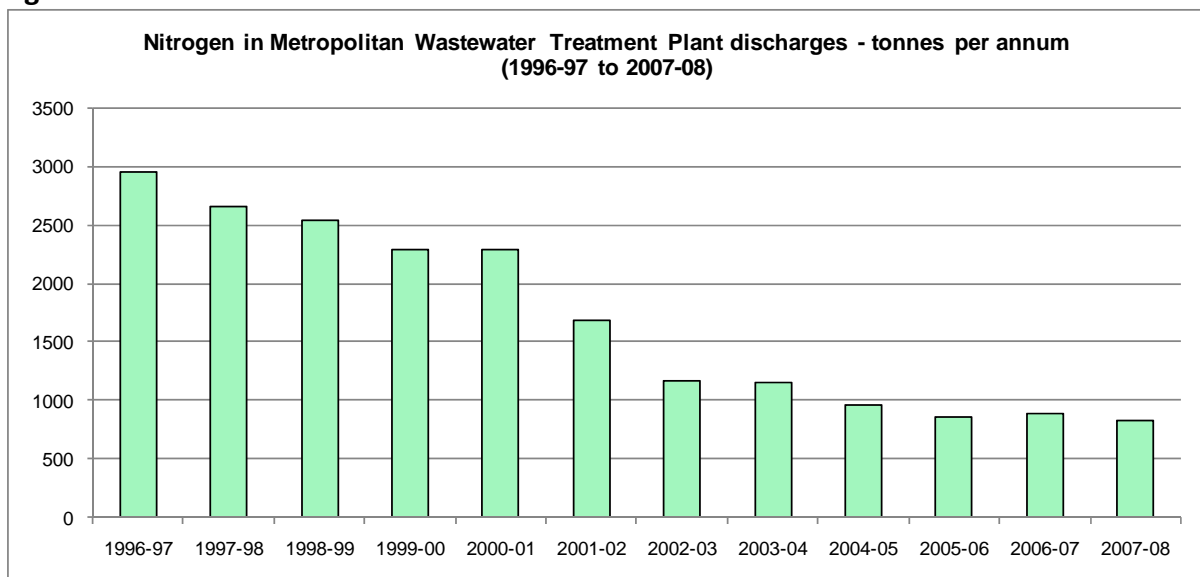
Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result.

Performance

All licence conditions set by the EPA were met in 2006-07 and 2007-08.

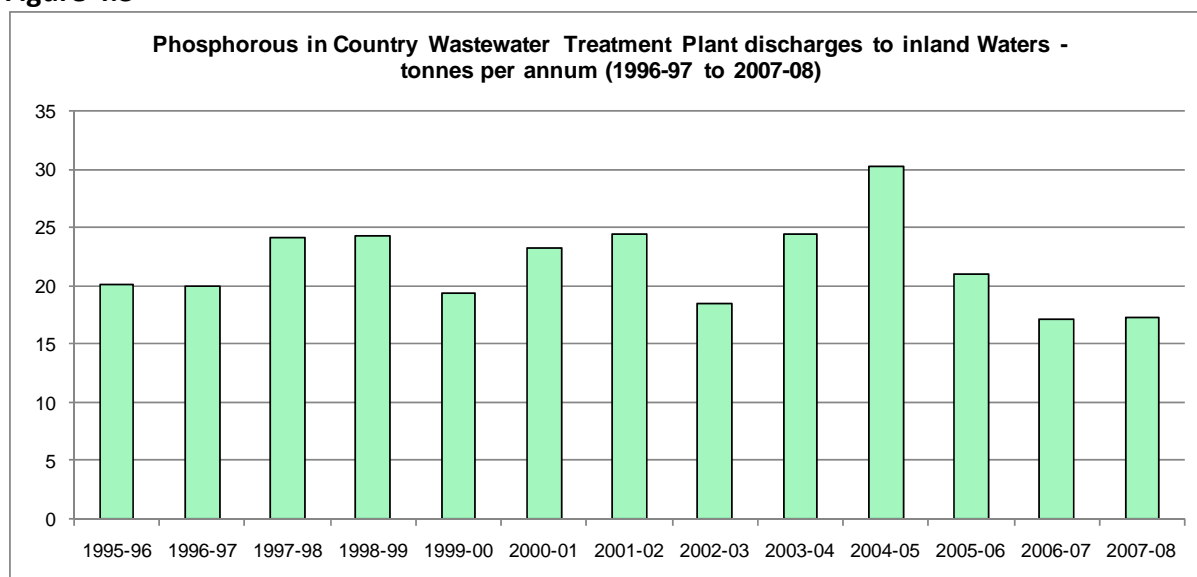
SA Water's wastewater treatment plants are licensed by the EPA in order to manage discharges into the environment. Figures 4.2 and 4.3 show reduced levels of discharge of nitrogen and phosphorous over the last ten years.

Figure 4.2



The focus of upgrade works at the metropolitan wastewater treatment plants has been to reduce the concentrations and loads of nitrogen discharged into the marine environment as nitrogen impacts on the health of seagrass.

Figure 4.3



Discharge to inland waters from SA Water’s regional wastewater treatment plants has focussed on phosphorous concentration and load reductions as phosphorous contributes to algal growth in fresh water systems. This is why nitrogen is reported for metropolitan discharges and phosphorous for regional discharges.

Going Forward

SA Water is aiming to maintain 100% compliance with EPA licences going forward.

Number of Type 1 & 2 wastewater notifications (SM)

This KPI measures the number of Type 1& 2 wastewater alert incidents (environment wastewater incidents) reported by SA Water to the EPA under a protocol agreed by each organisation. Type 1 incidents are those that are causing or threatening to cause serious or material environmental harm. Type 2 incidents are those that are causing or that could cause environmental harm but are not of a high impact or on a wide scale.

Strategic Targets (internal targets)	2006-07 Actual	2007-08 Actual	2012-13 Target
Reduce the Number of Type 1 & 2 Waste Water Notifications	98 (113)	73 (108)	92

Note: Targets for 2006-07 and 2007-08 are shown in brackets below the annual result.

Performance

SA Water seeks to prevent environmental incidents. However, the size and nature of the Corporation’s operations and systems at times leads to failures and overflows.

There were 10 Type 1 wastewater overflows in 2007-08. Causes of the incidents included:

- overflows due to high rainfall events overloading sewer networks;
- sewer chokes; and
- valve and level detection failures.

Chapter 4 –Sustainable Future

Several wastewater overflows involved discharges which entered water bodies (both inland and marine) and may have caused localised environmental impact. Some of these overflows were caused by external events beyond SA Water's control.

Most environmental incidents are related to wastewater overflows caused by sewer blockages from tree root intrusion, foreign bodies and fats and oils. Some overflows are caused through power failures. Programs are currently in place to upgrade infrastructure to prevent sewer overflows from occurring in problematic areas. Increased preventative maintenance is also in place to minimise the risk of chokes in sewers.

Investment in overflow abatement, combined with lower rainfall, contributed to SA Water staying within its target for wastewater environmental notifications for both 2006-07 and 2007-08.

Going Forward

SA Water is aiming to lower the target going forward and will aim to maintain current performance levels where possible.

As mentioned above, SA Water is continually evaluating and identifying sewer overflow risks and implementing measures such as system upgrades as identified in the Corporation's overflow abatement program and targeted preventative sewer maintenance programs.

Analysis of incident types will continue to be undertaken to identify incidents which are controllable and changes in work practice to enable further reductions in incident numbers. This will assist in directing investment of the Abatement Program.

4.3 CLIMATE

For its metropolitan sector, SA Water's net greenhouse gas emissions in recent drought years are high compared to other utilities due to its electricity usage being dependent on the need to pump water from the River Murray. SA Water drew approximately 91% and 85% of South Australia's drinking water supply from the River Murray in 2006-07 and 2007-08 respectively.

SA Water is seeking to reduce its greenhouse gas emissions to comply with the Kyoto Protocol and several other initiatives are being implemented to enhance electricity efficiency and reduce the Corporation's environmental impact.

Net tonnes of greenhouse gas emitted (SM & NPR)

This KPI measures the net tonnage of greenhouse gas emissions from the business.

Reductions in emissions can be achieved by sequestration, renewable energy purchases and energy recovery projects (SM definition).

Strategic Targets (internal targets)	2006-07 Actual	2007-08 Actual	2012-13 Target
Net Tonnes of Greenhouse Gas Emitted ¹	675,061	433,816	405,000 per calendar year

Note: Targets for 2006-07 and 2007-08 are not shown for this KPI as reporting on a "net tonnes emitted" approach was only introduced for 2008-09 reporting.

Chapter 4 –Sustainable Future

The Corporation's Strategic Map figures are reported on a total Corporation basis. The NPR data in Table 4.5 reports this data for the Corporation's metropolitan operations only.

Table 4.5

Net Greenhouse Gas Emissions (tonnes CO ₂ -Equivalent)							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Metro							
City West Water	Vic				7,289	8,077	7,840
Power & Water Corp - Darwin	NT	7,730	8,134	8,330	8,988	9,529	9,569
Yarra Valley Water	Vic	24,571	23,421	24,287	25,480	14,667	10,500
South East Water Ltd	Vic	43,211	34,209	34,210	32,148	33,470	29,115
ACTEW Corporation	ACT	31,136	37,171	30,064	29,948	30,590	40,203
Brisbane Water	Qld	193,589	203,275	204,740	207,639	193,365	161,596
Sydney Water	NSW	387,304	394,420	367,490	380,554	355,624	403,432
Water Corporation	WA		367,214	373,179	384,371	394,493	418,869
SA Water	SA	305,512	443,973	282,222	281,879	265,336	425,753
Metro Average		141,865	188,977	165,565	150,922	145,017	167,431

Performance

SA Water has consistently been a high emitter of greenhouse gas across the period with a significant increase recorded in 2006-07.

Based on a per 1,000 properties approach, SA Water also reported the highest figure, with 845 net tonnes per 1,000 properties in 2006-07 for metropolitan Adelaide.

For the 2006-07 NPR, SA Water did not report this measure for its regional operations. SA Water's regional areas of Mt Gambier and Whyalla will be reporting greenhouse gas information for the first time in the 2007-08 NPR.

The majority of SA Water's electricity use and greenhouse gas emissions are caused by the need to pump water from the River Murray - SA Water drew approximately 91% and 85% of South Australia's drinking water supply from the River Murray in 2006-07 and 2007-08 respectively. In 2006-07 SA Water's emissions on a total Corporation basis (SM) were at a historical maximum of 675,000 tonnes CO₂-e (net) due to pumping requirements. During 2007-08, SA Water's major pumping has been curtailed. SA Water's greenhouse gas mitigation activities helped curtail emissions from a gross value of over 700,000 tonnes CO₂-e.

