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**October 19, 2009**

# Valuation Report

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## SOUTH AUSTRALIA WATER

### ESTIMATED VALUE: $6,600.7 MILLION

| $ millions | FY2008a | FY2009e | FY2010f | FY2011f | FY2012f | FY2013f | FY2014f |
|---|---|---|---|---|---|---|---|
| Revenue | 889.5 | 967.2 | 1,053.4 | 1,140.4 | 1,226.2 | 1,311.8 | 1,395.1 |
| Operating income | 386.6 | 439.8 | 484.8 | 534.1 | 578.2 | 625.2 | 679.6 |
| Operating margin | 43.5% | 45.5% | 46.0% | 46.8% | 47.2% | 47.7% | 48.7% |
| Net income | 201.0 | 232.6 | 236.6 | 249.4 | 264.5 | 287.3 | 326.1 |
| Net margin | 22.6% | 24.0% | 22.5% | 21.9% | 21.6% | 21.9% | 23.4% |

FY ends June 30
Source: company reports, analyst estimates

## Summary

South Australia Water ("SA Water" or "the company") is the principal water and sewerage supplier in the South Australia state and its capital – Adelaide. The company serves a population of over 1.5 million, supplying over 200 gigalitres of water per year and running a network of over 25,800 km of water mains and 8,500 km of sewers. SA Water is owned by the government of South Australia and is subject to regulations imposed by local and central authorities, relating to water and sewerage rates, water quality requirements and environmental commitments.

The company has been reporting consistent revenues and net income, which suffered a decline in FY2008 due to severe draught and restrictions on water consumption introduced as a result. SA Water has been paying almost all of its net income as dividend in the past years, reflecting stable and cash-positive business.

Currently, the most notable development is the construction of the Adelaide Desalination Plant (ADP), which should secure a significant portion of Adelaide's water supply and reduce the reliance on River Murray which accounted for up to 91% of the company's water in the past. This project requires significant capital commitments and is being funded by consumers through elevated water price growth rates, as well as over $400 million in government funds.

Our valuation, based on a combination of absolute and relative techniques, suggests that SA Water's current value is $6.6 billion.

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## INVESTMENT HIGHLIGHTS

**SA Water is a natural monopoly**

Typical for utilities, SA Water is a natural monopoly, i.e. the only water and sewage supplier in its market. While monopolies may be perceived as a socially undesirable occurrence, it is both unavoidable and desirable for a water utility due to the high level of capital investment and infrastructure maintenance costs required to successfully operate, and due to the significant economies of scale needed to offer an acceptable price to consumers. As such, SA Water faces no direct competition and is protected from competition-driven downward price pressures and market share attrition. The only downward price pressure comes from political and social vectors, but the authorities regulating the pricing of SA Water's services usually take into account the company's operating conditions, which was clearly demonstrated with the recent price increase required to fund the construction of a desalination plant to secure long-term water supply in Adelaide.

Of course, there are implications of being a natural monopoly, the largest being heavy regulation, but regulators usually seek fair distribution of benefits and thus take into account the interests of both the consumers and the utilities.

**Strategic importance of water**

Unlike many other developed countries, Australia, including South Australia, is a largely arid and semi-arid territory where water is a very scarce resource. This makes water supply more than a simple delivery service, but rather a strategically important issue. In turn, SA Water is more than just a utility company – it is a national security vehicle whose purpose is to secure population's access to fresh water. As such, SA Water is very important to the local and central governments and this may benefit the company. For example, SA Water was chosen to operate the Adelaide desalination plant project, even though a completely separate operator could have been set up as a permanent supplier of desalinated water to Adelaide. Such opportunities can expand the revenue streams for the company, strengthening its profitability and stabilising its financial position. In addition, given the importance of SA Water, the government is likely to provide its support should the company run into any kind of trouble, as it will simply have no other choice but to save the only provider of water and sewage in the region.

**Non-cyclical business**

Like most utilities, SA Water delivers services whose demand elasticity is very low. People will always need water and sewage regardless of their income levels, as there are virtually no substitutes and it's almost impossible to live without these necessities. Thus, the company's sales will not decline significantly during a recession, although an economic upswing is unlikely to cause a significant increase in sales or net income either. Utilities are considered defensive investments exactly for this reason. In addition, utilities have regulatory support when prices need to be increased to finance large projects or cover increased costs. Customers simply don't have a choice but to accept the prices that are set by the government.

**South Australia Strategic Plan framework**

SA Water is a government-owned corporation and thus is subject to government's efforts to improve efficiency and attain other economic, social and environmental goals. If an eventual privatisation takes place, we doubt that SA Water will give up these targets as South Australian government's goals are in line with general business trends.

Government's goals applicable to SA Water are generally very desirable and include:

- improving customer satisfaction;
- commercialisation of research, generating additional revenue streams from licensing SA Water's patents and technologies;
- to match R&D expenses level to the average in other states;
- to match the national average in terms of investment in key economic and social infrastructure; and others.

These targets should increase SA Water's financial and operational robustness (normally we would say competitiveness but this is hardly an issue for a natural monopoly).

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**Expertise in water-related issues**
SA Water has accumulated significant expertise in water sourcing, delivery, quality management and other areas. This provides a significant potential to commercialise this intellectual property to drive additional revenues in the future. SA Water has expressed such intention which fits into the South Australian government's goal to commercialise research, as we mentioned above. Given that water is becoming a scarce resource even in regions that were never considered problematic, SA Water could potentially turn this into a significant opportunity. The Adelaide desalination plant could also add to SA Water's expertise as such plants are likely to become more widespread in the future but are rather scarce now.

SA Water's expertise in water quality management was also recognised when SA Water was announced to host the national water research centre, called Water Quality Research Australia (WQRA). WQRA will undertake collaborative research of national application on drinking water quality, recycled water and relevant areas of wastewater management. The main focus of the research programme will be on urban water issues related to public health and acceptability aspects of water supply, water recycling and aspects of wastewater management.

**Desalination plant may increase financial stability**
The Adelaide desalination plant could provide as much as half of the city's water supply, representing an important alternative source of fresh water. The plant should reduce the strain on other sources of water and can reduce the need for consumption restrictions, or at least make them less strict. As FY2008 showed, consumption restrictions imposed by the government limited the volume of water sold to consumers and hence SA Water's revenues. The high proportion of fixed costs in SA Water's cost structure creates high operating leverage which exacerbates revenue declines. Reducing the need for restrictions by adding a new water source may make SA Water stronger in this regard.

## Investment Risks

**Limited water resources**
SA Water relies heavily on River Murray to supply water to its customers. In FY2008, this source accounted for 85% of all water delivered, versus 40% six years earlier, according to the company. As the population and the economy keep growing, demand for water is likely to increase, increasing the strain on the system. The scarcity of water resources is exacerbated by droughts which reduce the amount of water that can be drawn. This was well illustrated in FY2008, when additional restrictions were introduced by the government to limit individual water consumption. This had a direct impact on SA Water's financial performance. Interestingly, a consumer survey showed that many would not increase their consumption to previous levels once the restrictions are eased, meaning that SA Water may not restore its previous per capita sales even during water-abundant periods.

The Adelaide desalination plant should ease the strain on the system and reduce the dependence on River Murray, as the plant's maximum capacity should cover up to half of Adelaide's water requirements. However, should the plant stop its activity for whatever reason, SA Water will be back to square one until the plant resumes operation, relying on River Murray as the primary source of water.

**Environmental risks**
SA Water draws most of its water from River Murray and other natural sources, while infrastructure includes thousands of kilometres of mains, numerous plants etc. These interact directly with the environment through drawing water, construction, repairs, leakages etc. affecting local wildlife, soils, ground water etc. In addition, sewers carry an additional risk of contaminating the environment in case of ruptures or treatment plant accidents which may lead to huge environmental liabilities. These risks will always remain. The Adelaide desalination plant should reduce the reliance on River Murray and thus the impact on the environment, but growth of population, network expansion, droughts and other developments will continue the upward pressure on environmental risks, demanding solid investments into reliability, quality control and reclamation projects.

**Regulatory risks**
SA Water operates in a tightly regulated market. The regulations come from two vectors:

- Resource management, including government-imposed water consumption restrictions, environmental norms, requirement to introduce alternative water sources etc.

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- Regulation of commercial operations, including pricing of water and sewage services, quality of water delivered to the consumer etc.

Thus, the risk comes primarily from two directions:

- Risk of non-compliance leading to additional expenses in the form of fines, legal expenses, upgrade costs etc. (e.g. poor water quality may lead to government fines, consumer lawsuits and costs to upgrade the systems to ensure quality in the future).
- Risk of additional regulations or modification of existing ones in detriment of the company (such as inadequate approved price increase or exaggerated consumption restrictions).

Once again, this risk is unlikely to go away any time soon.

**Aging workforce**

SA Water reports that its workforce is aging, with more than 35% of staff over the age of 50 at the end of FY2008. The company expects the aging to accelerate as baby boomers start retiring. This has prompted SA Water to introduce measures to attract younger workers, such as scholarships, apprenticeships and a graduate programme. In addition, workers who have reached the retirement age are offered an opportunity to remain as part-time employees to transfer knowledge to new staff who are likely to lack the expertise of those who have worked in the industry for many years. SA Water also notes that growing infrastructure will require additional staff. Thus, SA Water is likely to face increasing recruiting costs as a result of the extra effort required to recruit, retain and train employees. This may lead to increased staff turnover, strengthening of the bargaining power of employees and other issues that may lead to higher employee-related costs.

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# VALUATION

Our valuation of SA Water is based on a combination of absolute (DCF-based) and relative (multiples-based) valuation techniques. The relative valuation is complicated by the fact that Australia's water utilities are all owned by public authorities and thus any comparison for SA Water had to be done against foreign companies, mostly US-based.

