

2009/10 to 2012/13 Water Plan

South East Water

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1. Executive summary

Background

In August 2007, the Victorian Government announced that it had asked the Victorian Competition and Efficiency Commission (VCEC) to undertake an inquiry into reform of the Metropolitan Retail Water Sector. At this time South East Water was in the final stages of developing a Draft Water Plan for the period 2008/09 to 2012/13.

The Water Plan process was suspended while VCEC undertook its inquiry and a one year price increase (for 2008/09) was approved by the Essential Services Commission, consistent with the Government's intent of prices no more than doubling in real terms over the five year period.

As the VCEC inquiry has now concluded, the Water Plan process has recommenced. This document forms the first step in the process of establishing South East Water's price/service offering for the 2009/10 to 2012/13 period.

Strategic Context

In meeting its 2015 vision, South East Water set three strategic directions centred around providing customer water solutions, efficiency and growth, plus improved social/environmental outcomes.

This Water Plan has a clear focus on meeting our vision in the context of major infrastructure investments and a desire by Government for prices to no more than double over the five year period.

This document summarises the factors South East Water has taken into account to develop its Water Plan, including the influences of supply shortages, the expectations of customers, the outcomes South East Water intends to deliver, the revenue required to fund those outcomes and the proposed prices.

This Water Plan and accompanying templates commence the process of finalising South East Water price/service proposal for the 2009/10 to 2012/13 regulatory period.

Key Drivers

This Water Plan has been prepared in an environment where significantly below average rainfall and storage inflows in recent years have resulted in a serious supply shortage. As a result, the fundamental drivers of South East Water's Water Plan and the price outcome are as follows:

- **Supply augmentation** – Construction of augmentation options including a new desalination plant, expansion of Victoria's water grid and modernisation of Victoria's food bowl irrigation system. South East Water will share these costs.
- **Recycling to deliver potable substitution** – Installation of dual pipe reticulation systems, at a cost of approximately \$36M, to service some 5,000 properties over the next four years, with a total of in excess of 41,000 homes ultimately connected in South East Water's growth corridor. Significant additional investment in other recycled water/potable substitution projects is planned including a major project in conjunction with Bluescope Steel and the State Government to replace 660ML of potable water per annum.
- **Demand management** - \$37M to implement shower head exchange, industry conservation programs and enhanced leak detection initiatives.
- **Growth** - Investment of over \$210M in water and sewer infrastructure to meet the needs of over 40,000 new households to be built within South East Water's area over the next four years, as well as in future regulatory periods.
- **Sewer Connection** - Provision of sewer services to unsewered homes, in the lower Dandenong and Mornington Peninsula areas, based on accelerating this program to 20 years rather than 40.
- **Service Reliability** - Maintaining existing service standards in an environment of increased focus on response times, uncertain soil moisture levels, deteriorating condition of some asset types and traffic congestion.

Assumptions

While the Commission has proposed additional measures to deal with costs and demand forecasts that are subject to higher than normal levels of uncertainty, South East Water proposes the following to ensure that the Water Plan is finalised on the basis of the most realistic assumptions possible:

Restrictions – South East Water has developed this Water Plan on an assumed restriction level profile of 3A, 2, 1, Permanent Water Saving Rules for the 2009/10 to 2012/13 period. However, at the end of the 2008 filling season when further Government announcements are made in relation to future restriction levels, South East Water may lodge a supplementary submission based on revised restriction assumptions.

Recycling Projects – Government has announced its intention to upgrade Eastern Treatment Plant to Class A and investigate large scale uses for this recycled water. If these projects do not proceed, South East Water may need to assess and/or construct a number of additional projects to make use of this water.

South East Water has also assumed that an upgraded Eastern Treatment Plant will provide a source of Class A recycled water for its Cranbourne and Officer residential dual pipe estates. Should this not be the case, then South East Water will need to pursue a number of other recycling projects to ensure that the required Class A recycled water is available.

In both of the above cases, South East Water considers these works as uncertain projects and has not included them in this Water Plan.

Weighted Average Cost of Capital – South East Water has prepared this Water Plan on the assumption of a return on capital of 5.8%. Given recent market movements it is expected that this return will be reduced at the time the final decision is made.

Outcomes

South East Water is proposing real (ie not including inflation) price increases as follows for the 2009/10 to 2012/13 period, without making any changes to its tariff structures.

Real Price Increase	2009/10	2010/11	2011/12	2012/13
Price Increase	18%	16%	12%	11%

2. Who Is South East Water?

South East Water is one of Melbourne's three metropolitan water retailers. South East Water provides water, sewerage and recycled water services to residential, industrial and commercial customers in urban Melbourne and outlying semi-urban and rural areas.



South East Water buys bulk water from Melbourne Water and distributes it to approximately 1.42 million people through pipelines from ten service reservoirs and numerous major water tanks that it owns and operates. In addition, South East Water provides reticulated Class A and C recycled water to customers in Melbourne's south-east and on the Mornington Peninsula.

South East Water also collects wastewater from customers, of which around 90% is treated in one of Melbourne Water's two major wastewater treatment plants. The remaining 10% is treated in one of South East Water's eight smaller treatment plants to Melbourne's east and on the Mornington Peninsula. The treated water is either sold as

recycled water, discharged to the South Eastern Outfall or a small amount is treated at the Western Treatment Plant.

Key Facts – South East Water (as at 30 June 2008)

Population served	1.42 million
Customers served	625,862
New connections (2007/08)	10,003
Area Serviced (sq km)	3,640
Water supply mains (km)	8,585
Sewer mains (km)	8,033
Water and sewage pumping stations	317
Local Sewage Treatment Plants	8
Equivalent full time employees	510

3. Regulatory Environment

The Statement of Obligations was revised in June 2008 to require South East Water to submit to the Essential Services Commission (Commission) a Water Plan by 13 June 2008 for the period 1 July 2008 to 30 June 2009. South East Water was required to ensure that real price increases proposed did not exceed 14.8%.

These changes to the Statement of Obligations were made as a result of the Government's announcement in August 2007 of the review by VCEC of the structure of the retail water industry in Melbourne. This announcement effectively brought to an end the Water Plan process underway at that time for Melbourne water retailers. The change to the Statement of Obligations requiring a 14.8% maximum price increase in real terms for 2008/09 was implemented as the first stage of the Government's commitment to prices "no more than doubling over the five year period from 2008/09 to 2012/13". The one year price change implemented by the change in the Statement of Obligations gave the VCEC time to undertake its review.

A further revision to the Statement of Obligations now requires South East Water to submit a Water Plan to the Commission for the 2009/10 to 2012/13 period, by 5 November 2008.

The Commission will ultimately make a Draft Decision and Final Determination in accordance with the requirements of the Water Industry Regulatory Order.