In 2007-08, SA Water continued to improve on past performance in terms of greenhouse gas abatement, largely due to improved renewable energy use and revegetation programs.

Going Forward

SA Water is seeking a reduction in net greenhouse gas emissions to ensure compliance with the Kyoto Protocol. The annual target of 405 000 net tonnes of greenhouse gas emitted is equivalent to the Kyoto commitment, being 108% of 1990 emission levels. Based on current

Chapter 4 –Sustainable Future

calculations this equates to 804 net tonnes per 1,000 properties, which is still greater than the average of all States.

Recently the Corporation has undertaken extensive consultation on a proposed Climate Change Sector Agreement. The proposed agreement sets out targets including achieving compliance with the Kyoto Protocol (period 2008-2012); achieving 20% renewable energy use; and reducing emissions by 60% compared with 1990 levels by 2050.

A new procedure, “Greenhouse Footprint Evaluation in Significant Capital Projects and Procurement”, was developed in early 2008 for inclusion in the Corporation’s Environmental Management System. It aims to identify the potential environmental impacts from greenhouse gas emissions associated with the construction, operation and eventual decommissioning of any new capital work projects within SA Water at the development stage and throughout the design process. The procedure supports the development of strategies to reduce energy use, while encompassing the integration of greenhouse gas footprint evaluation into SA Water’s procurement, project management, planning and design stages.

The Australian Government’s Energy Efficiency Opportunities (EEO) program requires large energy-using businesses to assess their energy use to identify cost effective opportunities for improving energy efficiency. Through this program, SA Water is confident that future energy efficiency will be identified (Refer to Chapter 5.1 for further details).

The Greening of Government (GoGO) Framework, approved by Cabinet in 2006, provides an implementation framework for agencies to progress greening plans. SA Water has completed key strategic milestones for the framework and has adopted the principles of GoGO around sustainable workplace operations. The Corporation has also supported government agencies in attempting to meet the GoGO milestones.

Underlying growth trends, the need for additional water security projects, higher quality wastewater requirements and wastewater recycling are also causing SA Water's emissions to grow. However, SA Water will manage its net greenhouse gas emissions performance in accordance with its proposed Climate Change Sector Agreement with the Government of South Australia, which includes commitments to use more renewable energy, expand energy recovery and renewable energy projects and maintain revegetation programs.

5. Commercial Success

The Corporation's Strategic Map includes measures that relate to profit before tax, return on assets and capital expenditure. The key components of these measures, to be analysed from an efficiency perspective, are closely associated with operating costs and capital expenditure. Both are reported in the 2006-07 NPR for past performance and the Budget and Forward Estimates from a forward looking perspective. As such, no further analysis on the Strategic Map measures was considered necessary in this chapter.

All figures quoted in this chapter, unless stated otherwise, are shown in real 2006-07 dollars consistent with the 2006-07 NPR.

5.1 OPERATING COSTS

Real operating cost Per Property – (\$ / property) (NPR)

Operating costs include operations, maintenance and administration costs, but exclude interest/finance charges, capital depreciation, asset write-downs and non-core business operating costs.

The 2006-07 NPR (p41) reports the following key factors affecting operating costs:

- “changes in water consumption over time;
- network characteristics, for example the extent of pumping or treatment required given the significant energy requirements of these functions;
- customer density, where higher numbers of customers within smaller supply areas tend to result in lower operating costs per property;
- the extent to which water is sourced from external bulk business or other services are outsourced. The separation of ‘bulk’ and ‘retail’ functions is important as, where a retail business receives supply from an external bulk water utility, the cost of this supply will include capital-related costs for the bulk supplier. A utility which owns and operates its own ‘bulk’ supply sources would report, for this indicator, only the operating costs relating to these functions, and not depreciation or a return on capital invested; and
- some utilities operate defined benefit superannuation schemes which, depending on the performance of the investment environment, may cause some fluctuation in operating costs year on year.”

As a consequence of differences in operating environments, cost comparisons of water utilities must be interpreted with caution.

Metropolitan Water Supply

All metropolitan entities reported an increase in real operating cost per property for water supply in 2006-07 as utilities worked to secure additional water supplies and manage customer demand in the current drought conditions. Despite these challenges, the Corporation maintained a comparative cost efficiency rating (operating cost per property) for metropolitan water at the lower bounds of industry performance.

The Corporation's operating cost per property for water supply has increased marginally over the period with notable temporary increases in 2002-03 and 2006-07.

Drought conditions resulted in increased pumping costs, in particular in 2002-03 and 2006-07. The Corporation has reduced the cost per kilolitre for major pumping and is undertaking focused work to actively improve electricity efficiency going forward.

Other cost pressures relating to the climatic conditions have been incurred in maintaining service levels and responsiveness to customers, ensuring water licences are not exceeded and planning for future water security measures.

Performance

As discussed above, there are several factors that impact on metropolitan water operating costs which are important for the analysis herein. Table 5.1.1 below identifies some of the key factors.

Table 5.1.1

Key statistics – water supply							
	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Major Pumping							
Metro volume pumped from River Murray (GL)	70	154	73	65	68	193	90
Water Supplied							
Metro consumption (GL - master meter)	173	178	166	166	151	156	139
Customer Growth							
Metro total connected properties – water supply (000s)	475	480	486	492	499	504	510

Furthermore, in support of the existence of different operating environments in the provision of water services, the Commonwealth Grants Commission investigated the impacts of water availability and quality variations across regions on water supply costs and produced an index of water cost disadvantages arising from accessibility and water quality. The index, which is presented in Table 5.1.2³, shows that SA Water has a 0.9 disadvantage

³

Commonwealth Grants Commission (2004), 'Concessions and other payments – water, sanitation and protection of the environment', *2004 Review Working Papers*. See especially pp 80-81.

Chapter 5 –Commercial Success

index in water accessibility and quality. Only two other water companies (Actew AGL and Water Corporation) have a disadvantage index and in each case they are relatively small.

The data strongly supports the contention that transporting water long distances (from the River Murray to Adelaide) and the low quality of that source water, impose significant cost disadvantages for South Australia's metropolitan water supply arising from very poor availability and poor quality.

Table 5.1.2

Index of Disadvantage in Water Accessibility and Quality by Drainage Division			
	Availability	Quality	Combined Impact ¹
ActewAGL (Murray-Darling)	0	1	0.1
Brisbane Water (NE Coast)	0	0	0
City West Water (SE Coast)	0	0	0
Power & Water* (Timor Sea)	0	0	0
SA Water (SA Gulf)	2	1	0.9
South East Water (SE Coast)	0	0	0
Sydney Water (SE Coast)	0	0	0
Water Corporation (SW Coast)	0.2	1	0.18
ActewAGL (Murray-Darling)	0	0	0

Note: Calculated by the Grants Commission as $0.4 \times \text{Availability} + 0.1 \times \text{Quality}$.

Despite having a clear water quality and water availability disadvantage, when compared with other interstate water companies, the Corporation has operating costs for water in the metropolitan area that are comparable to the lowest cost operators.

Table 5.1.3 below shows the real operating cost per property for metropolitan water supply from 2001-02 to 2006-07 as reported in the 2006-07 NPR.

Table 5.1.3

Real operating cost – water (\$/property) – 2006-07 Dollars							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
South East Water Ltd	Vic	180	190	177	184	180	183
Yarra Valley Water	Vic					189	190
SA Water	SA	176	199	181	183	184	203
Water Corporation	WA					180	205
Sydney Water	NSW		265	234	244	224	260
Brisbane Water	Qld	292	235	237	254	246	278
ACTEW Corporation	ACT	309	302	317	318	242	282
City West Water	Vic	309	317	296	309	284	289
Power & Water Corp - Darwin	NT	304	334	332	304	316	390
Metro Average		262	263	253	257	227	253

Chapter 5 –Commercial Success

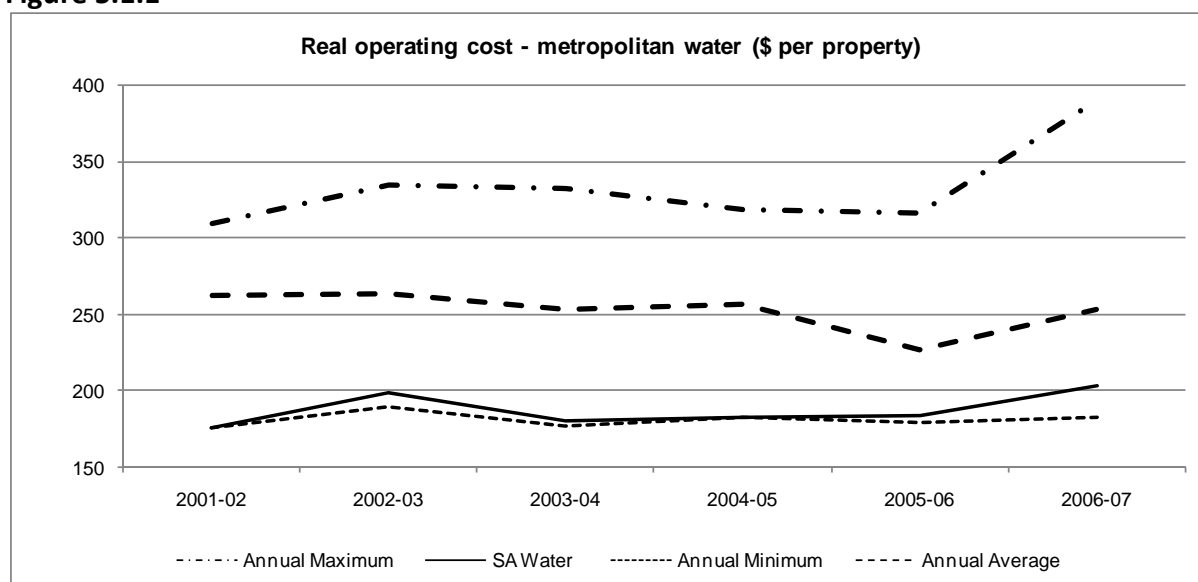
The Corporation's real operating cost per property for metropolitan water was \$198 in 2007-08 (in 2006-07 dollars).

All metropolitan entities reported an increase in real operating cost per property for water supply in 2006-07 (compared to 2005-06). The drought conditions experienced in 2006-07 are more than likely the primary driver for this increase across the country, as entities spend more to secure additional and more reliable water supplies.

Despite this challenge, the Corporation continued its strong performance in comparison to other entities, having the third lowest operating cost per property in 2006-07, well below the average of \$253 per property. SA Water's operating cost per property for metropolitan water supply has consistently outperformed the industry average, with the Corporation being the lowest cost provider in several years.

Figure 5.1.1 illustrates how the Corporation has kept its operating costs relatively stable, despite one-off increases in 2002-03 and 2006-07, which are explained further below.