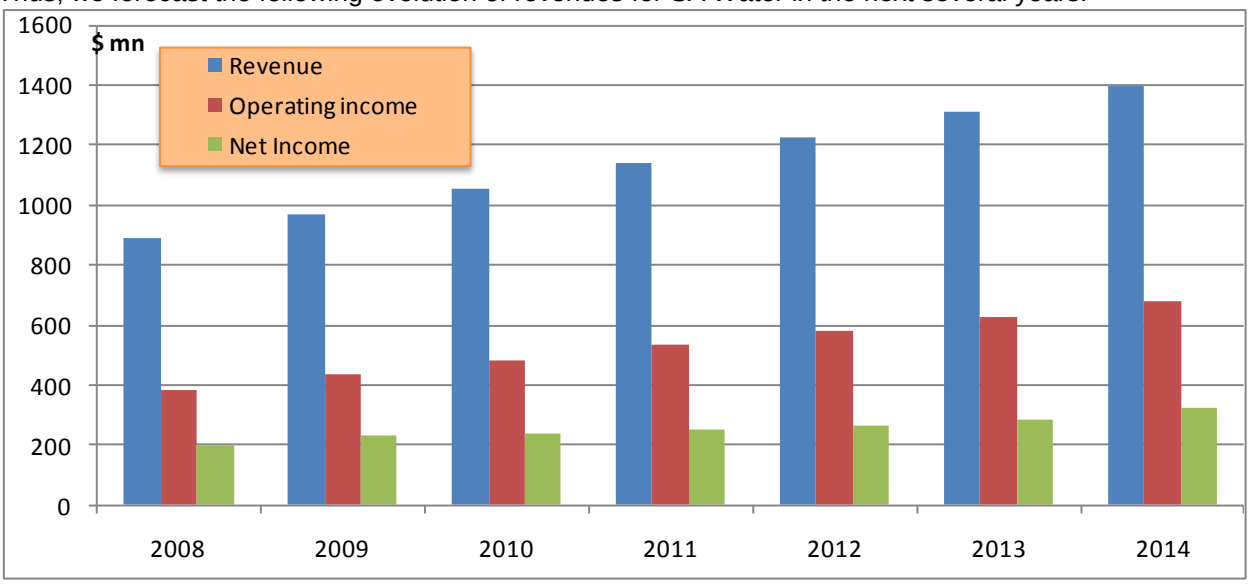
We would also like to point out that our financial model was based on FY2008 report as the most recent available, even though FY2009 ended on 30 June 2009 and year results are known by management.

## Key assumptions

Our model is based on the following assumptions and projections:

- Daily water consumption per capita will grow at a decreasing rate in the next several years, with FY2009 consumption assumed to have grown by 5% versus FY2008 which was marked by steep consumption restrictions.
- Total population was assumed to grow at a decreasing rate: from 0.65% p.a. in 2009 to 0.49% p.a. in Adelaide and from 0.83% p.a. to 0.56% p.a. outside Adelaide, while the percentage of population served was assumed to remain constant.
- Average revenue per kilolitre delivered was assumed to double between FY2008 and FY2014 due to regulatory water price increases.
- Wastewater average revenue per customer growth was assumed to remain constant at the same rate observed in FY2007 and FY2008 – 2.9% p.a.

Thus, we forecast the following evolution of revenues for SA Water in the next several years:




Source: company reports, analyst estimates.

## Absolute valuation

Our absolute valuation uses two methods: DCF valuation based on free cash flows to the firm (FCFF) and dividend discount model (DDM).

The main components of our DCF model are summarised in the table below:

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| | |
|---|---|
| **Beta** | 0.37 |
| **Market premium** | 5.0% |
| **Risk-free Rate** | 5.3% |
| **Cost of Equity** | 7.1% |
| **Long-term Equity Weight** | 70.4% |
| **Cost of Debt** | 7.3% |
| **Long-term Tax rate** | 30.0% |
| **Tax Effected Cost of Debt** | 5.1% |
| **Long-term Debt Weight** | 29.6% |
| **WACC** | 6.5% |
| **Terminal growth** | 2.5% |

Source: company reports, Reserve Bank of Australia, Reuters, Yahoo! Finance, Google Finance, analyst estimates.

The beta was obtained by averaging (by taking the median) peer betas as reported by Reuters, Yahoo! Finance and Google Finance. Peer betas are quite consistent, with mean and median values almost identical. Low beta values are not unusual for utilities as these companies have little correlation with economic cycles and overall stock market performance. This is one of the reasons utilities are considered defensive investments.

Risk-free rate equals the yield on Commonwealth Treasury Fixed Coupon Bonds maturing April 2020. Equity and debt weights are based on book values reported for FY2008.

## Dividend Discount Model (DDM)

The DDM is by far the easiest valuation technique as it simply takes the projected dividends and discounts them to today's value. At the same time we believe it is the best valuation technique for SA Water because the company has been regularly paying dividends at consistent rates, paying out most of its net income.

In the five years to FY2008, SA Water's average dividend payout ratio was 91.6%, varying between 84.2% in FY2005 and 95.1% in FY2006. We assumed the payout ratio to be in the range of 91.6%-93.1% in the future, and our financial model projects SA Water to reach a net income of $326.1 million in FY2014.

| $ millions | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|
| **Net income** | 236.6 | 249.4 | 264.5 | 287.3 | 326.1 |
| **Payout ratio** | 91.6% | 93.1% | 92.7% | 92.3% | 92.3% |
| **Dividend** | **216.7** | **232.3** | **245.2** | **265.2** | **300.9** |
| **Terminal value** | | | | | **6,763.4** |
| **Discounted cash flow** | **203.5** | **204.6** | **202.8** | **205.9** | **219.3** |
| **Discounted terminal value** | | | | | **5,574.7** |

Source: analyst estimates.

Adding the discounted cash flows and the discounted terminal value, the total equity value is $6,610.9 million.

The sensitivity of this model to the terminal growth rate and to WACC is shown below:

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| | WACC | | |
|---|---|---|---|
| LT Growth ↓ | 4.5% | 6.5% | 8.5% |
| **1.5%** | 9,168.69 | 5,459.41 | 3,863.79 |
| **2.5%** | 13,259.61 | **6,610.90** | 4,375.06 |
| **3.5%** | 25,280.17 | 8,521.98 | 5,089.56 |

Source: analyst estimates.

## FCFF-based DCF valuation

This valuation technique takes discounted free cash flows to the firm (FCFF) to arrive at the final value. The model is shown in the table below:

| $ millions | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|
| **Revenue** | 1,053.4 | 1,140.4 | 1,226.2 | 1,311.8 | 1,395.1 |
| ***Revenue growth*** | *9%* | *8%* | *8%* | *7%* | *6%* |
| **EBIT** | 484.8 | 534.1 | 578.2 | 625.2 | 679.6 |
| ***EBIT margin*** | *46.0%* | *46.8%* | *47.2%* | *47.7%* | *48.7%* |
| **EBIT*(1-tax)** | 339.6 | 374.2 | 405.0 | 438.0 | 476.1 |
| **(+) Depreciation & amortisation** | 184.7 | 192.3 | 198.6 | 203.7 | 206.1 |
| **(-) Capex** | -604.0 | -499.0 | -395.0 | -187.5 | -175.3 |
| **(-) Changes in non-cash working capital** | -1.8 | -1.7 | -1.5 | -1.4 | -1.5 |
| ***= Free Cash Flow (FCF)*** | *-81.5* | *65.8* | *207.2* | *452.8* | *505.4* |
| ***Terminal value*** | | | | | *12,830.6* |
| **Discounted cash flow** | **-76.5** | **58.0** | **171.4** | **351.5** | **368.3** |
| **Discounted terminal value** | | | | | **9,364.5** |

Source: analyst estimates.

Company reports and website mention that the Adelaide Desalination Project (ADP) will be worth $1.83 billion, and that the State Government and the Australian Government would invest $228 million each into the plant. Thus, SA Water's own ADP-related capex is estimated at $1.4 billion. This is in addition to the estimated regular capex investments of $140-$180 million per year. The ADP investments are expected to be spread over a 4-year period from FY2009 until FY2012, beginning at $500 million in the first year and declining to $200 million in the final year.

***FCFF-based DCF valuation:***

| DCF valuation | $ millions |
|---|---|
| **DCF stream** | 872.7 |
| **DCF terminal value** | 9,364.5 |
| **Total DC Enterprise Value** | 10,237.2 |
| **(Less) Net Debt** | 1,476.0 |
| **Equity Value** | **8,761.2** |

Source: analyst estimates.

***Sensitivity to growth rate and WACC:***

| | WACC | | |
|---|---|---|---|
| LT Growth ↓ | 4.5% | 6.5% | 8.5% |
| **1.5%** | 13,029.25 | 6,826.91 | 4,173.51 |
| **2.5%** | 19,901.17 | **8,761.17** | 5,032.35 |
| **3.5%** | 40,093.32 | 11,971.41 | 6,232.56 |

Source: analyst estimates.

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## Relative valuation

Our relative valuation is based on four techniques: forward P/E, forward EV/Sales, trailing EV/EBITDA and P/B. As we already mentioned, peers are mostly USA-based, with only two peers coming from the UK. Water utility industry remains largely government-owned around the world, including in Australia, making the task of finding comparable companies a difficult one.