The Water Industry Regulatory Order:

- Provides for the Commission to approve prices for prescribed services subject to certain regulatory principles and procedural requirements; and
- In addition to providing for the regulated business to earn a sustainable revenue stream, the Commission must be satisfied that prescribed charges provide for the sustainable use of Victoria's water resources, take into account the interests of low income/vulnerable customers, provide incentives to pursue efficiency improvements and are able to be readily understood by customers.

During the months preceding the announcement of the VCEC review of industry structure, South East Water had engaged its technical regulators (Environmental Protection Authority (EPA), Department of Human Services (DHS) and Department of

Sustainability and Environment (DSE)) to seek their input into the development of the Water Plan. The EPA had also provided *Draft Principles to Establish EPA Environmental Obligations for Water Businesses for the 2008-2013 Pricing Determination* for comment and then finalised this document in November 2006. South East Water subsequently documented the activities it proposed in its capital and operating expenditure programs to meet these environmental obligations, and has received positive feedback in relation to these proposals (copy of EPA letter attached at Appendix 1).

South East Water has also engaged both its Customer and Environment Advisory Committees as part of the Water Plan process.

This Water Plan outlines:

- The standards of service proposed;
- The operating and capital expenditure required to meet these standards and objectives;
- The revenue requirement; and
- The resulting tariffs and customer impacts.

4. South East Water's Strategic Direction

South East Water's achievement of its 2015 vision of:

- *Expanding our core function to provide a range of leading products and services to meet customer's needs in a supply constrained world;*
- *Growing value through efficiency gains, innovation and new technology; and*
- *Delivering improved social and environmental outcomes.*

is based on three key strategic directions that have been refined through a recent review of its Corporate Plan. These are:

1. **Provide Customer Water Solutions**

This Strategic Direction involves:

- Understanding our customers;
- Assisting our customers to become more water efficient;
- Reducing non-revenue water;
- Seeking alternative water supplies; and
- Ensuring flexible delivery frameworks.

2. **Deliver Efficiency and Growth**

This Strategic Direction aims to:

- Increase business operating efficiency;
- Maximise value with our customers;
- Grow the 'us' Utility Services alliance; and
- Develop new business approaches.

3. *Deliver Improved Social and Environmental Outcomes*

This strategy explicitly recognises South East Water's environmental and social responsibilities and associated activities, including:

- Embedding sustainability into our business practices;
- Maintaining our natural assets and resource efficiency;
- Meeting all water and sewer performance targets; and
- Engaging our community stakeholders.

The directions contained in this Water Plan are integrally related to achieving this vision.

5. Progress Against 2005/06 – 2007/08 Water Plan

The Commission's 2005/06 – 2007/08 price determination for South East Water listed a series of service standards, major projects and other criteria that formed the basis of the determination.

5.1 Service Standards

The 2005 price determination specified a number of service standards that South East Water was required to deliver.

South East Water has given delivery of these service standards significant management focus and in response to the impact of the recent drought has invested substantial effort into finding innovative ways of meeting these targets.

South East Water continued to deliver both high performance standards and made significant improvements in relation to a range of indicators during the 2005/06 to 2007/08 period, including:

- Water quality – 99.9%
- Unplanned interruptions – 29.5/100km (target 35)
- Average unplanned water minutes off supply – 17.4 (target 21.9)
- Unaccounted for water – 10.1% (target 10.5%)
- Average time to attend a sewer spill – 47 minutes (target 56.8)
- Complaints per 1000 customers – 2.8 (target 4.5)

However, there are some indicators which South East Water did not meet. These indicators have generally been significantly impacted by the extended dry conditions.

The service standards not met include:

- The **sewer blockages per 100 km** KPI was met in 2005/06, however prolonged drought conditions have led to a steady increase in blockages in the system (often due to the intrusion of tree roots looking for water sources) and as a result, this KPI has exceeded the target of 18 per 100 km in 2006/07 and 2007/08. South East Water has increased and will continue to maintain

its focus on proactive maintenance programs that can be used to address this issue.

- The **average duration of planned water supply interruptions / planned water supply interruptions restored within 5 hours** targets were not achieved during 2006/07 and 2007/08 as the targets were originally set on the assumption that South East Water would continue to undertake a number of short duration activities that have in the past kept the average low. The major contributor to the past low average was the proactive water mains flushing program. This activity has now been suspended in order to save water and as a result of research findings that questioned its efficacy. The targets proposed for 2009/10 – 2012/13 reflect the current activity levels.
- **Recycled effluent from local treatment plants** – Largely as a result of unexpected rainfall patterns during the irrigation season.
- **Customer satisfaction/Complaints to the Electricity and Water Ombudsman Victoria (EWOV)** – Customer satisfaction was marginally below target, however the measure was taken at a time when customers were being impacted by severe water restrictions and had recently been informed of a substantial price increase. The targets for complaints to EWOV were based on performance during the early years of the EWOV scheme. Since that time customer awareness of the scheme has increased and as result complaint numbers have increased. South East Water has designed a number of initiatives to improve these outcomes.

While South East Water continues to seek innovative ways of delivering on these targets, the potential impacts of the continuing drought have been taken into account when developing KPI targets for the next Water Plan period.

The following table details South East Water's performance against KPI targets for the 2007/08 financial year.

Service Standard	2007/08 Water Plan Target	2007/08 Result	
Water quality			
E.Coli samples passed (%)	99.9	99.9	4
Turbidity (%)	100	100	4
Water quality complaints (per 1000 customers)	2.8	1.8	4
Water			
Unplanned water supply interruptions (per 100km)	35	29.5	4
Average time taken to attend bursts and leaks (priority 1) (minutes)	40.5	37.6	4
Average time taken to attend bursts and leaks (priority 2) (minutes)	119.6	106.9	4
Average time taken to attend bursts and leaks (priority 3) (minutes)	655	374	4
Unplanned water supply interruptions restored within 5 hours (%)	99.6	99.7	4
Planned water supply interruptions restored within 5 hours (%)	84.3	79.4	8
Average unplanned customer minutes off water supply (minutes)	21.9	17.4	4
Average planned customer minutes off water supply (minutes)	23.10	7.3	4
Average frequency of unplanned water supply interruptions (number)	0.23	0.19	4
Average frequency of planned water supply interruptions (number)	0.15	0.04	4
Average duration of unplanned water supply interruptions (minutes)	95	90	4
Average duration of planned water supply interruptions (minutes)	155	208	8
Customers experiencing more than 5 unplanned water supply interruptions p.a. (number)	235	84	4
Unaccounted for water (%)	10.5	10.1	4
Recycled effluent from local treatment plants (%)	28.1	22.1	8

Sewerage			
Sewerage blockages (per 100km)	18	20.7	8
Sewer blockages taking less than 4 hours to be restored (%)	85	98.7	4
Average time to attend sewer spills and blockages (minutes)	56.8	47	4
Average time to rectify a sewer blockage (minutes)	132	105	4
Sewer spills contained within 5 hours (%)	100	100	4
Customers receiving more than 3 sewer blockages p.a. (number)	8	6	4
Sewer odour complaints (number)	50	36	4
Customer service			
Customer satisfaction (%)	92	88	8
Complaints (per 1000 customers)	4.5	2.8	4
Complaints to EWOV (per 1000 customers)	0.13	0.15	8
Telephone calls answered within 30 seconds (%)	96	96.9	4

5.2 Major Projects

Nineteen major projects were listed to be delivered by the end of the 2005/06 – 2007/08 Water Plan period.