Figure 5.1.1



To analyse the drivers of cost pressures and trends the components of real operating cost: labour; material and other costs; electricity; and chemical costs, are discussed below.

Labour

Note that labour costs are SA Water labour costs and do not include United Water labour – United Water's labour costs are part of materials and other costs.

The Corporation's labour costs displayed an increasing trend from 2002-03 to 2006-07, this reflects:

- an increase in the average number of full-time employees over the period, required to meet higher development activity;
- higher costs associated with enterprise bargaining pressures over the period;

Chapter 5 –Commercial Success

- a change in the accounting treatment for the SA Water workshops. Prior to 2003-04, costs associated with the workshops were accounted for separately and charged out to customers internally and across the State. As a result, workshops costs were recorded as material and other costs. From 2003-04, internal transfer pricing for the workshops ceased and the costs were recognised as direct labour costs. This change has impacts across the Corporation's four business segments; and
- increases in the number of full-time employees from 2006-07 as a result of increased workloads due to the implementation of water restrictions and other drought initiatives. These included labour costs for water conservation officers and additional call centre resources. Water conservation measures were introduced in 2003, with Level 2 water restrictions introduced in October 2006 and Level 3 restrictions introduced in January 2007.

Material and Other Costs

The Corporation has experienced an increasing trend in materials and other costs from 2003-04. The primary drivers for this increase in costs were:

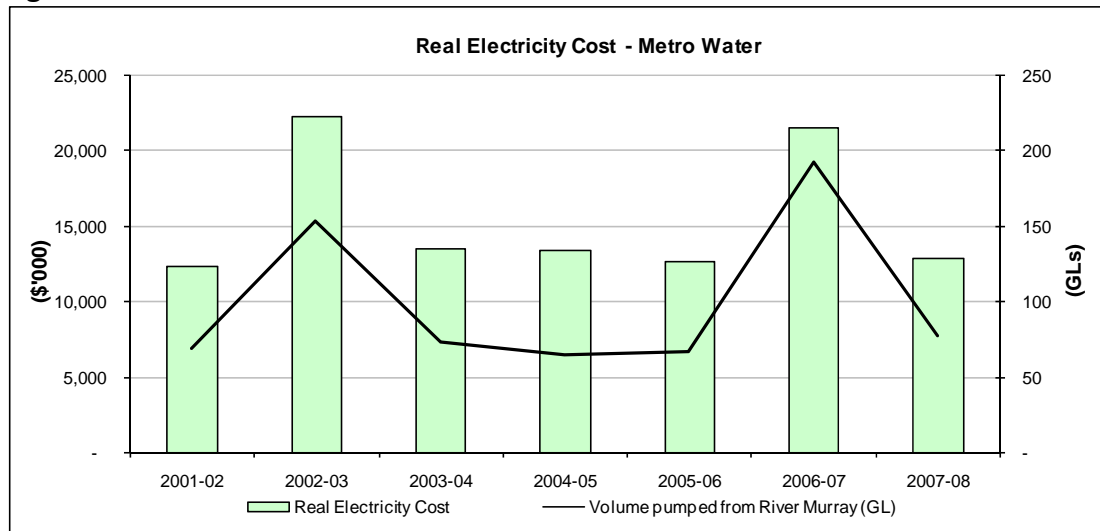
- an increase in expenditure on operational and service contracts, as a result of an increase in bursts attended and water services provided due to the dry conditions causing soil movement from 2006-07;
- an increase in contractor costs associated with increased activity due to drought initiatives, including communications and advertising programs, initial investigations into a weir at Wellington and additional resources to answer higher volume of customer enquiries from 2006-07;
- the introduction of the Water Efficiency Rebate Scheme in 2007-08 and the associated administration of this scheme;
- the purchase of additional temporary water allocations for 2007-08 to ensure compliance with existing water licences (refer Chapter 4.1); and
the expensing of a one-off provision in 2005-06 for the remediation costs of the Corporation's Thebarton Offices (allocated to each of the four business segments).

The cost pressures for labour and material and other costs are generally linked to the current climatic conditions which are considered to be outside the direct control of SA Water. The costs were incurred in order to maintain high service levels to customers, continue to be responsive to customers and to ensure water licences were not exceeded.

Electricity Costs

The operating cost per property cost spikes in 2002-03 and 2006-07 are primarily due to increases in electricity costs associated with additional major pumping from the River Murray in both of these years. The additional pumping from the River Murray was required due to significantly lower than average inflows into Adelaide's main storages in these years. For example, in 2006-07, as a drought pumping strategy an additional 60 gegalitres from the 2007-08 River Murray metropolitan allocation was brought forward and pumped into the metropolitan reservoirs to provide water security for 2007-08.

Figure 5.1.2



The total expenditure on electricity for pumping water from the River Murray through the major transmission pipelines can vary significantly depending on the combination of customer demand, quantity of water available from natural catchments and requirements for water security. Over the period, the Corporation has achieved a decreasing trend in the variable energy cost per kilolitre associated with the Corporation's major pumping.

From 2006-07 the improvement is partly linked with the introduction of new energy tariffs negotiated by SA Water under a five year contract with a new energy retailer.

Chemical Costs

Real chemical costs for the metropolitan area halved from 2000-01 to 2007-08. This is primarily due to an improvement in source water quality; a result of improved water quality sourced from the River Murray, due to low flow rates and the subsequent lower turbidity. In addition to the improved water quality over the period, a decrease in the volume of water supplied to customers has also been a factor in reducing the overall chemical costs.

Metropolitan Sewerage Services

The Corporation continued its high performance in comparison to other entities and had the lowest operating cost per property in 2006-07. Since 2002-03 costs have increased marginally, due mainly to the Environmental Improvement Program that has delivered significant improvements in environmental compliance and performance.

Performance

Table 5.1.4 below identifies some of the key factors affecting the Corporation's metropolitan sewerage services which are important in the context of the analysis herein.

Table 5.1.4

Key statistics – sewer							
	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Customer Growth Metro total connected properties – sewer (000s)	447	451	458	464	470	475	480
Percentage of Sewerage Treated to a Tertiary Level	54.6%	81.6%	91.0%	97.0%	100.0%	99.9%	100.0%

Table 5.1.5 below show the real operating cost per property for metropolitan sewerage services from 2001-02 to 2006-07 as reported in the 2006-07 NPR.

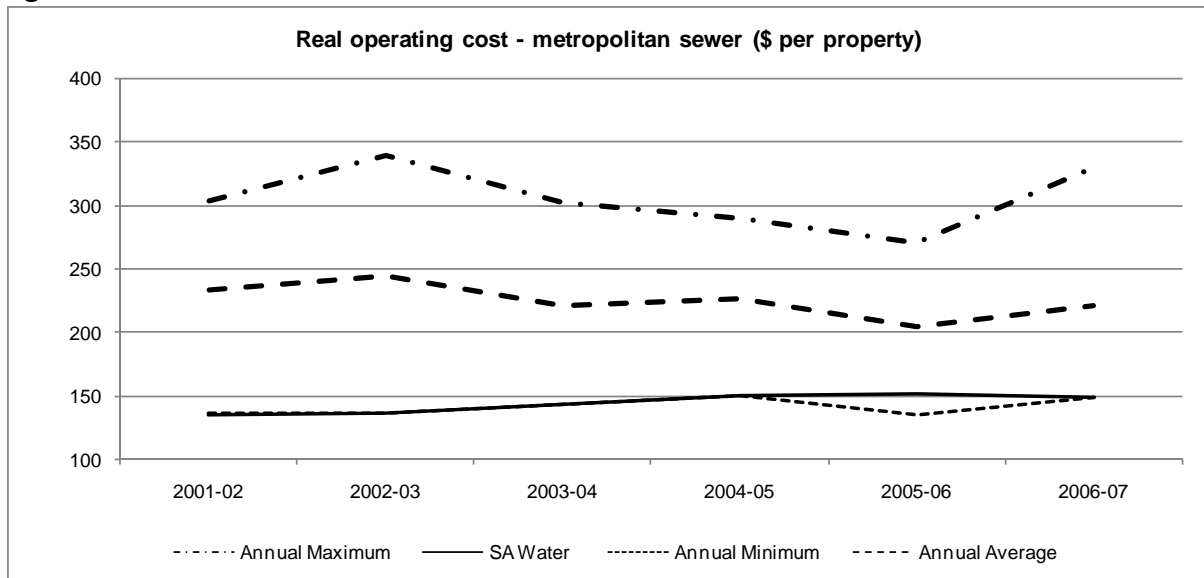
Table 5.1.5

Real operating cost – sewerage (\$/property) – 2006-07 Dollars							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
SA Water	SA	136	137	144	151	152	149
Brisbane Water	Qld	244	217	194	185	179	175
Water Corporation	WA					188	187
Sydney Water	NSW		289	210	211	135	190
South East Water Ltd	Vic	201	199	199	213	211	211
Yarra Valley Water	Vic					213	223
City West Water	Vic	233	228	220	243	226	225
ACTEW Corporation	ACT	303	300	302	288	264	294
Power & Water Corp - Darwin	NT	286	340	279	290	270	330
Metro Average		234	244	221	226	204	220

The Corporation's real operating cost per property for metropolitan sewerage services was \$151 in 2007-08 (in 2006-07 dollars).

The Corporation continued its high performance in comparison to other entities and had the lowest operating cost per property in 2006-07, well below the average of \$220 per property. Over the period SA Water has consistently been the lowest cost provider as illustrated in Figure 5.1.3.

Figure 5.1.3



To analyse the drivers of cost pressures and trends the components of real operating cost: labour; material and other costs; electricity; and chemical costs, are discussed below.

Labour

The factors driving a marginal increasing trend in labour costs from 2002-03 to 2005-06 are primarily due to:

- an increase in the average number of full-time employees over the period, required to meet higher development activity;
- higher costs associated with enterprise bargaining pressures over the period; and
- a change in the accounting treatment for the SA Water workshops (refer to the metropolitan water labour discussion for further details).

Material and Other Costs

A slight upward trend in materials and other costs across the period is largely attributable to additional costs incurred as a result of the Corporation's Environment Improvement Program (EIP), which has been introduced to meet higher environmental standards required by the EPA. SA Water has, at a significant cost over the past several years, adjusted its operating practices to reduce negative environmental impacts.

The EIP included the following metropolitan projects: Bolivar Dissolved Air Flotation Filtration plant and associated sludge dewatering process; the Queensbury Diversion; the Christies Beach EIP; and the Glenelg EIP. These plants are operated under contract and as such the operating costs associated with these additional supplies are included in materials and other costs.

As discussed in Chapter 4.3, and shown in Table 5.1.4 above, there has been a substantial increase in the proportion of wastewater treated to a tertiary level over the period. Interstate companies have seen some significant increases in the degree of tertiary

Chapter 5 –Commercial Success

treatment, but none as significant as SA Water's increase. Tertiary treatment is typically the most expensive treatment process to operate.