The peer list includes the following companies:

- Northumbrian Water Group (UK)
- Severn Trent Water (UK)
- California Water Service Group (USA)
- Aqua America (USA)
- SouthWest Water Company (USA)
- Middlesex Water Company (USA)
- Pennichuck Corporation (USA)
- Connecticut Water Service, Inc. (USA)
- Artesian Resources Corporation (USA)

The calculation of target value is shown in the tables below:

***P/B valuation***

| | $ millions |
|---|---|
| **Tangible book value, latest reported** | 5,991.4 |
| **Peers' multiple (median)** | 1.4 |
| **Equity value** | **8,484.5** |

Source: Reuters, companies' reports, analyst calculations

***EV/Sales valuation***

| | $ millions |
|---|---|
| **Sales FY2010e** | 1,053.4 |
| **Peers' multiple (median), 2010** | 4.2 |
| **Enterprise value** | 4,454.1 |
| **(Less) Net Debt** | 1,476.0 |
| **Equity Value** | **2,978.1** |

Source: Reuters, companies' reports, analyst calculations

***P/E valuation***

| | $ millions |
|---|---|
| **Net income FY2010e** | 236.58 |
| **Peers' multiple (median), 2010** | 17.9 |
| **Equity value** | **4,243.17** |

Source: Reuters, companies' reports, analyst calculations

| EV/EBITDA valuation | $ millions |
|---|---|
| **EBITDA 2008** | 548.8 |
| **Peers' multiple (median), TTM** | 14.2 |
| **Enterprise value** | 7,811.7 |
| **(Less) Net debt** | 1,476.0 |
| **Equity value** | **6,335.7** |

Source: Reuters, companies' reports, analyst calculations

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## Transaction-based relative valuation

This section is more for illustrative purposes than as a valuation tool due to the low number of example used, but we believe it can provide valuable valuation evidence. In the past few years there were several transactions in the water utility sector, and we found details for two such transactions involving sale/acquisition of UK-based water utilities: Thames Water and Kelda Group.

Taking the statistics from these two transactions, we obtain the following valuations for SA Water:

| Method | Value, $ millions |
|---|---|
| P/B | 20,347.0 |
| EV/Sales | 4,809.5 |
| P/E | 4,381.0 |
| EV/EBITDA | 4,771.7 |
| **Average** | **8,577.3** |

Source: analyst calculations based on companies' reports.

## Final valuation

The final valuation takes the weighted average of absolute and relative valuation results. We decided to give greater weight to DCF-based metrics, with DDM representing the largest share, because peers are not based in Australia and may reflect their own regional specifics not applicable to SA Water and because we believe that DDM is the most appropriate valuation method for SA Water due to the consistency and regularity of dividend payments.

We therefore applied the following weights to each valuation metric shown above (except transaction-based):

| Valuation metric | Weight | Value |
|---|---|---|
| DDM valuation | 40% | 6,610.9 |
| DCF valuation | 20% | 8,761.2 |
| EV/Sales valuation | 10% | 2,978.1 |
| P/E valuation | 10% | 4,243.2 |
| EV/EBITDA valuation | 10% | 6,335.7 |
| P/B valuation | 10% | 8,484.5 |
| **Weighted average valuation** | | **6,600.7** |

Source: analyst estimates.

Thus, the final valuation is $6.6 billion.

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# COMPANY PROFILE

With headquarters in Adelaide, SA Water is a government-owned utility company that provides water and sewerage services to 1.5 million people across South Australia for over 150 years. SA Water owns and manages an infrastructure worth more than $8.3 billion represented by almost 26,000 km of water mains, 8,500 km of wastewater mains; 29 water treatment plants and 25 wastewater treatment plants.

## Operations overview

### Water supply

Water supply and waste collection and treatment are SA Water's primary activities. The evolution of annual water supply can be viewed in the table below. The general trend in the past five years has been downward-sloping, with only modest increases in 2005 and 2007. One of the factors that caused the decrease, especially in 2008, was the limitation of water consumption set by the government of South Australia as a result of increasing scarcity of water resources. According to the Urban Water Utilities National Performance report[1] (the UWUNP report) for FY2007-2008, "all water utility companies across Australia have registered reductions in residential water supply in 2007-2008 falling by between 5%-19% (in volume terms) compared to 2006-2007", similar to SA Water's performance.

***5-year water supply dynamics***

| | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|
| **Water supply Adelaide** | | | | | |
| **Volume delivered (GL)** | 166 | 166 | 151 | 156 | 139 |
| ***Growth*** | | *0.1%* | *-9.1%* | *3.7%* | *-10.7%* |
| **Average daily water consumption per capita (L)** | 422 | 421 | 379 | 390 | 345 |
| ***Growth*** | | *-0.4%* | *-9.8%* | *2.9%* | *-11.6%* |
| **Water supply Country** | | | | | |
| **Volume delivered (GL)** | 80 | 86 | 84 | 90 | 80 |
| ***Growth*** | | *6.9%* | *-2.4%* | *7.1%* | *-11.1%* |
| **Average daily water consumption per capita (L)** | 560 | 596 | 577 | 614 | 540 |
| ***Growth*** | | *6.3%* | *-3.1%* | *6.3%* | *-12.0%* |

Source: company reports, analyst calculations.

In FY2007-2008 the company ranked third among similar-sized Australian water utilities (100,000+ connected properties) in terms of average volume of water supplied per property (only Adelaide area counted)[2]. Thus, SA Water delivers more water per property that national average for large utilities:

[1] Source: https://www.wsaa.asn.au/Publications/Documents/National%20Performance%20Report%202007-08%20-%20PART%20A%20-%20Comparative%20Analysis.pdf.
[2] Source: https://www.wsaa.asn.au/Publications/Documents/National%20Performance%20Report%202007-08%20-%20PART%20A%20-%20Comparative%20Analysis.pdf.

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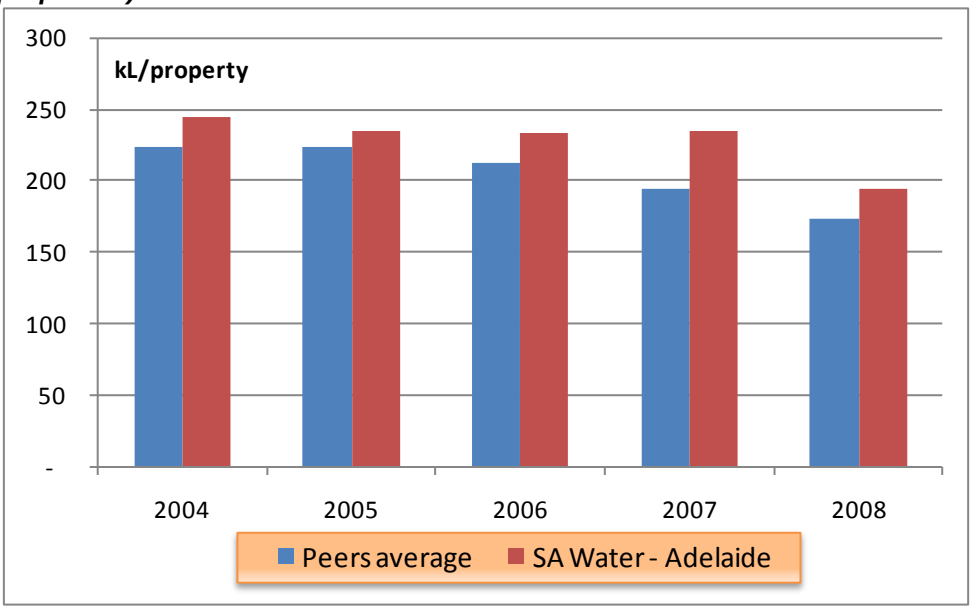
***Water supply per property: SA Water (Adelaide only) versus peer average (100,000+ connected properties)***




Source: Urban Water Utilities National Performance report FY2007-2008.

Currently, the main water source is the Murray-Darling basin, which provided 85% of SA Water's water in FY2008. It is worth mentioning that until 2006, water was almost equally supplied by River Murray and other surface and ground water sources, but with the increase in dry weather periods the situation has changed considerably. When the Adelaide Desalination Project is completed, it should be able to cover almost half of Adelaide's water needs, greatly reducing the dependence on River Murray.

## Customer base

Every year SA Water supplies over 200 gigalitres of water to more than 1.5 million consumers of water and serves 1.2 million consumers of sewerage services. This means that over 95% of South Australia's population is served by the company's water services (almost equal coverage in Adelaide and country), while its sewerage is used by 90.5% of Adelaide's population and by 37.2% of the population outside Adelaide.

***Population served***

| Population in thousands | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|
| Water Supply Adelaide | | | | | |
| Estimated population served | 1,071 | 1,079 | 1,087 | 1,095 | 1,103 |
| *Growth* | | *0.7%* | *0.7%* | *0.7%* | *0.7%* |
| Water Supply Country | | | | | |
| Estimated population served | 391 | 394 | 397 | 400 | 403 |
| *Growth* | | *0.8%* | *0.8%* | *0.8%* | *0.8%* |
| Wastewater Adelaide | | | | | |
| Estimated population served | 1,014 | 1,022 | 1,028 | 1,036 | 1,043 |
| *Growth* | | *0.8%* | *0.6%* | *0.8%* | *0.7%* |
| Wastewater Country | | | | | |
| Estimated population served | 155 | 155 | 156 | 157 | 158 |
| *Growth* | | *0.3%* | *0.6%* | *0.6%* | *0.3%* |

Source: company reports, analyst calculations.

The customer base includes residential households, public entities, commercial and industrial customers, 73% of which are served in Adelaide metropolitan area. Over the past five years the population served grew by an annual rate of 0.7% in Adelaide and 0.8% in the rest of the state.