The following table summarises South East Water's progress in delivering these projects by the end of the 2005/06 to 2007/08 regulatory period, and provides comments where these projects have not been delivered.

Category	Project Outputs to be Achieved within Regulatory Period	Progress as at June 2008	Comments
Augment water network	Gamble Road Tank to be completed	Partially Achieved	Tank and pipework have been completed but pump station not completed until mid 2009. Reduced demand due to restrictions has mitigated risk on this item.
	Water Main duplications and extensions - various	Achieved	
Augment sewer network	Mornington Transfer System	Achieved	Strategy revised and ready for commissioning June 2008.
	Caulfield West relieving sewer works	Achieved	
	Pakenham – Narre Warren Transfer System	On revised target	In November 2005, the Government released a revised Urban Growth Boundary for the Growth Corridor served by this sewer. These revisions were critical to the project and not only delayed commencement of detailed planning for the project but also increased the project scope by some 300%. Design is well advanced and construction of some elements has commenced.
Augment Sewage Treatment plants	Koo Wee Rup STP Upgrade effluent re-use and storage capacity	On revised target.	The scope of project has increased because of changing recycle customer circumstances. South East Water now has to purchase land and develop effluent re-use scheme on its own property to meet EPA guidelines. This has delayed project completion by 6 months.
	Mt Martha STP projects - effluent disinfection upgrade, sludge digestion capacity and activated sludge upgrade	Achieved	
	Pakenham STP organic treatment capacity increased	50% complete	This project has been influenced by the same issues that affected the Pakenham to Narre Warren strategy and the size of the upgrade has been consequently increased and commencement delayed.

Category	Project Outputs to be Achieved within Regulatory Period	Progress as at June 2008	Comments
	Boneo STP upgrade commenced & to be complete 2009/10	To be completed by 2009/10 as planned	
Water Renewals	Complete renewal of 94 km	Achieved	
	Renewal of high risk main	Achieved	
Sewer Renewals	Renew 30 km of reticulation and 6 km of branch sewers	Achieved	
Rising Main Renewals	Renew the top 7 priority mains	Achieved	Of the top seven mains listed at the time of the 2005/06 to 2007/08 Water Plan, one had remedial action taken that significantly reduced the risk without renewal and another main originally listed with a lower priority required reprioritising and was renewed instead.
Meter renewals	40,000 meter exchanges pa	Achieved	Current estimated total for the 2005/06 to 2007/08 period will be 130,000.
Contingency Tanks	5 priority tanks listed.	Achieved	
Odour Abatement	Program to address backlog of odour sources – 16 sites to be addressed	14 sites have been addressed	Target has been largely achieved. Some additional odour hot spots have arisen which has extended the scope of the overall program significantly.
Sewerage Backlog Program	800 properties to be serviced	Achieved	Number of properties serviced has exceeded 1400. This has been achieved by the use of pressure sewerage technology which reduces up front CAPEX and provides earlier opportunities for customer connection.

Category	Project Outputs to be Achieved within Regulatory Period	Progress as at June 2008	Comments
Recycling Projects	Planned recycling consumption to exceed 7,600 ML per year	3,997 ML. achieved in 2007/08	Ability to deliver recycling schemes has been impacted adversely by shifting customer demand and lead times required. The first residential recycling scheme in Victoria was launched during 2006 at Hunt Club Estate near Cranbourne, providing a valuable template to assist in fast tracking future schemes.
IT systems replacement and upgrades	Water Log replacement Business intelligence Warehouse Customer Service internet portal	Achieved Upgrades to financial business intelligence tools, customer & geo-spatial analytical & reporting capabilities completed Website review in progress	The next generation of data warehousing and development is currently being explored through a variety of projects. Although the investigation phase for this project has taken longer than expected, a go/no-go decision on the project is due to be made by October 2008, with implementation proceeding until September 2009.

A major project that was not envisaged at the time of the 2005/06 to 2007/08 Water Plan was the construction of a mini-hydroelectricity facility to investigate opportunities for power generation from excess energy in the water supply system, in conjunction with and part funded by Sustainability Victoria. This project was included in the water capacity program in 2007/08, at a total cost of \$1M and allows South East Water to put 900MWh per annum of renewable energy back into the grid.

5.3 Demand

Water sales volumes have been significantly below forecast as a result of water conservation campaigns, promotion of water efficient appliances and water restrictions. These lower sales volumes have continued into 2008/09 due to industry efforts to balance supply and demand as a result of the ongoing dry conditions and government requirements to deliver on Central Region Sustainable Water Strategy (CRSWS) per capita reduction targets. The ability to accurately forecast customer demand into the next regulatory period is one of the most significant risk factors in the Water Plan process.

Billed Consumption	2005/06		2006/07		2007/08	
	Water Plan	Actual	Water Plan	Actual	Water Plan	Actual
Water Volume (ML)	147,766	140,915	151,874	130,736	153,218	117,567
Sewer Volume (ML)	85,294	86,724	88,293	81,162	89,190.6	74,779

5.4 Operating Costs

While South East Water's operating costs have in total been lower than forecast at the time of the previous Water Plan, this is largely due to reduced payments to Melbourne Water as a result of reduced sales volumes.

South East Water initiated operating expenditure was however, greater than initially planned largely due to the impact of the drought (additional asset maintenance costs, extra sewer bursts due to root intrusion, higher unit costs than forecast as a result of fuel and professional cost increases) and the resulting need to implement water restrictions and demand management programs.