As well as improving discharges to the St Vincent's Gulf, the EIP has helped to increase the percentage of water recycled (refer Chapter 4.1) and ensured the Corporation continues to be EPA compliant (refer Chapter 4.3).

If EIP operating costs were to be removed from materials and other costs, this cost category would remain relatively stable over the period.

Electricity Costs

Electricity costs have remained relatively stable across the period, displaying a small downward trend from 2003-04.

Chemicals

Chemical costs have remained relatively stable across the period.

Regional Water Supply

SA Water's regional operating cost per property for water is in the midrange of the compared companies for both 2005-06 and 2006-07. SA Water's operating costs per property for regional water supply display a marginal increasing trend since 2003-04 largely associated with several key regional water initiatives which increased the amount of treated water delivered to customers. Other cost pressures relate to repair costs associated with the Eyre Peninsula bushfire and similar to the metropolitan water segment, increased labour and contractor costs and the introduction of a water efficiency rebate scheme, in response to the current climatic conditions.

Performance

As discussed earlier, there are several factors that impact on operating costs. Table 5.1.6 below identifies some of the key factors affecting the Corporation's regional water supply costs.

Table 5.1.6

Key statistics – regional water supply							
	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Major Pumping Regional volume pumped from River Murray (GL)	63	56	41	41	42	50	37
Water Supplied Regional consumption (GL - master meter)	93	103	80	86	84	90	80
Customer Growth Regional total connected properties – water supply (000s)	171	174	177	180	183	186	190

Table 5.1.7 below show the real operating cost per property for regional water services from 2005-06 to 2006-07 as reported in the 2006-07 NPR.

Table 5.1.7

Real operating cost – water (\$/property) – 2006-07 Dollars ¹							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Water Corporation - Mandurah	WA					148	160
Noosa Water Services	Qld					184	186
Toowoomba City Council	Qld					261	210
Fitzroy River Water	Qld					358	308
Byron Shire Council	NSW					428	377
East Gippsland Water	Vic					629	464
South Gippsland Water	Vic					968	493
Power & Water Corp - Alice Springs	NT						699
Country Energy	NSW						869
Regional Average						425	418
SA Water Internal Estimate ²		390	409	365	390	408	411
Adjusted Regional Average						423	418

1. Regional data for 2005-06 has been converted to 2006-07 dollars to be consistent with metropolitan data. The 2006-07 NPR published regional financial data in nominal dollars.
2. Total regional estimate was not reported in the 2006-07 National Performance Report. As previously mentioned SA Water does not currently report regional centres financial data in the NPR. For the purposes of further discussion herein, internal financial data for SA Water's Regional operations has been used from 2001-02 to 2006-07.

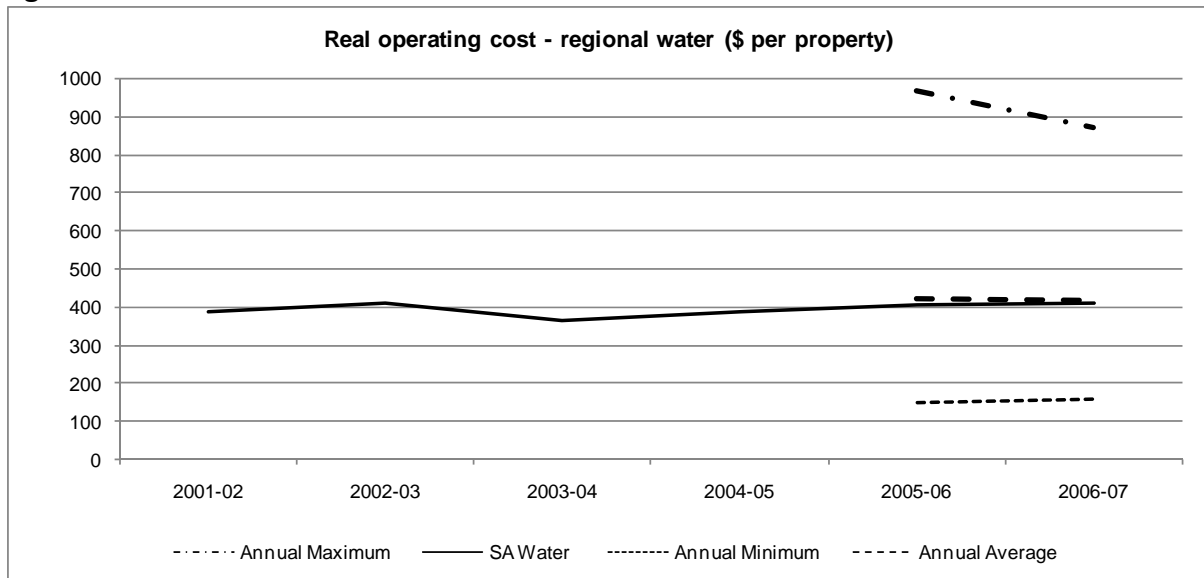
The Corporation's real operating cost per property for regional water was \$448 in 2007-08 (in 2006-07 dollars).

SA Water's regional operating cost per property for water is in the midrange of the compared companies for both 2005-06 and 2006-07 and slightly below the regional average. This reflects:

- the diversity of systems within the SA regional data. For example, Mount Gambier's water is sourced readily from the Blue Lake, whereas Whyalla's water must be treated and pumped 350km from the River Murray;
- whole-of-State regional averages which depend on the proportions of "low cost" and "high cost" regions that are present in the State; and
- South Australia's disadvantage in terms of water availability and quality variations (as detailed in Table 5.1.1 earlier in this chapter).

It is difficult to make longer term comparisons of operating cost per property trends in regional areas as regional centres have only been reporting in the NPR since 2005-06 and there is large variability between regional areas. Figure 5.1.4 displays this graphically, showing SA Water costs relatively stable and around the average of the compared companies.

Figure 5.1.4



Overall, from 2001-02 to 2006-07, operating costs per property for regional water supply have been relatively stable. SA Water has experienced a marginal increasing trend in operating costs per property since 2003-04 with the largest increase occurring in 2005-06.

The overall decrease in costs in 2003-04 relates to a shift in the allocation of indirect costs following a detailed review of program reporting which allocated a greater proportion of costs to the regional wastewater segment rather than the regional water segment. As such trend analysis below is focused on the period 2003-04 to 2007-08, which shows variable operating costs (electricity and chemicals) displaying a general downward trend, offset by an upward trend for fixed costs.

To analyse the drivers of cost pressures and trends the components of real operating cost: labour; material and other costs; electricity; and chemical costs, are discussed below.

Labour

Labour costs have also experienced cost pressure from 2003-04. This is attributable to:

- an increase in the average number of full-time employees as additional resources have been progressively required to meet higher development activity, to monitor water quality, to respond to drought conditions and implement restrictions;
- increased labour costs associated with the Corporation's response to the Eyre Peninsula bushfires in 2004-05;
- higher costs associated with enterprise bargaining pressures over the period; and
- a change in the accounting treatment for the SA Water workshops (refer to the metropolitan water labour discussion for further details).

Chapter 5 –Commercial Success

Material and Other Costs

Materials and other costs for regional water have displayed an upward cost trend from 2003-04.

An increase in 2005-06 is attributable to the additional repair costs associated with the Eyre Peninsula bushfire which enabled the Corporation to maintain supply to customers in circumstances which were beyond the Corporation's control. Whilst this cost pressure did not exist in 2006-07 or 2007-08, an increase in contractor costs was noted due to higher activity levels required for drought initiatives, including communications and advertising programs and additional resources to answer higher volume of customer enquiries.

The last 5 years has seen several key regional water initiatives come on line which increased the amount of filtered water delivered to customers as a part of the Corporation's Country Water Quality Improvement Program.

A further increase in 2007-08 is partly attributable to the Country Water Quality Improvement Program – Stage 3 (CWQIP3). CWQIP3 has meant a further 17 regional communities now receive filtered and treated water from the River Murray as opposed to their previous non-potable supply. As a result of this program the provision of filtered water has increased by around 10.55 ML per day in regional SA. Operation is largely undertaken through a third party contract by which SA Water pays for the labour, chemical, materials and maintenance cost of operating the 9 new plants at Kanmantoo, Mypolonga, Cowirra-Neeta, Swan Reach, Palmer, Blanchetown, Cadell, Moorook and Glossop.

The increase in 2007-08 is also attributable to some of the whole of business initiatives which were described earlier in the metropolitan water analysis. These include:

- the introduction of the Water Efficiency Rebate Scheme in 2007-08 and the associated administration of this scheme; and
- the purchase of additional temporary water allocations for 2007-08 to ensure security of supplies and compliance with existing water licences (refer Chapter 4.1).

Electricity Costs

From 2003-04, electricity costs have marginally decreased. As discussed in the metropolitan water section of this chapter, major pumping costs have decreased over time partly linked with the introduction of new energy tariffs negotiated by SA Water under a five year contract with a new energy retailer.

Chemical Costs

Chemical costs have remained relatively stable over the period.

Whilst material and other costs have increased over the period, SA Water has increased the percentage of treated water to regional customers and has supplied water to new customers. SA Water has also responded to the challenge of drought conditions and events outside of its control to ensure water security for customers is maintained.

Regional Sewerage Services

SA Water's regional operating cost per property for sewerage is in the midrange of the compared companies for both 2005-06 and 2006-07. The Corporation's real operating costs for regional sewerage services have increased marginally over the period 2000-01 to 2006-07. This is largely due to increased operating costs associated with the new Victor Harbour waste water treatment plant and upgrades to several regional wastewater treatment plants. These upgrades have had a positive impact on service standards including increasing the percentage of sewerage treated to a tertiary level, increasing the percentage of water recycled and helping SA Water ensure the Corporation continues to be EPA compliant.

Performance

As discussed earlier, there are several factors that impact on operating costs. Table 5.1.8 below identifies one of the key factors affecting the Corporation's regional sewerage service costs.

Table 5.1.8

Key statistics – sewer							
	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
Customer Growth Regional total connected properties – sewer (000s)	58	58	59	60	61	62	63

Table 5.1.9 shows the real operating cost per property for regional sewerage services from 2005-06 to 2006-07 as reported in the 2006-07 NPR.