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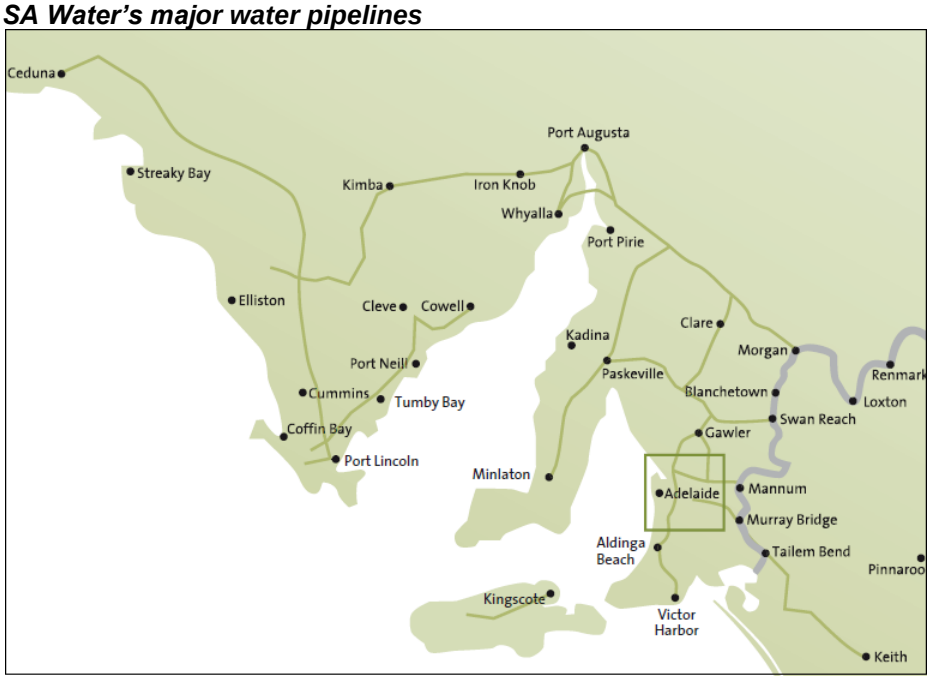
## Infrastructure

SA Water maintains an extensive network of pipelines and facilities for water storage, treatment and removal of waste water. SA Water's main water pipeline network can be seen in the map below.

***SA Water's major water pipelines***




Source: SA Water annual report 2007-2008

In FY2007-2008 SA Water boosted its capital expenditure by 44% versus the previous year by investing $247 million in fixed assets, of which 62% represented additions to water infrastructure ($154 million) and another 27% were investments in sewerage infrastructure ($70 million); the remaining part went into plant and equipment and leased assets.

***SA Water's infrastructure***

| | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|
| **Length of water mains Adelaide (km)** | 8,739 | 8,773 | 8,826 | 8,854 | 8,889 |
| ***Growth*** | | *0.4%* | *0.6%* | *0.3%* | *0.4%* |
| **Length of water mains Country (km)** | 16,616 | 16,749 | 16,867 | 16,941 | 17,004 |
| ***Growth*** | | *0.8%* | *0.7%* | *0.4%* | *0.4%* |
| **Length of sewers Adelaide (km)** | 6,903 | 6,973 | 7,025 | 7,070 | 7,099 |
| ***Growth*** | | *1.0%* | *0.7%* | *0.6%* | *0.4%* |
| **Length of sewers Country (km)** | 1,321 | 1,341 | 1,358 | 1,384 | 1,402 |
| ***Growth*** | | *1.5%* | *1.3%* | *1.9%* | *1.3%* |
| **Number of wastewater treatment plants Adelaide** | 4 | 3 | 4 | 4 | 4 |
| **Number of wastewater treatment plants Country** | 19 | 19 | 19 | 20 | 20 |
| **Total capital expenditure, $ millions** | 187 | 122 | 127 | 172 | 247 |
| ***Growth*** | | *-34.9%* | *4.1%* | *35.2%* | *43.9%* |

Source: company reports, analyst calculations.

Among the main investment projects commissioned or started in FY2007-2008 are[3]:

- Eyre Peninsula water supply scheme - $48.5 million.
- Salt Interception schemes - $30.2 million, to be completed by June 2011.
- Torrens system upgrade - $21.5 million.
- Christies Beach Wastewater treatment plant - $272 million, to be completed by June 2011.
- River Murray pumps station upgrades – $10.2 million.

[3] Total project value is shown.

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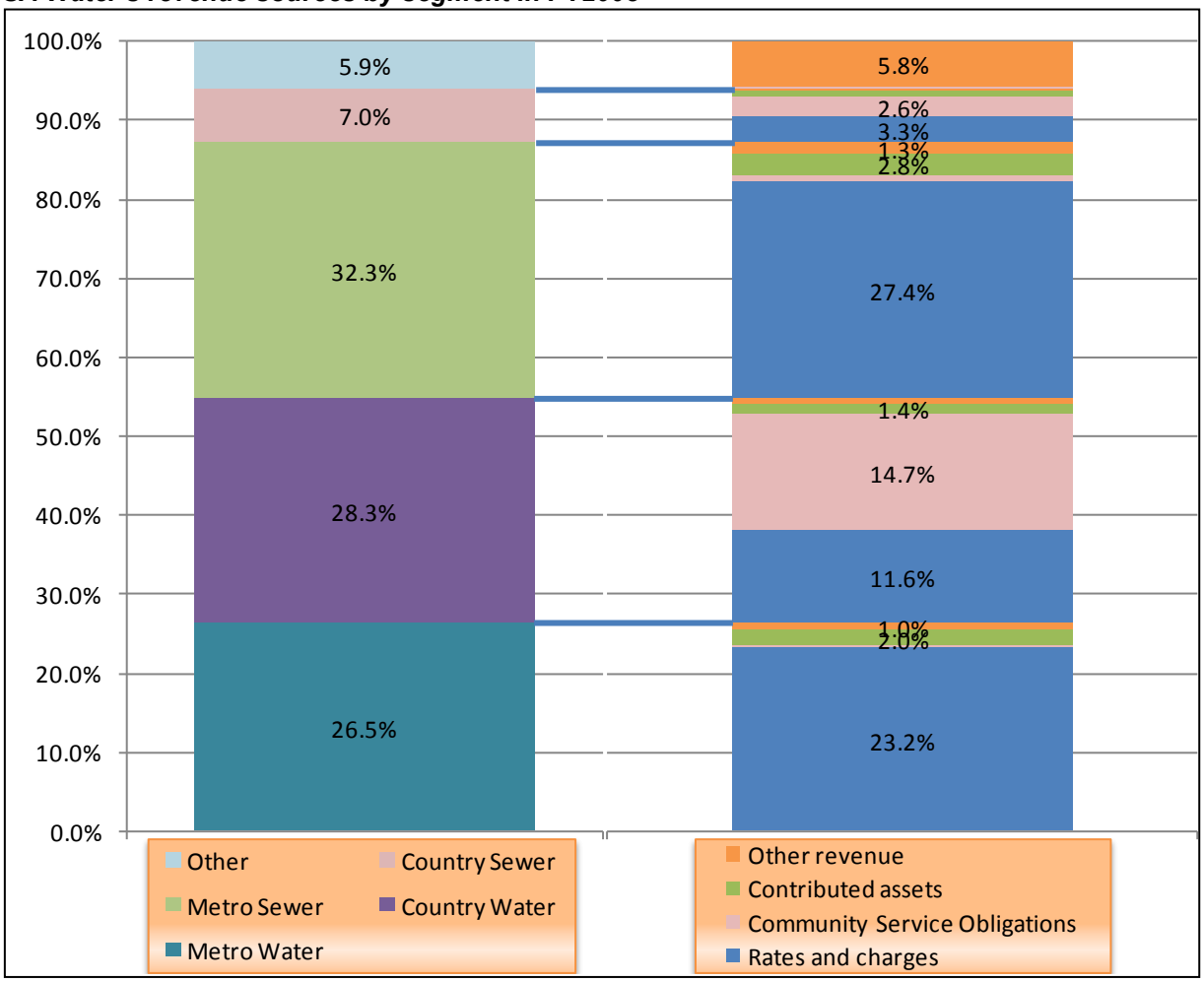
## Business segmentation

SA Water's business is divided into the following segments: Metro Water, Country Water, Metro Sewer, Country Sewer and Other. Each segment has four sources of revenue. The chart below shows detailed revenues sources by segment in FY2008.

***SA Water's revenue sources by segment in FY2008***




Source: company reports, analyst calculations.

Most of SA Water's revenue comes from the supply of water and sewerage services – the company's core activities. Revenue growth has been relatively slow in recent years: 3.7% in FY2008 and 3.1% in FY2007 – due to government restrictions in response to dry weather and the necessity to secure the future water supply.

## Government water strategy

SA Water operates in a government-regulated industry. The charges for water and sewerage are set by the state government, and a number of government projects to sustain water security in arid regions have been initiated. The company is part of the 4-way government strategy being implemented since 2007:

- Desalination – envisages a $1.83 billion desalination plant in Adelaide area, expected to be fully operational by the end of 2012, that would provide up to half of Adelaide's current annual water consumption.
- Recycling – reuse of waste water and storm water for non-drinking purposes in metropolitan and regional areas. During the past several years SA Water showed significant results in this respect comparing favourably against its peers from other states: in FY2007-2008 SA Water ranked first among utilities with 100,000+ connected properties in terms of percentage of effluent recycled – 31%, surpassing the peers' average percentage of recycled effluent waters by a factor of three. It

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also ranked second in terms of volume of recycled water supplied – 25.6 gigalitres, which represented 1/5 of the total water recycled by largest water utilities in FY2007-2008[4].

***Recycled water reuse***

| | Total recycled water supplied, GL | | | Average % of effluent recycled | | |
|---|---|---|---|---|---|---|
| | 2005-06 | 2006-07 | 2007-08 | 2005-06 | 2006-07 | 2007-08 |
| **Peers (100,000+ connected properties)** | 87 | 116 | 121 | 7.6% | 11.1% | 10.5% |
| ***Growth*** | | *33.5%* | *4.1%* | | | |
| **SA Water - Adelaide** | 17 | 25 | 26 | 18.0% | 30.0% | 31.0% |
| ***Growth*** | | *44.5%* | *2.1%* | | | |

Source: company 2007-2008 report, UWUNP report 2007-2008, analyst calculations.

- Limitation of water use by applying water saving measures, collection of recycled water and implementation of consumption efficiency plans.
- Catchments – extension of the current water reservoirs' capacity and construction of water mains for wise water distribution across the main consumption areas.