Operating Expenditure (\$M)	2005/06		2006/07		2007/08		Total	
	Water Plan	Actual	Water Plan	Actual	Water Plan	Actual	Water Plan	Actual
South East Water Business as usual	\$83.7	\$85.4	\$89.5	\$93.7	\$93.3	\$104.5	\$266.5	\$283.6
Bulk Charges	\$127.7	\$121.9	\$33.5	\$123.1	\$139.2	\$126.0	\$400.0	\$371.0
Restrictions	\$0.5	\$0.0	\$0.5	\$1.6	\$0.6	\$0.9	\$1.6	\$2.5
Demand Mgt/ CRSWS	\$1.4	\$0.0	\$1.1	\$1.8	\$1.7	\$4.0	\$4.1	\$5.9
Environment Contribution	\$15.1	\$15.1	\$15.1	\$15.1	\$15.1	\$15.1	\$45.3	\$45.3
Licence Fees	\$0.5	\$1.0	\$0.5	\$1.2	\$0.8	\$0.7	\$1.8	\$2.9
Total Operating Expenditure	\$229.7	\$223.4	\$240.5	\$236.5	\$251.4	\$251.3	\$721.6	\$711.2

- Expenditure is in dollars of the day and 2005/06 – 2007/08 Water Plan budgets have been escalated by CPI

5.5 Capital Expenditure

Capital Expenditure (\$M)	2005/06		2006/07		2007/08		Total	
	Water Plan	Actual	Water Plan	Actual	Water Plan	Actual	Water Plan	Actual
Water								
Water System Growth New Lots	\$4.0	\$3.8	\$7.0	\$11.2	\$8.5	\$12.8	\$14.2	\$27.7
Water Quality	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1	\$0.3	\$0.3
Water System Reliability	\$8.5	\$9.1	\$8.4	\$10.0	\$8.7	\$13.2	\$25.6	\$32.2
Meters	\$4.6	\$3.9	\$4.9	\$3.8	\$4.7	\$4.7	\$14.2	\$12.3
Total Water	\$17.2	\$16.8	\$20.4	\$25.0	\$22.0	\$30.8	\$59.6	\$72.6
Sewerage								
Sewer System Growth - New Lots	\$35.0	\$21.6	\$31.3	\$24.6	\$14.3	\$28.1	\$80.6	\$74.2
Sewer System Reliability	\$12.0	\$13.3	\$9.4	\$16.3	\$9.4	\$14.2	\$30.8	\$43.8
Sewer System Quality	\$1.5	\$0.8	\$1.4	\$0.5	\$1.2	\$0.2	\$4.1	\$1.5
Sewer System Growth - Backlog	\$11.6	\$1.3	\$10.5	\$12.1	\$10.7	\$18.4	\$32.8	\$31.9
Total Sewerage	\$60.0	\$36.9	\$52.6	\$53.5	\$35.6	\$60.9	\$148.2	\$151.3
Total Recycled	\$4.5	\$0.4	\$1.7	\$1.3	\$0.4	\$1.4	\$6.6	\$3.2
Corporate								
Plant & Equipment	\$0.1	\$0.5	\$0.1	\$0.5	\$0.1	\$0.5	\$0.3	\$1.5
Information Technology	\$5.4	\$4.5	\$5.0	\$5.6	\$4.8	\$5.1	\$15.2	\$15.2
Land & Buildings	\$0.4	\$0.1	\$0.2	\$1.3	\$0.2	\$0.2	\$0.8	\$1.6
Total Corporate	\$5.9	\$5.1	\$5.3	\$7.4	\$5.1	\$5.8	\$16.3	\$18.3
Total Capital Exp.	\$87.5	\$59.2	\$79.9	\$87.2	\$63.0	\$98.9	\$230.4	\$245.3

- Expenditure is in dollars of the day and 2005/06 – 2007/08 Water Plan budgets have been escalated by CPI

Capital expenditure has exceeded the amount specified at the time of the 2005/06 – 2007/08 Water Plan by approximately 6%, largely as a result of the following:

- Across the board increase in input costs, including engineering wages, raw materials and fuel;
- Delays to programs resulting from change to the urban growth boundary; and
- Errors in the Commission's 2005 Determination in relation to funding of large scale water and sewerage assets.

5.6 Revenue/Profit

South East Water's regulated revenue has been substantially below the levels provided for in the 2005 price determination. This has been caused by three main factors, reduced demand for water resulting in lower sales volumes, additional costs of encouraging customers to use less water and the additional operating costs associated with dealing with technical issues associated with the drought and water restrictions. These factors in combination have had a substantial impact on South East Water's profitability.

6. Dealing with Uncertainty

In its recent Final Decision for Regional and Rural Water Businesses, the Commission recognised that costs and demand forecasts for the coming regulatory period are subject to higher than normal levels of uncertainty. In order to deal with this, the Commission has made some changes to the previous mechanisms for reopening a price determination.

The Commission indicated that it may approve within period or end of period adjustments for variations in costs and/or demand. The Commission will take into account impacts on financial viability in making its decision on whether to allow the adjustments and whether to apply them during or at the end of the regulatory period.

South East Water supports the Commission's proposal to provide more options for making within period or end of period adjustments, given the current uncertainty around timing and cost of supply augmentations, the uncertain nature of inflows prior to the augmentations coming on line and the potential for the scope of capital projects to be changed or new projects to be added during the period.

South East Water would however, prefer to commence the regulatory period with a degree of certainty around what would constitute grounds for varying a determination, the degree of divergence from original estimates required before a variance could be requested and the process that the Commission will use to decide whether the variance should be dealt with through an end of year adjustment or a reopening. South East Water proposes that these issues be further clarified during the Water Plan process, for example as part of the Commission's Issues Paper. In particular, South East Water would like to consider the potential for variance (resulting in either a price increase or decrease) to a determination should the expected level of restrictions change, emissions trading be introduced or the weighted average cost of capital change substantially.

Given the flow through impact of changes to Melbourne Water's charges on all retailers, South East Water would expect that any within period or end of period adjustments granted to Melbourne Water should result in automatic adjustments for all retailers.

7. Efficiency Carryover and Adjustments from First Regulatory period

7.1 Efficiency Carryover

South East Water considers the lack of an efficiency carryover mechanism to be a flaw in the current regulatory model. During the first regulatory period, South East Water put significant management focus on establishing processes to delivering efficiency improvements through innovation. However, due to the lack of a carry over mechanism, few of the financial benefits of these achievements will continue to be received by South East Water in 2008/09 or the 2009/10 to 2012/13 regulatory period.

South East Water recommends that in order to encourage businesses to continue to focus on efficiency and innovation the Commission should, prior to the start of the 2009/10 period, notify businesses that an efficiency carryover mechanism will be in place for the end of the 2009/10 to 2012/13 regulatory period.

The carryover mechanism should involve:

- Retailer retention of benefits for 5 years; and
- Calculation of an efficiency carryover mechanism for both operating and capital expenditure.

7.2 Adjustments From First Regulatory Period

The Commission advised in its Supplementary Guidance paper that Government has indicated that no adjustments are to be made in the 2009/10 to 2012/13 period for foregone revenue in the 2005/06 to 2007/08 period. On the basis of this advice South East Water has removed adjustments it intended to propose for licence fees paid to the Commission that were significantly above initial estimates and lower return on investment

during the first period as a result of an error made by the Commission when specifying the final capital requirements for the 2005 Water Plan.

These adjustments were expected to add approximately \$3M to South East Water's revenue requirement in the 2009/10.

South East Water's expectation is that the Commission will provide clear guidance, as part of the Water Plan process, as to how any such events that occur during the 2009/10 to 2012/13 period will be carried forward at the end of the period.