Table 5.1.9

Real operating cost – sewerage (\$/property) – 2006-07 Dollars ¹							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Toowoomba City Council	Qld					148	152
Water Corporation - Mandurah	WA					211	225
Noosa Water Services	Qld					324	228
Country Energy	NSW					251	234
Fitzroy River Water	Qld					252	235
South Gippsland Water	Vic					281	304
Water Corporation - Bunbury	WA					353	330
Power & Water Corp - Alice Springs	NT					529	356
East Gippsland Water	Vic					502	452
Byron Shire Council	NSW						516
Regional Average						317	303
SA Water Internal Estimate ²		218	224	261	269	296	281
Adjusted Regional Average						315	301

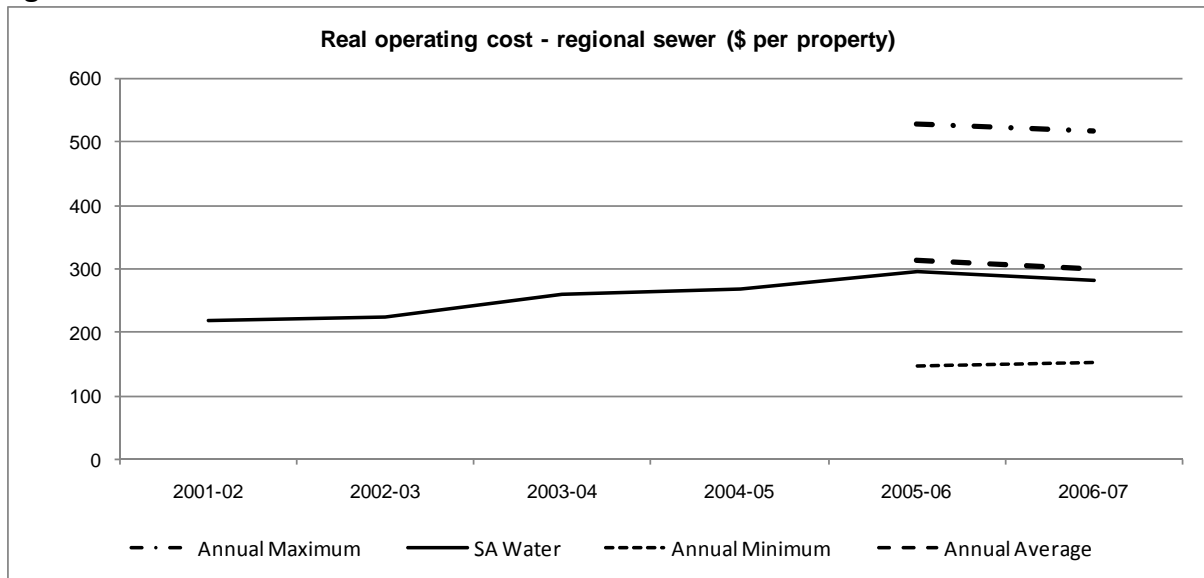
1. Regional data for 2005-06 has been converted to 2006-07 dollars to be consistent with metropolitan data. The 2006-07 NPR published regional financial data in nominal dollars.
2. Total regional estimate was not reported in the 2006-07 National Performance Report. As previously mentioned, SA Water does not currently report regional centres financial data in the NPR. For the purposes of further discussion herein, internal financial data for SA Water's Regional operations has been used from 2001-02 to 2006-07.

The Corporation's real operating cost per property for regional sewerage services was \$307 in 2007-08 (in 2006-07 dollars).

SA Water's regional operating cost per property for sewerage is in the midrange of the compared companies for both 2005-06 and 2006-07 and slightly below the regional average.

It is difficult to make longer term comparisons of operating cost per property trends in regional areas as regional centres have only been reporting in NPR since 2005-06; analysis of SA Water's regional cost trend is more useful as shown in Figure 5.1.5.

Figure 5.1.5



The Corporation's real operating costs for regional sewerage services have increased over the period 2000-01 to 2006-07, as shown in Figure 5.1.5.

The increase in 2003-04, relates to a shift in the allocation of indirect costs following a detailed review of program reporting. This effectively allocated a greater proportion of costs to the regional wastewater segment rather than the regional water segment. This resulted in more accurate recognition of cost activities from 2003-04. As such trend analysis below is primarily focused on the period 2003-04 to 2007-08.

To analyse the drivers of cost pressures and trends the components of real operating cost: labour; material and other costs; electricity; and chemical costs, are discussed below.

Labour

Labour costs have also experienced marginal cost pressure from 2003-04. This is attributable to:

- an overall increase in workload across many outer-metropolitan treatment plants as a result of expanding hills and regional development;
- increased labour costs associated with preventative maintenance to reduce the incidence of chokes; and
- a change in the accounting treatment for the SA Water workshops (refer to the metropolitan water labour discussion for further details).

Material and Other Costs

Material and other costs have displayed cost pressures over the period for regional sewerage.

The increase in 2005-06 is partly attributable to the commissioning of the Victor Harbour Waste Water Treatment Plant which was built to meet environmental requirements. This plant is managed under contract. The 2005-06 increase was also driven in part by

Chapter 5 –Commercial Success

remediation works from the Eyre Peninsula fire to ensure the reliable treatment of waste and a minimisation of environmental harm.

Over the period the Corporation has upgraded several of its regional wastewater treatments plants (WWTP) to meet environmental requirements and a general increase in workload across many outer-metropolitan treatment plants as a result of expanding hills and regional development. These projects include the construction of WWTPs in Victor Harbour, Whyalla, Port Pirie and an upgrade at Heathfield WWTP. Operating costs associated with these upgrades has added cost pressures for regional wastewater.

The significant increase in 2005-06 relates to the expensing of a one-off provision for the remediation costs of the Corporation's Thebarton Offices, which was allocated across the four business segments.

Other pressures over the period included increases in preventative maintenance to reduce the incidence of chokes and a Corporation-wide increase in fleet costs in 2004-05.

Electricity Costs

Electricity costs have remained relatively stable over the period.

Chemical Costs

Chemical costs have marginally increased over the period which is attributable to the upgraded wastewater treatment plants in order to meet higher environmental standards.

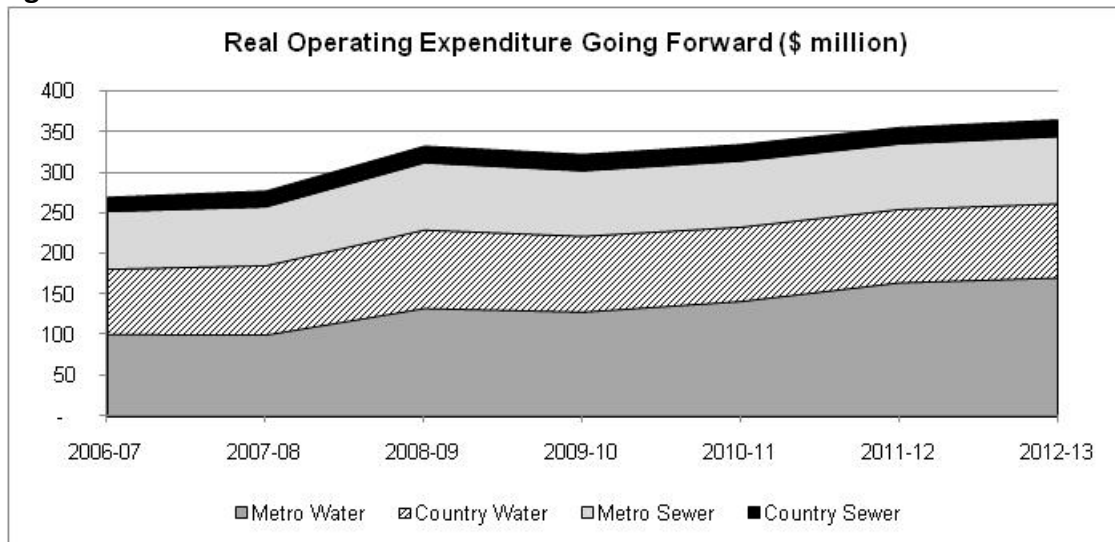
Whilst cost pressures are evident for regional wastewater, the upgrade of several WWTPs has had a positive impact on service standards including increasing the percentage of sewerage treated to a tertiary level (refer Chapter 4.3), increasing the percentage of water recycled (refer Chapter 4.1) and helping SA Water ensure the Corporation continues to be EPA compliant (refer Chapter 4.3).

Going Forward

Operating costs for water supply are expected to remain under pressure going forward, driven by the need for enhanced levels of water security. Operating costs for sewerage services are expected to remain relatively stable to 2012-13.

Figure 5.1.6 illustrates the total operating cost profile going forward across the four business segments.

Figure 5.1.6



The metropolitan water segment is the main contributor to increases in real operating costs across the Corporation going forward.

The cost pressures are primarily associated with water security for customers and ensuring the Corporation continues to operate within its licence allocation going forward (refer Chapter 4.1), despite ongoing drought conditions.

Adelaide Desalination Plant (ADP): the operating costs for the ADP are expected to put upward pressure on operating costs from 2009-10. The project is expected to deliver First Water by the end of December 2010 and is due to end its commissioning and testing phase and achieve Project Completion and Project Handover by the end of June 2011. At this point the plant will be capable of producing at capacity. The costs increase progressively as the plant increases to full production and cycles through its essential maintenance periods.

Purchase of water licences: the Corporation will continue to acquire additional temporary water licences in 2008-09 to ensure critical human needs are met during 2009-10.

Additional pumping: SA Water's metropolitan licence allows up to 180GL of river Murray water to be pumped during 2008-09. It is expected that SA Water will be required to pump from the River Murray at the maximum rate but within its licence.

Chapter 5 –Commercial Success

In addition to these water security related cost pressures, the following factors contribute to the increase in base operating costs from 2007-08 to 2008-09:

- the ongoing purchase of carbon offsets from 2008-09 to ensure the Sustainable Future greenhouse gas emission target is achieved (refer to Chapter 4.3);
- an increase in operating costs associated with the delivery of capital projects across the period. Key projects include the Southern Urban Reuse Scheme and the Glenelg to Adelaide Parklands recycled water project. Although these projects are related to re-use of wastewater, for regulatory purposes 50% of the costs have been included in the metropolitan water segment;

These projects will deliver significant improvements in strategic performance, particularly in regards to the percentage of water recycled (refer Chapter 4.2). Other benefits include a reduction in nutrient loads discharged to the Gulf of St Vincent which assist to deliver some objectives of the Adelaide Coastal Water Study as well as the closure of the Noarlunga Downs sludge lagoons; potentially improving environmental compliance as well as reducing odour complaints.

- The continuation of water restrictions also has an impact on metropolitan and regional water supply operating costs. Additional costs include: communications and advertising; continuation of the RAA Hotline; labour costs associated with Water Restrictions Officers; cost of additional water treatment; water carting; and water quality investigations.

Energy Efficiency Opportunities

The Australian Government's Energy Efficiency Opportunities (EEO) program requires large energy-using businesses to assess their energy use to identify cost effective opportunities for improving energy efficiency.