## Water quality management

SA Water is committed to attain leadership in water service quality by being responsive to customer needs. In FY2007-2008 the company achieved 99.7% compliance with Australian Drinking Water Guidelines and 100% E.coli compliance. The majority of water utility companies with 100,000+ connected properties reached 100% compliance[5]. However, according to a survey performed by the company in June 2008, SA Water received a customer satisfaction rating of 8.0 for residential and 7.8 for commercial customers on a 0 to 10 scale, scoring lower than in previous year. The company is investigating and addressing the reduction in customer rating.

***Customer satisfaction evolution***

| 0-10 scale | 2004-2005 | 2005-2006 | 2006-2007 | 2007-2008 |
|---|---|---|---|---|
| **Residential customers** | 8.2 | 8.2 | 8.2 | 8.0 |
| **Commercial customers** | 8.3 | 8.2 | 8.3 | 7.8 |

Source: company 2007-2008 report.

Main reasons for customer complaints are: water taste and odour (50%), dirty water (36%) and other[6].

## Environmental impact

Due to the specifics of the water utility business, the company affects the environment with wastewater spills, water overflows, management of water quality in the Murray-Darling basin and water catchments, influences the biodiversity during fixed asset installation etc. In order to manage the risks associated with its activities, the company operates a detection system and implements special measures, upgrades and replacements in order to minimise the impact on the environment.

In FY2008 SA Water almost doubled its gas emissions to 994 tonnes of $CO_2$ per 1000 connections from 533 tonnes in FY2007 due to increased pumping of water from River Murray. One of the company's targets for 2013 is to reduce its greenhouse gas emissions to 405,000 tonnes from 448,709 tonnes in FY2008 and thus achieve compliance with the Kyoto Protocol on gas emissions.

## Major water projects

### Adelaide Desalination Project (ADP)

As part of government's water security measures, a $1.83 billion seawater desalination plant is being constructed in Adelaide. The desalination technology is based on the use of seawater and elimination of up to 99% of salt and other matter through a process called reverse osmosis. The plant is being built in

[4] Source: Urban Water Utilities National Performance report FY2007-2008.
[5] Source: Urban Water Utilities National Performance report FY2007-2008.
[6] Source: http://www.sawater.com.au/NR/rdonlyres/F4353C40-F966-4493-9CD1-7A14F87C8E2F/0/DWQR_0708.pdf.

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Port Stanvac in the south Adelaide area. The plant is designed, constructed and will be managed for 20 years by AdelaideAqua, a multinational consortium (McConnell Dowell Constructors, Abigroup Contractors, ACCIONA Agua and United Utilities Australia). According to SA Water's website, the state government announced it would invest $228 million, matching the Australian government's $228 million funding commitment towards the ADP, to double the plant's capacity from 50 gigalitres per year to 100 gigalitres.

First desalinated water is planned to be provided by December 2010 with initial water supply of 15 million litres a day and ongoing gradual increase. The completed main project, due by December 2012, will supply at its full capacity almost half of the Adelaide metropolitan area's annual consumption (100 billion litres of water). During the National Water Week from October 18 to 24, 2009, the ADP construction site was visited by premier Mike Rann and Minister for Water Security, Karlene Maywald. Mr Rann said that "the desalination plant is being built on time, and on budget, and is due to be producing water by the end of next year[7]".

Another significant part of the desalination project is the construction of pipelines that will link the plant with the water catchment basin situated in Happy Valley. The overall length of the water mains will be of 11.5 km that are to be completed by June 2010.

## Glenelg to Adelaide Park Recycled Water Project

The project will supply 3.8 gigalitres of recycled water to be used for watering the Adelaide Park Lands. The total amount of the investment amounts to $74.5 million and will be delivered by CityGreen Alliance (SA Water, United Water, Leed Engineering and Construction, Leighton Services and Guidera O'Connor). The project's main targets are: reinforcement of Adelaide's position as a green city, reduction of waste and more than tripling in the annual quantity of reused water from Glenelg Treatment Plant.

[7]Source: http://www.waterforgood.sa.gov.au/2009/10/desalination-plant-site-open-for-public-inspection/

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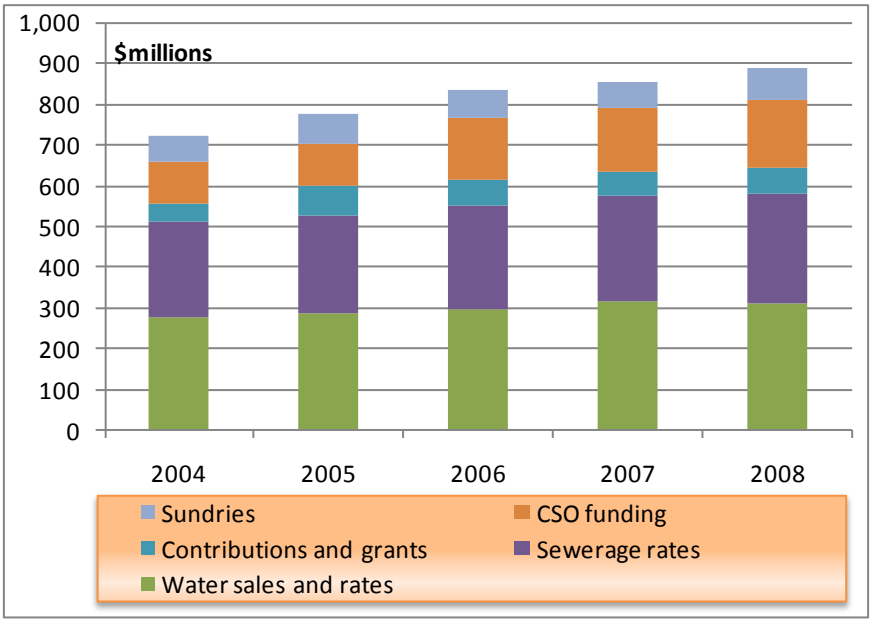
# FINANCIAL OVERVIEW

## Income Statement

In 2008 total sales showed a slight growth versus 2007. 65% of revenues came from SA Water's core business related to the sales of water and sewerage, and another 19% were represented by compensations received through Community Service Obligations (CSOs) from the Government of South Australia for the company's non-commercial services provided to the community. In FY2008 SA Water registered a total net income decrease of 9% year-over-year due to an 11% increase in operating expenses related to services and supplies, higher expenses on operational and service contracts and increased depreciation charges. Increasing expenses influenced the company's margins, which have been declining in the past several years.

***SA Water's revenues***




Source: company reports.

***Evolution of SA Water's key indicators***

| $ millions; FY ends 30 June | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|
| Total revenue | 722 | 776 | 834 | 856 | 889 | |
| Operating income | 345 | 366 | 413 | 404 | 387 | |
| Net income | 179 | 196 | 229 | 220 | 201 | |
| Total revenue growth, year-over-year | | 8.3% | 6.4% | 3.1% | 3.7% | |
| Operating profit margin | 47.8% | 46.8% | 49.6% | 47.1% | 43.5% | |
| Net profit margin | 24.8% | 25.1% | 27.4% | 25.6% | 22.6% | |

Source: company reports, analyst calculations.

## Consumption

Despite a continuous increase in the size of the population served, the total volume of water sold has been declining, especially in 2008 due to the water consumption restrictions imposed by the Government of South Australia in order to secure the future water supply in conditions of increasing number of drought periods. Respectively, water consumption per capita was also bumpy during the past 5 years. In 2008 there was a 12% decline in average daily consumption due to the restrictions mentioned above.

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***Water and Wastewater supply***

| Population in thousands | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|
| **Water Supply Adelaide** | | | | | | |
| **Volume delivered (GL)** | 166 | 166 | 151 | 156 | 139 | |
| ***Growth*** | | *0.1%* | *-9.1%* | *3.7%* | *-10.7%* | |
| **Estimated population served** | 1,071 | 1,079 | 1,087 | 1,095 | 1,103 | |
| ***Growth*** | | *0.7%* | *0.7%* | *0.7%* | *0.7%* | |
| **Average daily water consumption per capita (L)** | 422 | 421 | 379 | 390 | 345 | |
| ***Growth*** | | *-0.4%* | *-9.8%* | *2.9%* | *-11.6%* | |
| **Water Supply Country** | | | | | | |
| **Volume delivered (GL)** | 80 | 86 | 84 | 90 | 80 | |
| ***Growth*** | | *6.9%* | *-2.4%* | *7.1%* | *-11.1%* | |
| **Estimated population served** | 391 | 394 | 397 | 400 | 403 | |
| ***Growth*** | | *0.8%* | *0.8%* | *0.8%* | *0.8%* | |
| **Average daily water consumption per capita (L)** | 560 | 596 | 577 | 614 | 540 | |
| ***Growth*** | | *6.3%* | *-3.1%* | *6.3%* | *-12.0%* | |
| **Wastewater Adelaide** | | | | | | |
| **Estimated population served** | 1,014 | 1,022 | 1,028 | 1,036 | 1,043 | |
| ***Growth*** | | *0.8%* | *0.6%* | *0.8%* | *0.7%* | |
| **Wastewater Country** | | | | | | |
| **Estimated population served** | 155 | 155 | 156 | 157 | 158 | |
| ***Growth*** | | *0.3%* | *0.6%* | *0.6%* | *0.3%* | |

Source: company reports, analyst calculations.

## Pricing

Revenue is generally limited not only by the restrictions on water consumption but also by prices of water and sewerage that are set by the South Australian Government. Currently, a 3-tier price structure is used. Price increases seek to reduce water consumption and help South Australia to become water secure by financing new infrastructure and maintenance of existing SA Water facilities. The water tariffs increased by nearly 37% for the period 2009-2010, while the fixed annual water supply charge was cut by nearly $20, allowing consumers to reduce their water bills by using less water.