8. Form of Price Control

In the process of developing the Water Plan, South East Water has given significant consideration to the form of price control to be recommended ie. revenue cap or price cap.

While the primary advantage of a revenue cap form of price control is revenue certainty, there are a number of downsides, including:

- Reduced incentives to reduce costs – Under a revenue cap a business is certain that it will receive its approved revenue, therefore if circumstances prove to be unfavourable during the period, there is little incentive for the business to take steps to re-evaluate programs and/or accelerate efficiencies to offset the loss of revenue.
- Revenue loss as a result of customer growth – If a revenue cap is in place and developer activity is in excess of that originally predicted, additional revenue will not be collected to offset the corresponding increase in costs.
- Price variability – In some circumstances a revenue cap can result in larger variance in price for customers over time. For example, if South East Water had been subject to a revenue cap during the current regulatory period, South East Water would be entitled to recover annually the revenue lost as a result of the drought and water restrictions from customers on top of the price increase proposed for the second regulatory period. Fundamentally, a revenue cap assigns demand risk to customers rather than the water business.

Therefore, South East Water is proposing the continued application of a price cap for the 2009/10 to 2012/13 period.

Assuming that a price cap is to continue, the following approaches could be used to implement price adjustments during the period:

- Pre-determined price path; or
- Tariff basket; or
- A combination of the above.

The tariff basket approach allows a business to rebalance its tariffs during the regulatory period, subject to the overall revenue constraint in that year and an upper limit (to ensure customers are not adversely affected), while the pre-determined price path requires tariff rebalancing to be specified in advance.

During the 2005/06 to 2007/08 regulatory period, South East Water implemented a tariff basket approach. This approach was deemed by the Commission to be compliant with the Water Industry Regulatory Order at the time of the 2005 Price Determination. South East Water has implemented minor adjustments to its price strategy during the period without any customer issues.

The Commission has recently approved a hybrid form of price control in its Final Decision for Regional and Rural Water Businesses. This hybrid methodology requires businesses wishing to adjust their tariff strategies during the regulatory period to apply to the Commission clearly articulating their tariff strategy, demonstrating that appropriate customer consultation has taken place and that customer impacts have been addressed.

South East Water considers that the ongoing implementation of a tariff basket approach could be of value in the current environment, as the tariff basket provides the ability to:

- Make adjustments to at least partially reflect the actual impact of climate change on sales volumes;
- Potentially use price as a mechanism to meet the reduced consumption targets required by the Central Region Sustainable Water Strategy (CRSWS); and
- Potentially use price as a mechanism to assist in achieving reductions should supply shortages worsen.

Given the requirement to ensure that customer bills “no more than double in real terms” during the 2009/10 to 2012/13 period, South East Water does not envisage making major adjustments between tariffs during the regulatory period and is prepared to accept the Commission’s proposed “hybrid form of price control” methodology for the current period,.

9. Service Standards

9.1 Customer Research

South East Water considered the following customer service level related questions, as a basis for development of this Water Plan:

- Would customers value higher standards of service?
- Are there additional activities that customers would like South East Water to focus on? and
- What KPI's should be put in place to facilitate performance monitoring throughout the regulatory period?

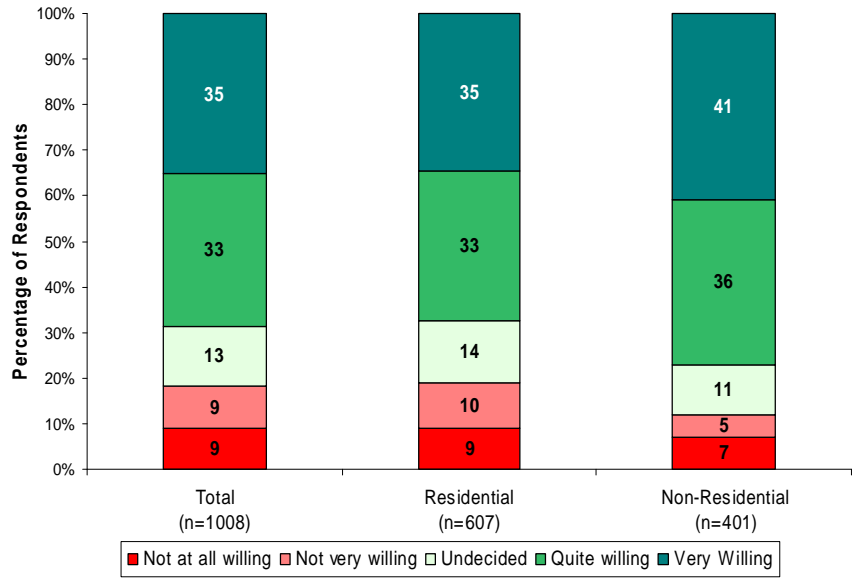
South East Water undertook an extensive program of market research (including choice modelling, surveys and focus groups), as well as liaised with its Customer Advisory Committee, in order to establish the preferences of customers prior to the suspension of the Water Plan process in 2007. In summary, this research concluded that customers consider existing standards of service to be sufficient and were not willing to pay for any general improvements. Given the price increases that have subsequently occurred, this research outcome is still considered to be valid.

The 2007 research also indicated that customers were willing to pay extra for specific new services, particularly those that have a long term positive impact on the environment. The services that customers were most interested in included increased recycling (now mandated by the CRSWS), escalation of the backlog program (supported by the EPA) and greenhouse gas abatement.

The chart below demonstrates customer's willingness to pay for a specific set of service improvements structured around environmental improvements. The costs incurred in implementing these improvements during the 2009/10 – 2012/13 period have been factored into South East Water's Water Plan, along with a continuation of existing levels of service in all other areas.

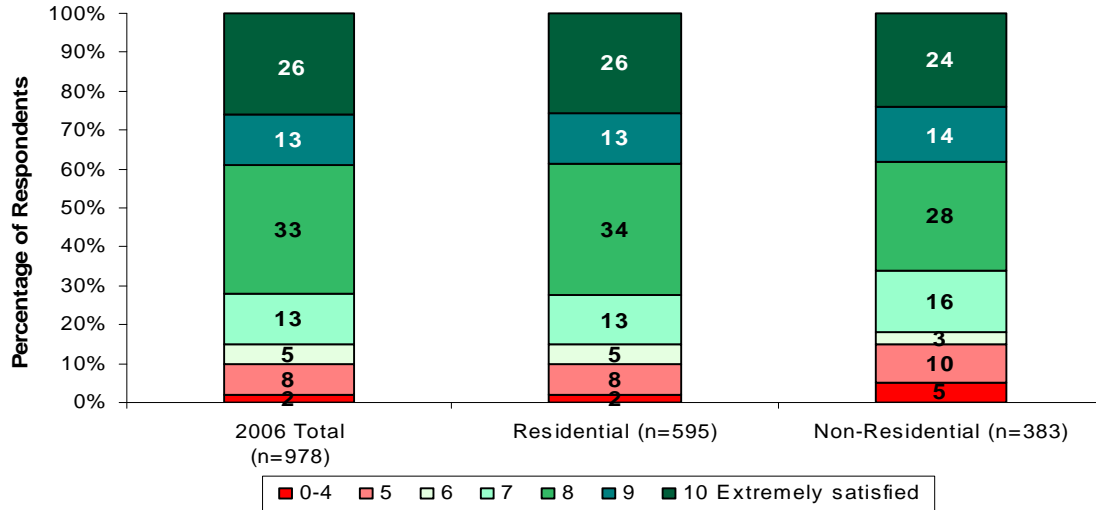
PROPOSED SERVICE OPTION

“If South East Water decided to increase the amount of sewage recycled from 20% to 25%, cut greenhouse gas emissions by 90% and reduce the time taken to introduce piped sewage to un-sewered areas from 40 to 20 years at a cost of \$13 per household/business, how willing would you be to pay this additional amount to ensure that these improvements were made”