The Assessment Framework includes six key elements:

- Leadership – demonstrated commitment through all levels of the corporation;
- People – responsibilities and accountabilities are suitably allocated;
- Information, Data and Analysis – data is appropriately, comprehensively and accurately measured and analysed;
- Opportunity Identification and Evaluation – undertake an effective process to identify all potential energy efficiency opportunities and undertake a whole of business evaluation;
- Decision Making – management make informed decisions based on quality investment information; and
- Communicating Outcomes – increased awareness of the outcomes achieved within and external to the business.

Chapter 5 –Commercial Success

SA Water has submitted an Assessment and Reporting Schedule which was approved by the Department of Resources, Energy and Tourism in January 2008. The Schedule identified the following actions:

- Identified three key energy using activities to undergo detailed energy assessments:
 - water transmission;
 - wastewater treatment, recycling and disposal; and
 - water distribution
- Established Energy Efficiency Steering Committee to oversee compliance with the legislation and pursue energy efficiency outcomes, of appointed an Energy Efficiency Sponsor.
- Established Energy Management Policy to articulate SA Water's commitment to responsible strategic management of energy into the future to:
 - ensure continuity of supply;
 - improve cost efficiency;
 - increase energy efficiency; and
 - reduce the Corporation's impact on the environment.

Through this program, SA Water is confident that future energy efficiency will be identified.

5.2 TOTAL COSTS

On a total cost basis the Corporation's performance in the metropolitan area has been strong when compared to other utilities.

Real total cost per property – (\$/property) (NPR)

Total cost for water supply/sewerage services (\$/property) equal to operating cost for water supply/sewerage services plus current cost depreciation for water supply/sewerage assets divided by Total connected properties receiving water supply/sewerage services)

Table 5.2.1 and Table 5.2.2 compare SA Water's real total cost per property for metropolitan water and sewerage services.

Table 5.2.1

Real total cost – water (\$/property) – 2006-07 Dollars							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Metro							
South East Water Ltd	Vic	180	190	177	184	180	183
Yarra Valley Water	Vic						190
SA Water	SA	260	281	264	269	273	298
Water Corporation	WA					286	307
Sydney Water	NSW		501	409	336	311	369
Brisbane Water	Qld	398	334	337	364	363	413
Power & Water Corp – Darwin	NT	414	479	470	445	462	534
ACTEW Corporation	ACT	576	552	556	562	519	559
City West Water	Vic						
Metro Average		366	390	369	360	342	357

Table 5.2.2

Real total cost – sewerage (\$/property) – 2006-07 Dollars							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Metro							
South East Water Ltd	Vic	201	199	199	213	211	211
Yarra Valley Water	Vic						223
SA Water	SA	219	212	224	233	231	235
Water Corporation	WA					334	330
Sydney Water	NSW		642	513	325	256	345
Brisbane Water	Qld	339	306	281	284	285	346
Power & Water Corp – Darwin	NT	343	397	342	355	340	374
ACTEW Corporation	ACT	547	528	513	489	419	375
City West Water	Vic						
Metro Average		330	381	345	317	297	305

Performance

Caution must be taken when comparing total cost per property as the depreciation component of this cost varies significantly with the asset valuation methodology used by the utility. Difficulties associated with determining total cost measures, particularly with respect to the treatment of capital assets, mean that the more limited operating cost measure is widely used for comparison purposes (refer Chapter 5.1). Moreover capital costs are to a significant degree a legacy of decisions taken long ago and it may be preferable to confine attention to aspects which are in the control of current management.

The Corporation reported the third lowest total cost per property for both water supply and sewerage services in 2006-07. Over the six year period SA Water's total cost per property has consistently been well below the average of the compared entities.

Total cost per property for both water and sewer generally follows the same trend over the period as operating cost per property. This is to be expected as operating costs are a major component of total costs for the Corporation.

5.3 CAPITAL EXPENDITURE

Historically the Corporation's level of capital expenditure for metropolitan water supply has been low, compared with other utilities. Going forward this is set to increase significantly as enhanced levels of water security are delivered.

SA Water has delivered a number of significant water supply projects in regional South Australia from 2001-02 to 2007-08. These projects have significantly improved the level of service to several areas.

For the sewer side of its business the Corporation's capital expenditure has been focused predominantly on meeting enhanced environmental standards. Delivery of these projects has increased the levels of water recycled as well as reduced the environmental impacts of the Corporation's wastewater treatment plants.

SA Water is currently investigating the impact of the Adelaide Coastal Water Study on SA Water's metropolitan sewerage.

The Corporations' capital planning process is driven by corporate risk management processes, which encompass managing the changing operating/business environment, risk based asset renewal and responding to growth in demand, all of which are linked to outcome measures.

As well as monitoring expenditure for capital projects, each project is required to be expressed in terms of outcomes so that capital investment can be measured in terms of realised benefits and not just cost. In 2007-08, approximately 80% of infrastructure projects had quantifiable outcome targets that linked to the Strategic Map.

Real capital expenditure – (\$000s) (NPR)

Water supply capital expenditure reflects the actual capital expenditure on water supply for the reporting year. This should include all capital expenditure for: new works; renewals or replacements; other expenditure that would otherwise be referred to as capital; and recycling water assets.

Sewerage capital expenditure is the actual capital expenditure on sewerage for the reporting year. This should include all capital expenditure for: new works; renewals or replacements; and other expenditure that would otherwise be referred to as capital.

Table 5.3.1 and Table 5.3.2 compare SA Water’s real capital expenditure for metropolitan water and sewerage services.

Table 5.3.1

Real capital expenditure - water supply (\$000s) – 2006-07 Dollars							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Metro							
Sydney Water	NSW				101,524	176,598	228,731
Water Corporation	WA	87,483	126,678	110,445	122,790	364,329	220,481
Brisbane Water	Qld	26,326	34,632	39,621	32,107	42,016	100,768
Yarra Valley Water	Vic					85,456	71,240
SA Water	SA	26,573	21,236	29,873	32,292	33,486	32,938
South East Water Ltd	Vic	27,236	36,001	27,955	22,900	19,592	28,494
City West Water	Vic	13,916	15,183	25,864	34,906	37,152	26,430
ACTEW Corporation	ACT	13,788	9,094	32,637	48,374	24,112	19,664
Power & Water Corp – Darwin	NT	14,714	6,465	19,997	9,221	8,141	7,168
Metro Average		30,005	35,613	40,913	50,514	87,876	81,768

Table 5.3.2

Real capital expenditure - sewerage (\$000s) – 2006-07 Dollars							
	State / Territory	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Metro							
Sydney Water	NSW				322,824	336,072	406,755
Water Corporation	WA	137,356	99,541	126,589	77,942	85,113	140,800
Yarra Valley Water	Vic					90,438	96,040
Brisbane Water	Qld	42,316	56,242	99,103	161,093	97,842	80,864
South East Water Ltd	Vic	32,107	66,519	76,250	76,405	41,945	61,501
City West Water	Vic	20,733	21,340	3,606	35,354	46,870	24,346
SA Water	SA	55,316	49,281	77,653	27,805	22,397	23,237
ACTEW Corporation	ACT	10,458	14,133	13,343	12,718	5,341	10,787
Power & Water Corp – Darwin	NT	8,483	8,262	7,969	6,598	7,478	8,052
Metro Average		43,824	45,045	57,788	90,092	81,500	94,709

Chapter 5 –Commercial Success

Of the compared entities only Power & Water Corp – Darwin reported regional capital expenditure data in the *2006-07 NPR*. Therefore, meaningful comparison for regional performance is not considered possible.

Performance

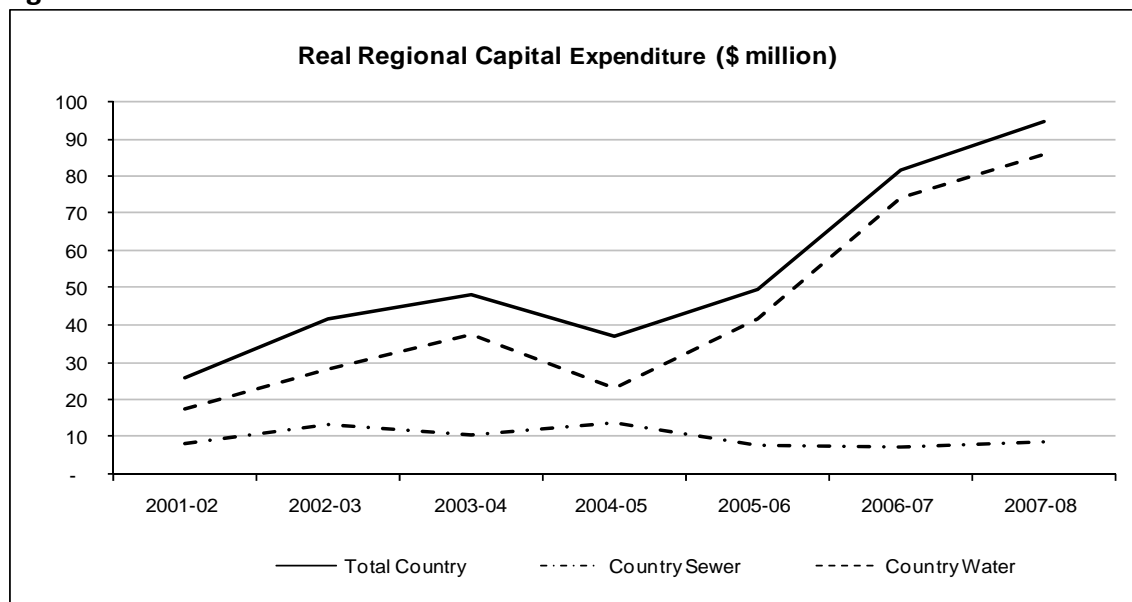
The Corporation's metropolitan capital expenditure for water supply and sewerage services in 2006-07 is in the middle to low range of the compared entities. Sydney Water and Water Corporation reported significantly higher levels of capital expenditure for both water and sewerage services in 2006-07.

The Corporation's metropolitan capital expenditure for water supply has been fairly stable over the period, ranging from \$21 million to \$32 million per annum in real terms.

The Corporation's sewerage capital expenditure has fluctuated more significantly over the period due to the completion of several EIPs as well as the relocation of the Port Adelaide Waste Water Treatment Plant (WWTP) to Bolivar. The EIPs have included the Bolivar Dissolved Air Flotation Filtration plant and associated sludge dewatering process, the Queensbury Diversion, the Christies Beach EIP and the Glenelg EIP. The increased capital expenditure has delivered improved outcomes for the environment, which can be seen by the improvement in the percentage of sewerage treated to a tertiary level (refer Table 4.3.1), increasing the percentage of water recycled (refer Chapter 4.1) and helped to ensure the Corporation continues to be EPA compliant (refer Chapter 4.3).

Figure 5.3.1 shows SA Water's regional capital expenditure from 2001-02 to 2007-08, based on internal estimates.