***Evolution of water prices***

| Per kilolitre of water used | 2007-2008 | 2008-2009 | 2009-2010 | % increase 2008-2009 | % increase 2009-2010 |
|---|---|---|---|---|---|
| **Annual residential supply charge** | $157.40 | $157.40 | $137.60 | 0.0% | -12.7% |
| **0-120 Kilolitres** | $0.50 | $0.71 | $0.97 | 42.0% | 36.6% |
| **120-520 Kilolitres** | $1.16 | $1.38 | $1.88 | 19.0% | 36.2% |
| **>520 Kilolitres** | $1.16 | $1.65 | $2.26 | 42.2% | 37.0% |

Source: news releases of the Government of South Australia, analyst calculations.

The new tariffs were adopted based on the average metropolitan household usage of about 191 kilolitres of water in 2007-08. Based on this average, householders would pay $387.50 in 2009-10 – an increase of $46.90, or 13.8% – compared with $340.60 in 2008-09.

## Balance Sheet

Being a water utility company, SA Water's property, plant and equipment accounted for 97% of total assets at the end of FY2008. Additions of new infrastructure in 2008 amounted to $0.5 billion versus $0.3 billion in 2007. The table below shows yearly gross book values (GBV) and total accumulated depreciation for the past 5 years. Analysis of depreciation shows that the average implied age of SA Water's PPE remains relatively constant at around 35 years, even though assets are becoming increasingly depreciated.

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***Gross book value of PPE and accumulated depreciation***

| $ millions | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|
| GBV | 10,628 | 11,094 | 11,699 | 12,925 | 14,000 | |
| Accumulated depreciation | (3,911) | (4,272) | (4,617) | (5,124) | (5,614) | |
| NBV | 6,717 | 6,822 | 7,081 | 7,801 | 8,386 | |
| Accumulated depreciation as % of GBV | 36.8% | 38.5% | 39.5% | 39.6% | 40.1% | |
| Implied average age of PPE | 33.4 | 35.0 | 35.3 | 35.5 | 35.1 | |

Source: company reports, analyst calculations.

The high level of fixed costs associated with maintaining the huge infrastructure, SA Water has high operating leverage, making the company vulnerable to revenue swings such as the decrease in volume of water delivered witnessed in 2008. As can be seen in the table below, Return on Assets (ROA) declined in FY2008 due to lower net income and increasing assets. This might indicate that the company converts less investment into profit, but given the long-term looking nature of some of its investment projects, this could be perfectly acceptable. Net working capital deficit has been increasing in the past several years due to higher payables and interest bearing liabilities.

***Selected Balance sheet data and key ratios***

| $ millions | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|
| Total current assets | 135 | 166 | 90 | 94 | 101 | |
| Total non-current assets | 6,706 | 6,879 | 7,134 | 7,861 | 8,461 | |
| Total assets (TA) | 6,841 | 7,044 | 7,224 | 7,954 | 8,562 | |
| Total current liabilities | 177 | 174 | 187 | 195 | 214 | |
| Total non-current liabilities | 1,330 | 1,774 | 1,852 | 2,090 | 2,318 | |
| Total liabilities | 1,507 | 1,948 | 2,039 | 2,285 | 2,532 | |
| Total equity | 5,333 | 5,096 | 5,185 | 5,669 | 6,030 | |
| Net working capital | -42 | -9 | -96 | -102 | -113 | |
| % of total assets: | | | | | | |
| Current assets | 2% | 2% | 1% | 1% | 1% | |
| Non-Current assets | 98% | 98% | 99% | 99% | 99% | |
| Current liabilities | 3% | 2% | 3% | 2% | 2% | |
| Non-current liabilities | 19% | 25% | 26% | 26% | 27% | |
| Equity | 78% | 72% | 72% | 71% | 70% | |
| ROA | 2.6% | 2.8% | 3.2% | 2.8% | 2.3% | |
| Assets Turnover | 10.6% | 11.1% | 11.5% | 10.8% | 10.4% | |

Source: company financial reports, analyst calculations.

The low amount of cash and negative working capital is most likely caused by the fact that the company pays out almost all net income as a dividend. Without the dividend payout (or with different timing of the payout), the net working capital would have been positive in all periods under review.

Equity financed 70% of total assets ($6.0 billion) as of 30 June 2008, while long-term debt financed 16% of total assets – $1.4 billion at an average interest rate of 6.65% (11.63% for leases), including $0.2 billion at floating interest rates. Most long-term debt was due within five years, with only $124 million due after 5 years. Another major part of total liabilities was represented by deferred tax liabilities on the revaluation of property, plant and equipment and lease liabilities.

## Cash Flows

The company has been generating strong cash flows from operations in recent years. The main sources of cash for SA Water are the receipts from customers for the services provided, proceeds from borrowings (used to repay maturing debt) and compensation received from the government for CSO services. The most important directions of cash outflow comprised capital expenditures, which increased by 55% in 2008; repayment of borrowings; and dividends to the government, which represent more than 90% of net income.

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***Key cash flow indicators:***

| $ millions | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|
| CFO | 272 | 277 | 400 | 308 | 320 | |
| CFF | (88) | (163) | (290) | (145) | (74) | |
| CFI | (184) | (115) | (106) | (160) | (249) | |
| Net Cash Flow | 0.9 | -2.0 | 2.1 | 4.8 | 2.4 | |

Source: company financial reports, analyst calculations.

## Capital expenditure

Capital expenditure leaped by 44% in 2008 denoting heavy investment in the company's existing and new infrastructure. According to the company, several projects were commissioned, including 9 water treatment plants; a $21.5 million Torrens System completed to replace an aging aqueduct; and a $10 million pilot desalination plant in Adelaide as a precursor for the Adelaide Desalination Project.

***Annual capital expenditures***

| $ millions | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|
| Water supply | 84 | 61 | 79 | 109 | 154 | |
| Sewerage | 82 | 46 | 31 | 31 | 37 | |
| Other | 21 | 21 | 18 | 31 | 56 | |
| Total capital expenditure | 187 | 127 | 127 | 172 | 247 | |
| Year-over-year growth | | | | | | |
| Water supply | | -27.6% | 29.6% | 39.1% | 41.0% | |
| Sewerage | | -44.8% | -32.7% | 0.9% | 19.5% | |
| Other | | -1.0% | -14.8% | 77.5% | 78.1% | |
| Total capital expenditure | | -32.2% | 0.0% | 35.2% | 43.9% | |

Source: company reports.

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# MARKET OVERVIEW

SA Water has two very specific features that make it different from an average company: (a) it is a utility company and (b) it is owned by the government. In addition, water is a strategic resource in Australia. These characteristics define in large part the operating conditions for the company and its regulatory environment. To be precise, these specifics *demand* a regulatory environment. Being a water utility, SA Water is a natural monopoly and its business is virtually equivalent to the whole market, meaning that there are no competitors (substitutes). Therefore we will look at SA Water's market from the following angles:

1. Government influence; and
2. Demand factors.

## Government influence

Government influence comes from several directions, and Hon Dr Mike Kelly AM MP summarised the main vectors quite well: "the Australian Government is investing in four key priorities – taking action on climate change; using water wisely; securing water supplies; and supporting healthy rivers"[8]. All government water-related regulations focus on these goals.

### Regulation of operations

**Pricing**

The most direct vector of government influence is the price-setting mechanism. Price controls are imposed mainly because utilities are usually monopolies in their markets (true for SA Water) and thus have significant pricing power because there are no substitutes and demand is relatively price- and income-inelastic, thus creating a potential for abnormal profits at consumer's expense.

When setting/approving prices, authorities need to take into account several factors:

- Profit margin must be maintained to support a financially viable operation;
- Cash inflows should be sufficient to support capital expenditures and infrastructure maintenance;
- Prices should be affordable for consumers.

In December 2008, when 2009-2010 water prices were announced, Treasurer Kevin Foley admitted that "clearly over time we have to get full user-pays for water" and that "we will see a rough doubling of water prices over a five-year period."[9] This evokes the need to run SA Water as a self-sufficient sustainable business.

Below is the recent water pricing history for South Australia.

***Recent evolution of water prices***

| Per kilolitre of water used | 2007-2008 | 2008-2009 | 2009-2010 | % increase 2008-2009 | % increase 2009-2010 |
|---|---|---|---|---|---|
| Annual residential supply charge | $157.40 | $157.40 | $137.60 | 0.0% | -12.7% |
| 0-120 Kilolitres | $0.50 | $0.71 | $0.97 | 42.0% | 36.6% |
| 120-520 Kilolitres | $1.16 | $1.38 | $1.88 | 19.0% | 36.2% |
| >520 Kilolitres | $1.16 | $1.65 | $2.26 | 42.2% | 37.0% |

Source: news releases of the Government of South Australia, analyst calculations.

**Other regulations**

In addition to price-setting, the government regulates other operating aspects, most importantly:

- *Quality of water*. Water must meet high quality standards to eliminate health risk for consumers from biological, chemical and mechanical contaminates. This requires constant quality checks at numerous plants and points of consumption, maintaining a purification and quality assurance infrastructure, waste disposal for residues, and research to find better and safer ways to fight off new and existing threats with less impact on environment.

[8] Source: http://www.environment.gov.au/minister/kelly/2009/mr20090403.html.
[9] Source: http://www.news.com.au/adelaidenow/story/0,22606,24749644-5006301,00.html.

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- *Environmental requirements*. Water and sewage operations significantly affect the environment. This impact comes from all levels of the delivery chain – from drawing water from natural sources to waste disposal and recycling, and environmental regulations cover all these areas. Following all environmental rules, laws and regulations requires committing significant resources to infrastructure planning, construction, maintenance and reclamation, as well as tight network integrity control. Additionally, the Kyoto Protocol has its implications for SA Water, which is one of the largest greenhouse gas emitting water utilities in its size group in Australia, according to the urban water report published in early 2009[10].

## Water resource management

South Australia is an arid and semi-arid territory where water is largely a limited resource. River Murray is the primary source of fresh water for SA Water, accounting for 85% of its total water supply in FY2008. Thus, during draughts, the amount of water available for consumption is reduced, while demand rises, and government intervention is required to prevent irreparable environmental damage and the creation of a water shortage for population.