The following chart demonstrates customer’s satisfaction with the services currently provided by South East Water.

Q3.: “Taking everything into consideration how satisfied are you overall with the services that you receive from South East Water?”



Since the suspension of the price review process in 2007, South East Water has posted a copy of its Draft Water Plan summary on its web site and discussed pricing with its Customer Advisory Committee on several occasions, as follows:

- **March 2008** Initial advice provided to the Committee in relation to the 2008/09 price increase. Discussion around potential for Government concession increases and what South East Water can do to assist customers.
- **June 2008** Confirmation of 2008/09 price increase provided to the Committee. Affordability issues and South East Water's communication strategy were discussed.
- **September 2008** Committee advised on progress towards developing South East Water's Water Plan including proposed price increases, the potential for tariff changes and service standards.

The primary feedback from the Customer Advisory Committee throughout this period of restrictions and rising prices has been that while the reasons for the price rise are understood, South East Water should focus on what can be done to provide customers with solutions/advice on how to manage their consumption to minimise impacts.

9.2 Service Standards

South East Water has also proposed a set of KPI's to allow ongoing benchmarking of performance against the targets established in this Water Plan. These KPI's have been prepared taking into account:

- The current focus on responding to leaks and bursts in the shortest possible time to conserve water;
- Expected issues with water quality as dam levels reduce further and new sources of water are introduced; and
- The requirement to provide customers with more detailed information about water restrictions and ways to save water.

As a result of the uncertainty around the ongoing impacts of the drought, KPI targets have been set with emphasis on long term average performance for a large range of KPIs rather than the last three years.

South East Water has also proposed to substitute some of the Commission's standard measures with measures which are considered to be a better indicator of performance (coloured grey in the following table) and added additional performance measures where these are considered essential to customers or are an important indicator of a the

achievement of the goals of a specific expenditure program (coloured blue in the attached table).

Greenhouse Gas

South East Water's original greenhouse gas target of zero net emissions was supported by the EPA in 2007, however this target has subsequently been adjusted as a result of

- Changes in legislative reporting frameworks, and the introduction of the Carbon Pollution Reduction Scheme (CPRS);
- Major water and utility price rises;
- Strong ongoing community support for reducing emissions;
- Major technology developments to be made in coming years; and
- An energy audit that identified further opportunities for South East Water to reduce its greenhouse footprint internally.

South East Water is now proposing to adopt a greenhouse reduction target of approximately 10% of the 2007/08 levels each year until 2012/13. It is intended that this target will be achieved by implementing internal changes in the following order of priority, with the purchase of offsets as the last resort:

1. Avoid greenhouse emissions;
2. Reduce greenhouse emissions;
3. Use renewable energy;
4. Recover waste energy;
5. Sequester carbon on site; and
6. Utilise off-site abatement (offset) schemes.

Note, while South East Water supports the use of savings resulting from showerhead replacements to achieve targets, these savings have not been incorporated.

The critical customer service standards are as follows:

Service Standard	Actual					Average		Target	Water Plan Proposal			
	03/04	04/05	05/06	06/07	07/08	3 Yr	Long Term	08/09	09/10	10/11	11/12	12/13
Drinking water quality												
Compliance with drinking water regulations	100	100	100	100	100	100	100	100	100	100	100	100
Water												
Average time taken to attend bursts and leaks (priority 1) ¹	38.5	38	37.1	37	37.6	37.2	39.7	40	40	40	40	40
Average time taken to attend bursts and leaks (priority 2) ¹		100	100	123	107	110	108	120	120	120	120	120
Average time taken to attend bursts and leaks (priority 3) ¹		505	1,385	1,071	375	944	832	550	550	550	550	550
Unplanned water supply interruptions (per 100km) ²	34.6	30.6	27.4	32.0	29.5	29.6	35.4	35.0	35.0	35.0	35.0	35.0
Average frequency of unplanned water supply interruptions (per 1000 customers)	228	187	185	210	193	196	242	230	230	230	230	230
Customers experiencing more than 5 unplanned water supply interruptions p.a. (number) ³	111	145	40	293	84	139	313	250	235	235	235	235
Average duration of unplanned water supply interruptions (minutes) ⁴	95	88	85	88	90	88	104	95	95	95	95	95
Average unplanned customer minutes off water	21.7	16.5	15.7	18.4	17.4	17	26	25	22	22	22	22

Service Standard	Actual					Average		Target	Water Plan Proposal			
	03/04	04/05	05/06	06/07	07/08	3 Yr	Long Term	08/09	09/10	10/11	11/12	12/13
supply (minutes)												
Unplanned water supply interruptions restored within 5 hours (%)	99.9	99.9	99.8	99.6	99.7	99.7	99.4	99.6	99.6	99.6	99.6	99.6
Planned water supply interruptions (per 100km) ⁵	8	6.8	5.6	3.6	5.5	4.9	11	6.0	6.0	6.0	6.0	6.0
Average frequency of planned water supply interruptions (per 1000 customers) ⁵	61	50	51	30	40	40.3	122	60	60	60	60	60
Average duration of planned water supply interruptions (minutes) ⁶	189	198	199	210	208	206	203	220	220	220	220	220
Average planned customer minutes off water supply (minutes)	11.5	10	10.1	5.8	7.3	7.7	25	15	12	12	12	12
Planned water supply interruptions restored within 5 hours (%)	84.2	81.1	76.7	79.4	79.4	78.5	78.4	75	75	75	75	75
Unaccounted for water (ML/km) ⁷	2.27	1.75	1.71	1.59	1.57	1.6	2.3	1.66	1.65	1.63	1.62	1.61
Water reuse												
Total recycling volumes by South East Water (ML) ⁸	4,054	3,376	3,572	5,088	3,997	4,219	4,000	6,900	7,200	7,300	7,400	7,500
Demand by potable substitution schemes (ML)	n/a	n/a	n/a	5	123	n/a	n/a	200	300	900	1,000	1,100