Figure 5.3.1



The Corporation's capital expenditure in the country sewer segment has remained relatively stable. The completion of several wastewater treatment plant EIPs in the country segment has been the key driver of capital expenditure over the period in this segment. These

projects include the Port Pirie, Whyalla, Heathfield and Victor Harbour wastewater treatment plant EIPs.

Unlike metropolitan water, country water capital expenditure has increased significantly over the period. Country water capital expenditure increased significantly from 2001-02 to 2003-04 as spending on the Clare Valley water supply peaked in these years. This scheme was completed in 2004-05, allowing many townships and irrigators in this world-renowned wine region to access reticulated supply for the first time.

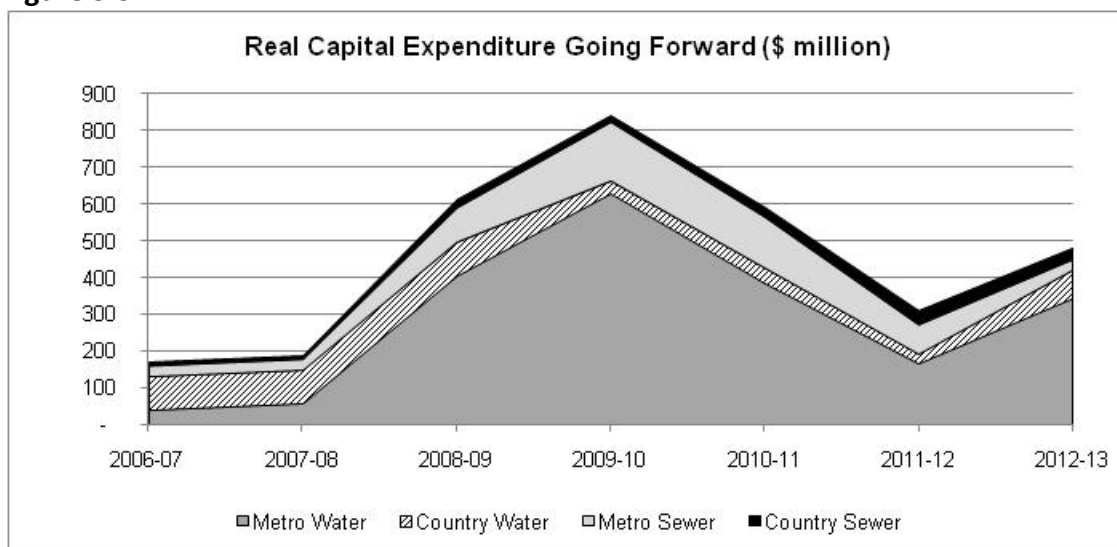
The increasing trend in country water from 2004-05 to 2007-08 is due to several significant projects including:

- Stage 3 of the Country Water Quality Improvement Program. Underpinned by the Corporation's vision of providing water for growth, development and quality of life to all South Australian, this project improved water quality to several regional communities by delivering filtered water through a series of water treatment plants and pipelines;
- the construction of a pipeline between Lock and Kimba on the Eyre Peninsula, with the aim to reduce pressure on groundwater sourcing on the Eyre Peninsula;
- the upgrade of the Millbrook Dam wall and spillway as a part of an established program to meet national and international standards for best practice management and safety of dam structures;
- the completion of a 12km pipeline from Milang to connect to existing network in Clayton, replacing existing aquifer and lake extraction; and
- replacement of the high voltage switchboards at the pumping stations along the Morgan Whyalla Pipeline – a critical State water asset. Investigations had concluded that the high voltage equipment originally installed in the 1940's had surpassed its design life.

Going Forward

Figure 5.3.2 illustrates the total capital profile going forward across the four business segments.

Figure 5.3.2



Chapter 5 –Commercial Success

The key driver for this significant increase in capital expenditure is spending on water security initiatives for metropolitan Adelaide including: the 50GL ADP; a north-south interconnector pipeline; and the potential expansion of Mount Lofty storages. The Corporation's capital expenditure program is forecast to peak in 2009-10, which is driven by a peak in spending on the ADP.

As well as the increase in expenditure for water security, the Corporation is also planning to increase its metropolitan sewerage capital expenditure from 2007-08. Significant projects going forward include: the Christies Beach and Aldinga Wastewater Treatment plant upgrades.

The release of the Adelaide Coastal Water Study in November 2007 has the potential to further impact on the Corporation's metropolitan sewerage business. The Study's primary findings, which have potential impacts for SA Water, are to reduce nitrogen emissions to the marine environment by 75% and identify targets for stormwater reuse.

SA Water is committed to reducing the impact of its operations on the environment and as a first step in response to the Adelaide Coastal Water Study, will undertake detailed follow-up studies and investigations. SA Water recognises these investigations may result in a requirement for significant capital upgrades to wastewater treatment plants, or the introduction of additional/expanded recycling schemes, or a combination of both. The current Christies Beach Wastewater Treatment Plant upgrade and the Southern Urban Reuse Program are examples of how SA Water is considering the impact of the Adelaide Coastal Water Study in asset management planning.

The Corporation will conduct a full assessment of the study and its implications on SA Water's investment plans and budget, however, at this time key planning and asset management resources are heavily diverted to addressing water security requirements.

6. Value for Money

The Customer Satisfaction Survey conducted by the Corporation in 2007 indicates customers are generally very satisfied with the range and quality of services provided by the Corporation. Eighty-four per cent (84%) of responses to the survey consider that the price of water represents good value.

The standard of service offered by the Corporation to its customers is predominately at the mid-to-high range in the metropolitan area and in the mid-range in the regional areas when compared with the service levels offered customers of the other water bodies.

While SA Water's operating costs for water supply and wastewater services are comparatively low in Adelaide when compared with other Australian cities, water and wastewater bills are comparatively high. To some extent this level of contribution may reflect the relative quality of assets which, in turn, as earlier demonstrated, provides a generally high level of standards of service.

6.1 INTRODUCTION

Value for money for customers of a water company like SA Water that is highly asset-based and does not set the prices it charges is problematic and difficult to assess. Demonstrating value for money is made even more challenging when comparable water providers interstate do not have the same operating conditions. For example, most do not pump source water long distances; most have access to source water that is of generally good quality; and most provide their services in geographical conditions with soils that are either sandy or more readily worked compared with the clay soils around Adelaide. To compound problems associated with the use of comparisons, as discussed earlier there is an inconsistent approach to the valuation of assets in the water industry in Australia which has a consequential impact on the calculation of total costs.

Notwithstanding these quite significant obstacles it is important to consider the services being provided in the context of the charges being levied, that is, the value for money for customers who purchase water and wastewater services. Value for money for customers is considered here in terms of:

- customer feedback – that is, what customers say about the quality of services and the price;
- an assessment of the relative quality of service compared to other water bodies; and
- an assessment of the costs of providing the services relative to the customer's bill.

A brief discussion is also provided about the Corporation's Customer Assist Program that has been developed to assist customers in financial hardship.

Chapter 6 – Value for Money

In aggregate this information provides some assessment of the value for money customers derive from the services provided by the Corporation.

6.2 CUSTOMER FEEDBACK

As indicated earlier in this report, in June 2008 the Corporation undertook its eighth annual customer satisfaction survey to measure satisfaction with its service delivery and performance across a broad range of areas. The state-wide study involved three telephone surveys for three target groups:

- General households – 618 interviews (411 metropolitan and 207 regional);
- Households who have contacted SA Water – 457 interviews (256 metropolitan and 201 regional); and
- Businesses – 308 interviews (205 metropolitan and 103 regional).

General household survey results

Table 6.1 shows the total results of the general household survey. Overall, these results show:

- high levels of satisfaction with indicators such as reliability of supply, safety of drinking water and essential service;
- relatively high levels of satisfaction with SA Water being professional and competent, responsive when something goes wrong, active in educating the public about water issues, and being trusted to manage the State's water and wastewater systems well; and
- mixed levels of satisfaction with the amount charged for water as it represents good value and in reducing greenhouse gas emissions.

Overall, the survey confirmed SA Water is well regarded as a service provider with customer satisfaction at a high rate of 8.0 (out of 10).

Table 6.1

General Household Survey Results

Attribute	Result
Reliability of service	8.4
Safety of drinking water	8.1
Essential service	8.0
Performance and competence	7.7
Responsiveness to a problem	7.2
Advice in educating the public	7.1
Trusted manager of water and wastewater systems	7.1
Charges reflect value for money	6.7
Reducing greenhouse gas emissions	6.2

Households who have contacted SA Water

Table 6.2 shows the results of the survey of customers who had contacted SA Water recently. In particular, these are results of the survey that sought responses concerning the level of satisfaction with the service provided by SA Water. Overall, these results show:

- very high levels of satisfaction with SA Water’s reliability of supply, the safety of drinking water supplied, provision of an essential service, being responsive when something goes wrong, and being professional and competent;
- relatively high levels of satisfaction with SA Water’s services for being active in educating the public about water issues and how to conserve water, and being trusted to manage the State’s water and wastewater systems well; and
- mixed levels of satisfaction with the amount charged for water as it represents good value and in reducing greenhouse gas emissions.

Overall, the survey confirmed SA Water is well regarded as a service provider with customer satisfaction at a high rate of 8.0.

Table 6.2

Household’s contacted SA Water Survey Results	
Attribute	Result
Reliability of service	8.5
Safety of drinking water	8.3
Essential service	8.3
Professional and competent	8.0
Responsiveness to a problem	8.1
Advice in educating the public	7.4
Trusted manager of water and wastewater systems	7.4
Charges reflect value for money	6.9
Reducing greenhouse gas emissions	6.7

Business survey results

Table 6.3 shows the results of the survey of business customers. In particular, these are results of the survey that sought responses concerning the level of satisfaction with the supply of mains water and sewerage services to their business. Overall, these results show:

- very high levels of satisfaction with reliability of supply and the effort to provide water at an acceptable pressure; and
- relatively high levels of satisfaction for SA Water being professional and competent, the extent to which SA Water can manage the State’s water and wastewater systems well, responsiveness when something goes wrong, the level of commitment to improving drinking water quality, the level of environmental responsibility, the amount charged for water as it represents good value and the focus on future need’s.

Overall, the survey confirmed SA Water is well regarded as a service provider with business customer satisfaction at a high rate of 7.9.

Table 6.3

Business Customer Survey Results

Attribute	Result
Reliability of service	8.6
Commitment to improving drinking water quality	7.1
Effort to provide water at acceptable pressure	8.1
Professional and competent	7.8
Responsiveness to a problem	7.2
Focus on future needs	7.0
Trusted manager of water and wastewater systems	7.2
Charges reflect value for money	7.0
Level of environmental responsibility	7.0

6.3 COMPARATIVE LEVELS OF SERVICE

Metropolitan operations

The Corporation's performance in a range of service measures compared to other interstate water utilities for its metropolitan operations is summarised in Table 6.4. The compared utilities are the same as those used in the benchmarking analysis of the NPR in the earlier chapters of this report. In comparing the relative performance, the performance of each water utility is ranked against the total number of compared utilities – the better performing being given a higher ranking. The bracketed number is the number of utilities compared. This varies due to the availability of data.