Water is the centrepiece of South Australia's long-term development plans due to its strategic importance. As such, water resource management makes part of almost every development plan. Among these are Water For Good, Waterproofing Adelaide, Water Sensitive Urban Design and others.

Water consumption is controlled in two ways:

- Financially, by using a tiered tariff where additional consumed water is priced higher than the lower tier(s).
- Administratively, whereby restrictions are imposed on how and when water can be used by population, such as defining times for watering lawns and gardens, prohibiting using water for certain purposes etc.

In addition, alternative sources of water are being developed, from individual water recycling and rainwater collection to the huge desalination plant in Adelaide.

**Pricing**

Pricing was discussed above. Here we will just add that the tiered structure of the tariff, which includes a fixed component and progressive variable price, is specifically targeted at controlling water consumption as the latest price increase was accompanied by a reduction in fixed charge to allow consumers to be more "water wise".

**Water consumption restrictions**

With increasing incidence and severity of draughts, the government has introduced water consumption restrictions to save water as a scarce resource. Two levels of restrictions are in place:

- Permanent Water Conservation Measures (PWCM);
- Level 3 Enhanced Water Restrictions.

Permanent Water Conservation Measures include limitations on watering gardens, grounds and nurseries; washing paved areas, walls or roofs; cleaning of motor vehicles and boats; and controlling dust or other pollutants at construction sites. Level 3 restrictions add more limitations to the PWCM, further restricting water usage in non-essential applications.

[10] Source: http://www.environment.gov.au/minister/kelly/2009/mr20090403.html.

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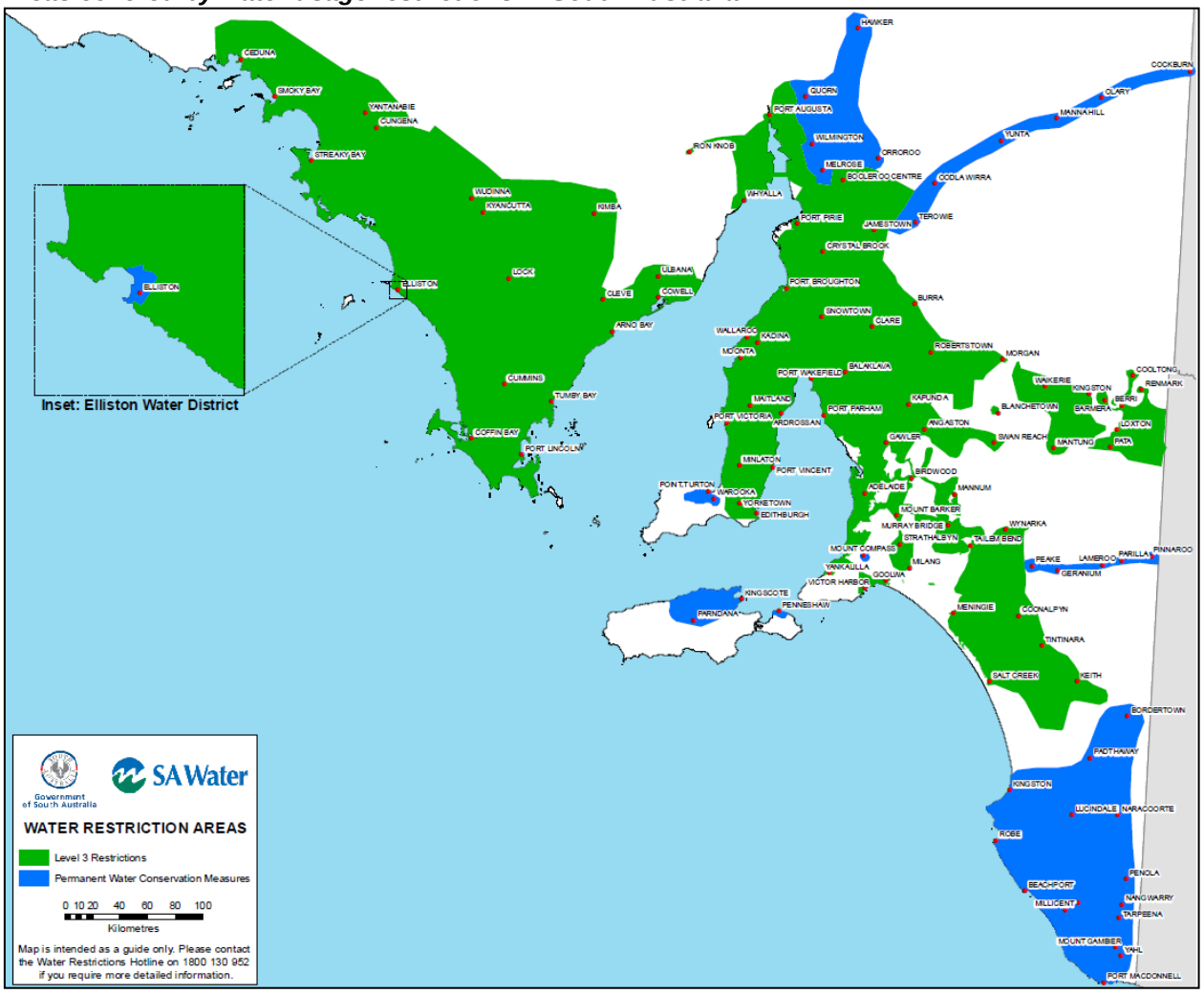
***Areas covered by water usage restrictions in South Australia:***




Note: additional PWCM zone in the northern part of the state not shown.
Source: http://www.sawater.com.au/NR/rdonlyres/A1700B03-0CC3-401C-B338-C94F8C297DD4/0/WaterRestrictions_lvl3.pdf

As the map shows, restrictions apply in a significant part of South Australia, affecting most consumers.

Below is a chart of historical annual water deliveries and planned water supply for 2009-2010 season with water restrictions:

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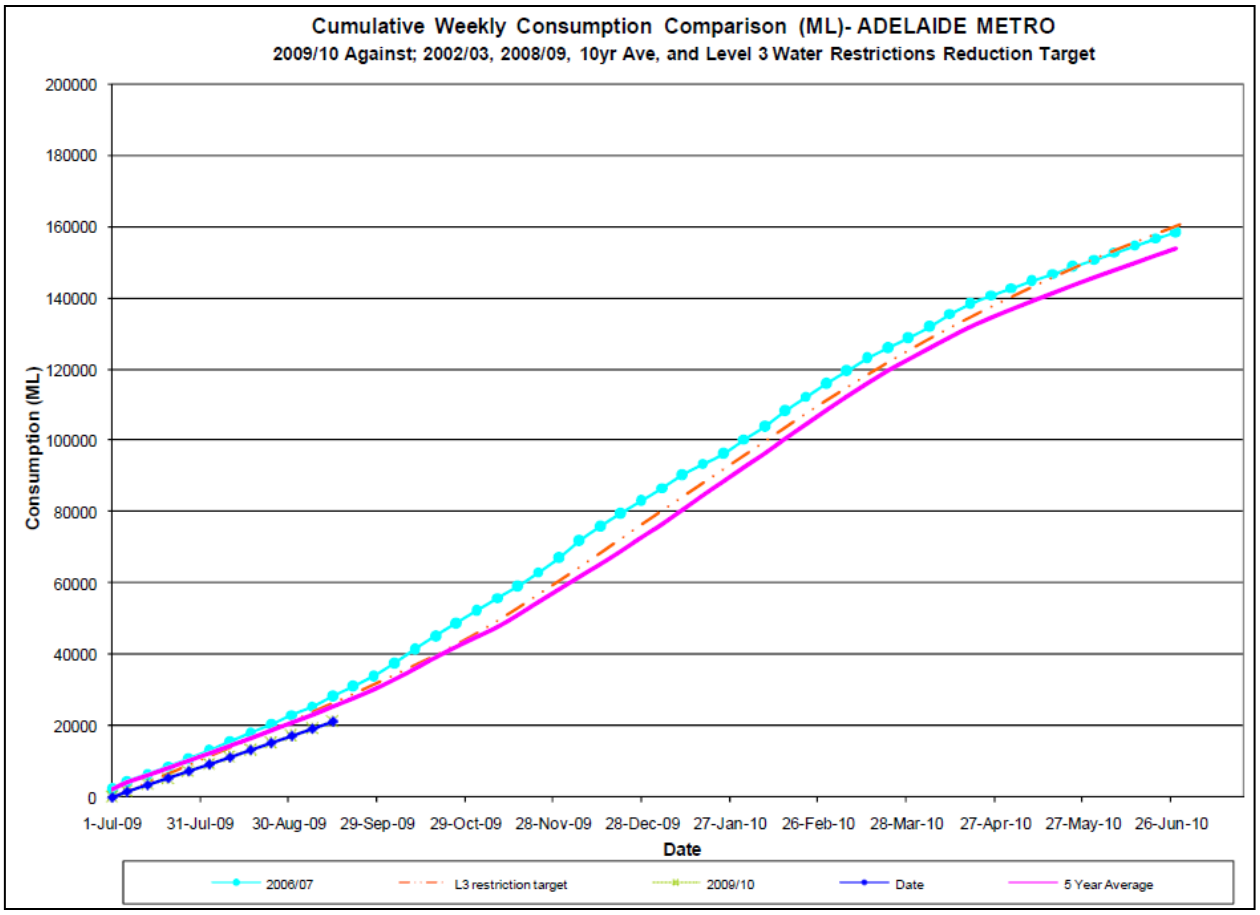


Source: http://www.sawater.com.au/NR/rdonlyres/F8E754AB-A80C-4C1A-A372-15532D1D6423/0/Cumulative_Weekly_Consumption_Comparison.pdf

As the chart shows, the restriction target is a little higher than the 5-year average, while the consumption to date has been below target, probably due to higher price.