Service Standard	Actual					Average		Target	Water Plan Proposal			
	03/04	04/05	05/06	06/07	07/08	3 Yr	Long Term	08/09	09/10	10/11	11/12	12/13
Sewerage												
Sewerage blockages (per 100km) ⁹	17.9	15.3	16.4	21.4	20.7	19.5	15.9	21.5	22.5	22.5	22.5	22.5
Customers receiving more than 3 sewer blockages p.a. (number)	6	4	0	2	6	2.7	4	8	8	8	8	8
Sewer odour complaints (number) ¹⁰	70	41	37	53	36	42	52	50	50	50	40	35
Average time to attend sewer spills and blockages (minutes) ¹¹		49.8	42.4	48.2	47	45.9	47.4	56	56	56	56	56
Total time taken to rectify blockage (minutes) ¹²		202	163	167	152	161	170	180	180	180	180	180
Sewer spills total (per 100km)		3.7	4.7	6.9	5.5	5.7	5.2	7.0	7.5	7.5	7.5	7.5
Sewer spills contained within 5 hours (%)	100	100	100	100	100	100	100	100	100	100	100	100
Environment												
EPA Licence effluent standards met for STP's (%)	100	100	100	100	100	100	100	100	100	100	100	100
Greenhouse gas net emissions (tonnes) ¹³	34,210	32,148	33,470	29,115	27,113	29,899	n/a	24,500	22,000	19,000	16,500	13,750
Biosolids recycled (%) ¹⁴	121	33	321	218	100	213	102	105	105	105	105	105
Backlog properties serviced (20 year program)	1,263	1,188	0	460	1,327	596	n/a	300	400	600	800	900

Service Standard	Actual					Average		Target	Water Plan Proposal			
	03/04	04/05	05/06	06/07	07/08	3 Yr	Long Term	08/09	09/10	10/11	11/12	12/13
Customer service												
Complaints to EWOV for investigation (per 1000 customers) ¹⁵	0.11	0.13	0.16	0.15	0.15	0.15		0.15	0.15	0.15	0.15	0.15
Telephone calls to accounts hotline answered within 30 seconds (%) ¹⁶	96.8	98.1	98.1	97.2	96.9	97.4	95.8	93	93	93	93	93
Telephone calls to faults hotline answered within 30 seconds (%)	96.7	96.8	96.9	96.9	96.9	96.9	96.9	96	96	96	96	96

Minimum Flow Rates

Pipe Size	20mm	25mm	32mm	40mm	50mm
Flow Rates (litres per minute)	20	35	60	90	160

Explanatory notes

1. The target for Priority 1 and 2 bursts are at the high end of current performance due to ongoing concerns about issues beyond SE Water's control such as traffic congestion. The introduction of 'smart' cars in January 2006 has significantly improved the time to attend Priority 3 bursts.
2. SE Water's strategies for operations, remediation and renewal are based on maintaining a relatively steady level of interruptions that optimises whole of community costs over the long term. The recommended target reflects the 10 year average performance. The current continued dry period has resulted in relatively stable ground conditions and a drop in bursts over the past few years. However with a possible return to wetter conditions and in spite of a steady program, it can be expected that bursts will increase closer to long term average, as extreme moisture changes in the clay soils move and stress some of the more vulnerable pipes.
3. Opportunities for further improvement in this area are limited therefore a target of 235 is proposed, still significantly below the long term average.

4. Recent performance can be attributed again to more stable ground conditions, fewer bursts and less demand for resources. The proposed target is better than long term average performance. This is consistent with constant management strategy and no significant technological changes.
5. With the increased use of technology (under pressure tapplings) and also a major reduction in the number of smaller/quick planned shutdowns (air scouring, flushing) the total number of planned shutdowns has been reduced to significantly less than the long term average. A significant reduction from the long term average has been made in this service standard.
6. South East Water is reducing planned shutdowns through the use of technology. However the remaining shutdowns are likely to be only those that are too difficult to carry out under pressure and consequently a target longer than past performance is proposed.
7. Expenditure continues on proactive leakage monitoring and the meter replacement program to reduce this measure.
8. Includes South East Water treatment plants, South Eastern Outfall and dual pipe estates. Volumes can be significantly affected by rainfall during the irrigation season as is reflected in the 2007/08 figures.
9. There has been an increasing trend in blockages due to tree root intrusion as a result of dry conditions and recent additional cleaning activities will require some time to become effective.
10. Odour complaints can vary significantly from year to year influenced by a variety of factors from weather conditions to level of activity at sewerage treatment plants (STPs). Drop in odour levels post 2011, reflect completion of significant works at STPs and in the network to reduce odour levels in line with EPA requirement.
11. Improvements in this performance measure are also constrained by deteriorating traffic conditions. High priority is given to the relatively rare more critical events i.e. >200L spills or internal flooding.
12. Developers/property owners are now fully utilising their blocks of land and are securing their properties to an extent that access to manholes, usually located in the rear of backyards, is getting more difficult to obtain. It often takes approaches to neighbours to get access, resulting in lost time. In many cases a number of manholes have to be accessed in order to locate the problem. It is expected that this trend will worsen in future years.
13. These figures are based on a 10% reduction from the 2007/08 emission level and will be delivered through a combination of internal energy reduction projects and the purchase of offsets.
14. South East Water intends to continue its existing land application program to utilise biosolids. Further investigation into alternative approaches will occur during the Water Plan period.
15. Increased EWOV complaints in recent years are believed to be as a result of increased awareness amongst customers of the EWOV scheme, rather than any changes to work practices at South East Water, therefore current complaint levels are expected to continue.
16. In order to better educate customers on water conservation measures, staff are encouraged to spend additional time with high water usage customers. This time is devoted to assisting customers to identify where water is used in their homes and to provide them with water saving solutions. This process also requires outbound calls and survey customers to obtain further data on where high use customers use water in the home. ¶

9.3 Guaranteed Service Levels (GSL)

South East Water proposes to continue to offer its GSL scheme in order to recognise all residential and non-residential customers who do not receive an appropriate standard of service.

The service standards proposed are as follows:

Water

- Unplanned interruptions not restored within five hours
- More than five unplanned interruptions in 12 months

Sewerage

- More than three interruptions in 12 months
- Interruptions not restored within four hours
- Spills not contained within 5 hours
- Spills not contained in a house within one hour.

In the interests of minimising price increases, it is proposed that:

- The payments for sewerage spill containment remain at \$500; and
- All other GSL payments remain at \$25.