The Table also makes a qualitative assessment of the performance – they are assessed as either high, medium or low for a segment of the ranked scores as follows:

Ranking of 1-3	High
Ranking of 4-6	Medium
Ranking of 7-9	Low

For example, from the Table, SA Water's metropolitan operations performance for the number of water quality complaints per 1,000 properties was second highest from a total of nine compared utilities. This was considered high performance.

Table 6.4

SA Water metropolitan service performance - summary comparisons

Service Standard	Rank ⁽¹⁾ 06-07	Corporation Performance
Customer Service and Water Quality		
Percentage of population where microbiological compliance was achieved	Equal 1	High
Number of water quality complaints per 1,000 properties	2 (9)	High
Average connect time to a telephone operator (seconds)	2 (7)	High
Number of sewage odour complaints (per 1000 properties)	8 (9)	Low
System Performance		
No. of water main breaks per 100 km of main	3 (8)	High
Number of sewer main breaks and chokes (per 100 km)	8 (8)	Low
Infrastructure leakage index	3 (9)	High
Sustainable Future		
Sewage treated to a tertiary level (%)	2 (9)	High
Recycled water (%of effluent recycled)	1 (9)	High
Net greenhouse gas emissions (tonnes CO2 –equivalent)	9 (9)	Low
Bio-solids reused (%)	6 (8)	Low
Sewer overflows to the environment (per 100 km) ⁽²⁾	7 (9)	Low

Regional operations

The results of comparisons of performance of the Corporation's regional operations relative to interstate regions regional utilities are provided in Table 6.5 . A ranking is provided according to the number of utilities with data supplied in a similar manner to the metropolitan operations.

The Table also makes a qualitative assessment of the performance – either high, medium or low and relates this to a segment of the ranked scores⁴.

⁴

The assessments have been assigned on the basis of the following number of indicators:

No. of indicators	High	Medium	Low
7	1-2	3-4	5-7
8	1-3	4-6	7-8
9	1-3	4-6	7-9
12	1-4	5-8	9-12

Table 6.5

SA Water's relative performance – Regional operations – service standards

Performance measure	Mt Gambier		Whyalla	
	Ranking	Performance	Ranking	Performance
Customer Service and Water Quality				
Number of water quality complaints/1,000 properties	2 (7)	High	4 (7)	Medium
Number of sewage odour complaints (per 1000 properties)	1 (12)	High	4 (12)	High
System Performance				
Number of water main breaks/100 km	1 (9)	High	5 (9)	Medium
Number of breaks and chokes/100km	2 (9)	High	8 (9)	Low
Sustainable Future				
Number of sewer overflows to the environment	5 (8)	Medium	7 (8)	Low

Overall comparison of service level

When comparing the range of service measures with other water companies in Australia (12 in the metropolitan area and 5 in regional areas), the Corporation displays the following overall relative performance in standards of service:

Service Standards	Relative Performance		
	High	Medium	Low
Metropolitan	7	0	5
Mt Gambier	4	1	0
Whyalla	1	2	2
Total	12	3	7

That is, when aggregated approximately 70% of the Corporation's performance results are at the high and medium comparative level with the remaining 30% at the low comparative level. It can therefore be concluded that the standard of service offered by the Corporation to its customers is predominately at the mid-to-high level when compared with the service levels offered customers of compared water utilities.

6.4 COMPARATIVE LEVEL OF COSTS OF SERVICES AND CUSTOMER BILLS

A customer's assessment of value for money invariably will be the intersection of value or quality of service and the cost or charge. Customer feedback has been discussed in Chapter 6.2 and a comparison of levels of service has been made in Chapter 6.3. This chapter considers the relative costs of providing the service and the corresponding charges levied on customers.

The 'costs' are reflected by the operating cost per property for water supply and operating cost per property for wastewater services contained in *NPR 2006-07*. This metropolitan data has been provided already in this report but it is combined in Table 6.6 for broader

Chapter 6 – Value for Money

comparison purposes. Also, for ease of comparison, data is presented for each Australian mainland city (based on the relevant water utility in each State/Territory). A weighted average has been used to recognise the substantially different number of properties served in each city. For example, Darwin has substantially higher costs than the other cities but this has little impact on the weighted average given its size.

Charges to customers are presented in Table 6.7 as a combined average water and wastewater bill based on a water consumption of 250kL per annum. Again, a weighted average has been used.

Table 6.6
Operating cost per property for metropolitan water supply & wastewater services
(2006-07 dollars)

	2002-03	2003-04	2004-05	2005-06	2006-07
SA Water	336	325	334	336	352
Water Corporation				368	392
Melbourne*	441	423	450	420	426
Sydney Water	554	444	455	359	450
Brisbane Water	452	431	439	425	453
ACTEW Corporation	602	619	606	506	576
Power & Water Corp - Darwin	674	611	594	586	720
Weighted Average	481	429	443	395	433

* This is a consolidation of data for City West Water, South East Water and Yarra Valley Water.

Table 6.6 shows the operating costs per property for combined water supply and wastewater services in Adelaide are the lowest in 2006-07 and consistently lowest of each city in the previous five years. Costs in Adelaide are consistently below the weighted average cost.

Table 6.7 shows that Adelaide residents are charged at about the mean of their interstate counterparts but consistently more than the weighted average.

Table 6.7
Typical Residential Bill (water and sewage)

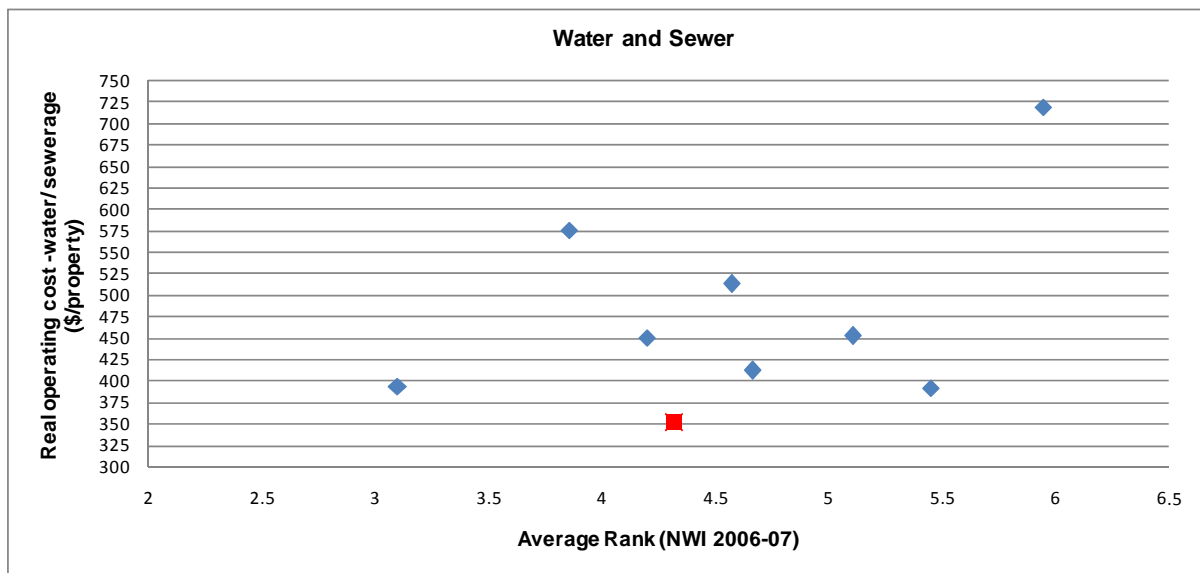
	2002-03	2003-04	2004-05	2005-06	2006-07
Melbourne*	450.39	443.69	440.16	476.76	468.89
Brisbane Water	628.00	656.72	677.26	627.01	627.08
Sydney Water	638.91	632.49	638.02	693.51	697.81
SA Water	692.92	687.03	700.07	719.56	738.90
ACTEW Corporation	623.80	630.95	686.82	747.30	739.03
Power & Water Corp - Darwin	703.81	721.11	741.82	724.80	771.46
Water Corporation	519.22	743.55	741.82	749.62	799.90
Weighted Average	619	658	668	699	710

* This is a consolidation of data for City West Water, South East Water and Yarra Valley Water.

Chapter 6 – Value for Money

As an alternative graphical representation, Figure 6.1 shows the combined real operating costs for water and wastewater services of eleven metropolitan water providers overlaid with an average ranking of twenty (20) key performance measures from the NPR 2006-07 as detailed in other chapters of this report. The Table shows that SA Water's operating costs (shown in red) are lowest of all the compared providers and approximately mid ranked in terms of the average of the performance measures.

Figure 6.1



6.5 CUSTOMER ASSIST PROGRAM

SA Water recognises that there are times where customers find it difficult to meet household expenses and other financial obligations due to economic hardship, temporary financial difficulty or tragic life events. In order to provide assistance, SA Water has introduced a Customer Assist Program aimed at identifying customers who are having difficulties and providing assistance as early as possible to help prevent customers falling into a utility debt spiral.

Potential causes of hardship can include:

- Unemployment
- Low / reduced income
- Ill health
- Domestic violence
- Addictions (drugs, alcohol, gambling)
- Unexpected large or multiple bills
- Relationship breakdown

Chapter 6 – Value for Money

If customers are experiencing financial difficulties, SA Water has a team of Community Liaison Officers available to help.

Through the Customer Assist Program customers can access assistance through flexible payment arrangements, whilst being shielded from further fees and charges. During 2008, 237 customers have entered the Customer Assist Program with many more receiving ongoing assistance.

An integral part of SA Waters Customer Assist Program is working closely with various organisations which make up South Australia's welfare sector. Community Liaison Officers work directly with financial Counsellors to determine the appropriate type of assistance, ensuring customers are not negatively and unnecessarily impacted by further recovery action.

In order to promote the Customer Assist Program, SA Water co-presents at information forums with Origin Energy and AGL Energy, which are aimed at educating financial counsellors on the assistance which is available.

Additional schemes which will form part of the Customer Assist Program in future include the introduction of Centrelink's *Centrepay* functionality which is currently in the process of being implemented. This will give customers who receive a Centrelink benefit the opportunity to have nominated payments deducted from their entitlement on an automated regular basis.

Also under consideration is an initiative to provide identified hardship customers with assistance in the repairing of leaking internal pipe work. The basis of this initiative is that hardship customers who are on fixed low incomes may not have the financial ability to perform required maintenance on their internal pipe work, which may lead to abnormally high water use bills.