**Adelaide desalination project (ADP)**

The Adelaide Desalination Project, currently under construction, aims to supply up to half of Adelaide's water requirements, greatly reducing the strain on natural sources of fresh water, such as River Murray, which is the primary source at the moment. With the full-scale launch of ADP, we should expect water restrictions to be eased in the metropolitan area. This should also contribute to less need to increase water prices beyond what is required to fund capital projects and run a reasonably profitable business. As a result, there may be an increase in individual (and hence, aggregate) water consumption down the road, although not in the near term, when tariffs are expected to double within a five-year time frame.

**Other measures**

Other measures are implemented mainly through the introduction of alternative water sources and recycling, such as rainwater, stormwater, blackwater, greywater, desalination etc. As such, the Water Sensitive Urban Design (WSUD) for Greater Adelaide plan provides for the sustainable use and re-use within developments of water from various sources, including rainwater, stormwater, groundwater, mains water and wastewater (including 'greywater' and 'blackwater').

The Water for Good plan envisages that by 2050:

- in Greater Adelaide, at least 60 GL/year will be recycled from stormwater for non-drinking purposes, with a target of up to 15 GL/year in regional areas.
- a minimum of 75 GL/year of the wastewater generated in South Australian urbanised areas will be recycled for non-drinking purposes.

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It is worth noting that SA Water has the largest rate of wastewater recycling among Australian water utilities with 100,000+ connections and second largest in terms of volume[11].

## Demand factors

SA Water provides water to over 95% of South Australia's population, and sewerage – to over 90% of metropolitan population and over 37% of country population. In these conditions, future demand for water is determined by the following factors:

- Population growth.
- Percentage of population served.
- Average water consumption per customer.

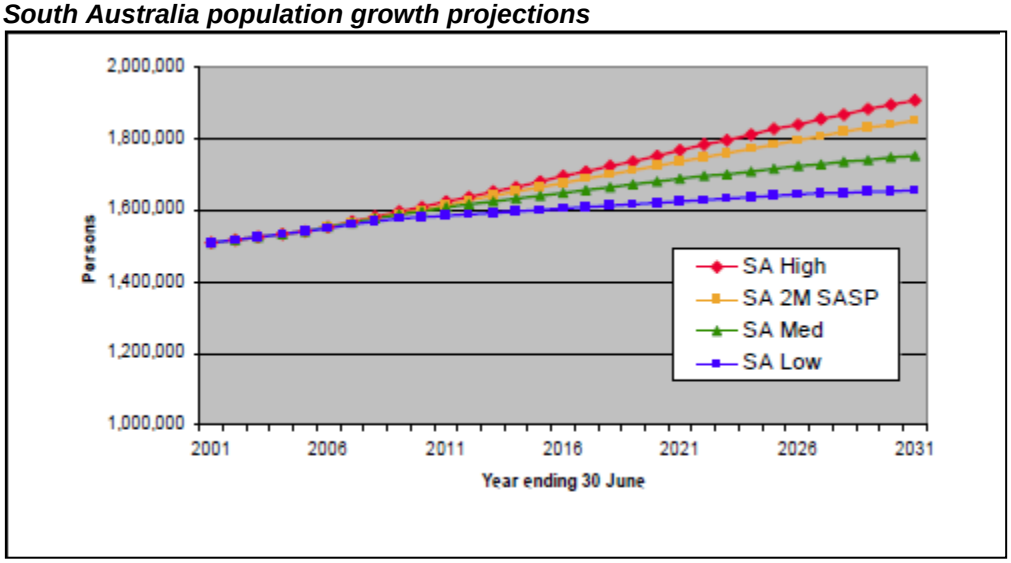
Natural monopoly status ensures that there will be no significant competition from other suppliers of water or sewage and thus there will be no volume fluctuations from market share changes in the near future. It is worth noting that government policies regarding water supply envisage introducing competitive mechanisms into the market, but it is too early to talk about market liberalisation or privatisation at this stage.

## Population growth

South Australia as a state has relatively low population density – lowest in Australia – with 1.61 people per 1 km$^2$, with the total population of about 1.6 million and total area of over 1 million km$^2$, according to Wikipedia.

The latest population estimates available at the Planning in South Australia website[12] (as of June 2007) estimate that in 2006, the population of South Australia totalled 1,553,201[13], with 2031 projected population of 1,753,430, representing average annual growth of 0.50%. The population growth is expected to slow down from 0.70% p.a. in 2006-2011 to 0.34% p.a. in 2026-2031. Even the low-growth scenario projects population increase, albeit at an average rate of 0.30% p.a.

***South Australia population growth projections***




Source: http://dataserver.planning.sa.gov.au/publications/1173p.pdf.

Adelaide[14] represents about 73% of South Australia's population, with an estimated population of 1,137,354 in 2006. Adelaide population is expected to grow at an average annual growth rate of 0.54% between 2001-2021 and to reach 1,232,805 in 2021. Annual growth rate is also expected to slow down: from 0.65% p.a. in 2006-2011 to 0.47% p.a. in 2016-2021.

[11] Source: http://www.nwc.gov.au/resources/documents/NPR_Part_A_complete.pdf.
[12] Source: http://dataserver.planning.sa.gov.au/publications/1173p.pdf.
[13] All estimates quoted here take the medium growth scenario unless otherwise noted.
[14] Adelaide statistical division, excluding Outer Adelaide.

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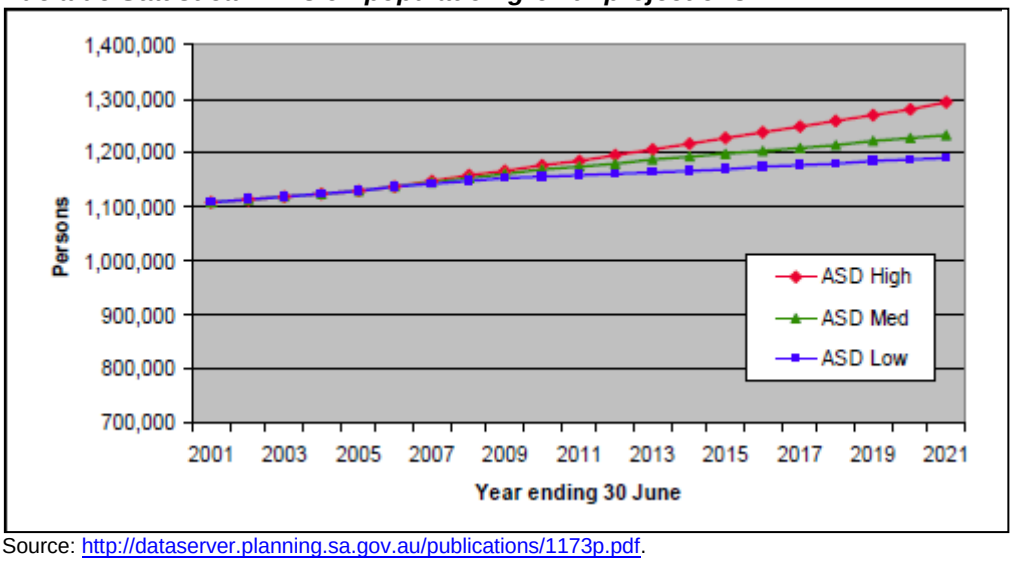
***Adelaide Statistical Division population growth projections***




Source: http://dataserver.planning.sa.gov.au/publications/1173p.pdf.

Projected growth in population increases the severity of the water scarcity problem and warrants government measures to reduce consumption and introduce alternative sources.

## Consumption trends

Demand for water is influenced by internal factors (consumers' need to use water) and external factors – government's restrictions on water use driven by limited resources. Since SA Water supplies water to over 95% of South Australia's population, we can analyse demand from the company's statistics.

Average water consumption per customer in Adelaide has been following a downward trend in the past five years, declining from 415 litres of water per capita per day in 2004 to 345 litres in 2008, or by 16.9%. During this period, 2007 was the only year when an increase was registered. Country water consumption grew twice – in 2005 and 2007, but declined over the whole 5-year period by 3.7%. FY2008 saw the most drastic decline in per capita consumption in recent history:

***Average daily water consumption per capita***

| Daily water consumption per capita, litres | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|
| Adelaide | 415 | 414 | 374 | 388 | 345 |
| *Year-over-year change* | | *-0.2%* | *-9.7%* | *3.7%* | *-11.1%* |
| *5-year change* | | | | | *-16.9%* |
| Country | 560 | 596 | 577 | 614 | 540 |
| *Year-over-year change* | | *6.3%* | *-3.1%* | *6.3%* | *-12.0%* |
| *5-year change* | | | | | *-3.7%* |

Note: Adelaide consumption as reported by SA Water; country – calculated by analyst (not reported by SA Water). FY ends on June 30.
Source: company reports, analyst calculations.

South Australian consumption moved in line with the national average in FY2008, when average residential consumption fell by 12%[15].

Below is a quote from SA Water's FY2008 report concerning restrictions and consumption: "Market research undertaken in 2007-08 indicated continuing high levels of awareness (99%) of water restrictions and the majority of respondents (80%-83%) indicated they were in favour of enhanced Level 3 restrictions. This was a slight fall on 2006-07 surveys (86%-91%). Most continue to cite the reason 'water is a scarce resource' as the reason for supporting restrictions. Impressively, most people indicated they had taken specific action to reduce consumption in their garden (73%-84%) and home (73%—81%).

[15] Source: http://www.environment.gov.au/minister/kelly/2009/mr20090403.html.

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When asked how their behaviour would change if restrictions were lifted only 3%-4% indicated they would go back to using as much water as they did before restrictions were introduced in 2006."

It is the last sentence that is most important in our view. It indicates that consumption (in terms of volume per capita) may not reach historical levels, limiting the revenue growth potential for SA Water, while reaching the government's goal of making consumers more "water wise".

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