The number of GSL payments by category and the total amount paid each year, for the previous Water Plan period are as follows:

Number/Value of GSL Payments	2005/06	2006/07	2007/08
Unplanned interruptions not restored within five hours	211	646	497
More than five unplanned interruptions in 12 months	39	373	200
More than three interruptions in 12 months	2	4	4
Interruptions not restored within four hours	132	30	81
Spills not contained within 5 hours	0	0	0
Spills not contained in a house within one hour	2	9	7
Total Number	386	1,062	789
Amount Paid	\$10,600	\$32,825	\$23,050

9.4 Statement of Obligations

South East Water has identified the elements of its Statement of Obligations that impose a specific compliance obligation.

The Department of Sustainability and Environment have recently provided South East Water with a list of seven key quantifiable outcomes, extracted from South East Water's Statement of Obligations. These outcomes (and South East Water's proposed measure of achievement) are as follows:

Activity	2008/09	2009/10	2010/11	2011/12	2012/13
1a. CO ₂ generated (tonnes)	29,500	30,000	31,000	32,000	33,000
1b. CO ₂ green energy/offset purchases (tonnes)	5,000	8,000	12,000	15,500	19,250
1c. CO ₂ showerhead replacement (tonnes)	140,000	150,080	145,600	147,840	152,320
2. Recycled water (ML)	6,900	7,200	7,300	7,400	7,500
3. Biosolids reused (%)	105%	105%	105%	105%	105%
4. Sewer backlog lots serviced	300	400	600	800	900
5. Expenditure on knowledge and learning (\$M Jan 2009)					
- Smart Water Fund	\$1.2	\$1.0	\$1.0	\$0.9	\$0.9
- Research & Development	\$0.5	\$0.6	\$0.6	\$0.6	\$0.6
- Training	\$0.7	\$0.7	\$0.7	\$0.6	\$0.6
- Brainwaves Cup	\$0.2	\$0.5	\$0.5	\$0.5	\$0.5
- Pressure management pilot - capex	\$0.0	\$0.3	\$2.1	\$2.2	\$2.2
6.a Water Conservation Residential– total potable water use per person (litres per person per day)	159	155	163	169	168
6.b Water Conservation Total – total potable water use per person (litres per person per day)	245	240	253	261	258
7. Savings from shared services and bulk procurement (\$M Jan 2009)	\$0.0	\$0.5	\$1.0	\$1.5	\$2.0

10. Demand Forecasts

Forecasts of water, sewer, trade waste and recycled water volumes are required to allow Melbourne Water to develop estimates of bulk water and sewer volumes and to allow South East Water to design tariffs that will collect sufficient revenue.

The forecasting process has been undertaken in a period of great uncertainty. That is, the impact of the initiatives mandated by the CRSWS, water restrictions, behaviour change, water efficient technologies, lot growth in greenfield areas and the potential impact of higher prices have had to be estimated for the 2009/10 to 2012/13 period.

10.1 Bulk Water

10.1.1 Impacts of Restrictions, Elasticity and the Central Region Sustainable Water Strategy (CRSWS)

While South East Water has analysed the impacts of restrictions, price elasticity and the CRSWS initiatives individually, in many cases these measures overlap.

For example, a customer may reduce their consumption because:

- They are concerned about their bill increasing; and/or
- The current stage of restrictions prohibits the use of water for that particular purpose; and/or
- Because one of the CRSWS programs has assisted them to use less water.

In order to avoid over estimating the impact of these events on demand for water, South East Water has:

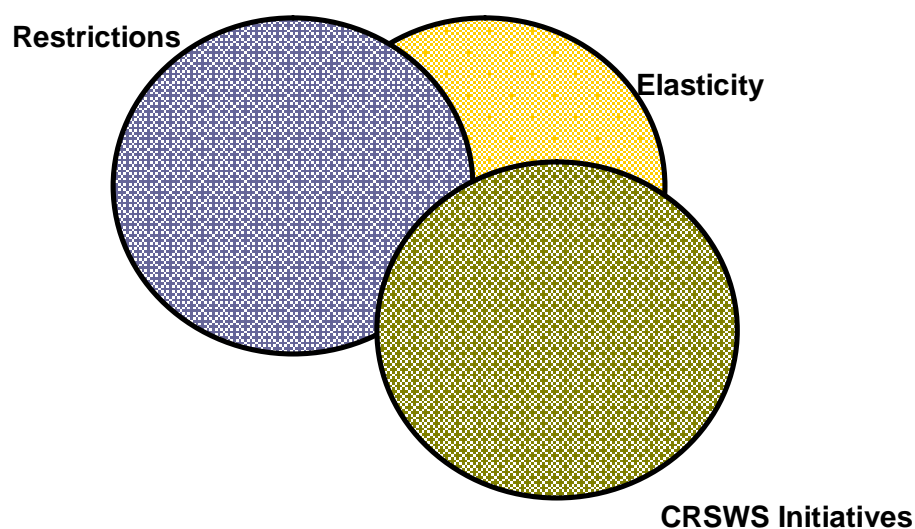
- Firstly incorporated the reduced consumption that results from the mandated CRSWS initiatives;
- Secondly incorporated the incremental impacts of restrictions, based on the forecast level of restrictions, as agreed with Melbourne Water and the other metropolitan

retailers. The overlap between CRSWS initiatives and restrictions is relatively small and has been estimated by isolating the impacts of any CRSWS initiatives that relate to external residential usage; and

- Thirdly, estimating the impact of price elasticity and incorporating it only where it relates to specific circumstances that would not be covered by either restrictions or the CRSWS initiatives. This has resulted in additional elasticity impacts being incorporated in relation to the non-residential sector and the residential sector later in the regulatory period when the impact of restrictions is forecast to reduce.

The overlap between restrictions, elasticity and the CRSWS initiatives is represented in the figure below. This diagram contrasts the minimal overlap between restrictions and the CRSWS initiatives with the large overlap between elasticity and both other drivers of reduced water consumption.

Overlap Between Restrictions, Elasticity and CRSWS Initiatives



South East Water considers it imperative that restrictions and the CRSWS initiatives operate concurrently in order to contribute to the alleviation of the current short term supply imbalance as well as to implement structural reforms that will achieve significant reductions in future water consumption.

Given the aggressive reductions in water consumption required and the untested nature of many of the CRSWS initiatives, price elasticity will provide greater certainty that the required water savings will be achieved.

Restrictions Assumptions

South East Water has assumed that restrictions are as follows for the Water Plan period:

Restrictions	2008/09	2009/10	2010/11	2011/12	2012/13
Restriction Level	3A	3A	2	1	PWSR ¹
Estimated annual savings as a percentage of unrestricted demand ²	15%	15%	8%	2.5%	-

- 1 Permanent Water Saving Rules
2 Source: Drought Response Plan

These assumptions are based on the following:

- The fact that stage 3A restrictions are in place during 2008/09 and appear unlikely to be relaxed before a significant supply augmentation can take effect;
- The first major augmentation (the Sugarloaf Interconnector) is expected to be completed in the latter part of the 2009/10 financial year and deliver up to 75GL. This additional water (and the impending completion of the desalination plant) is expected to allow restrictions to move back to stage 2 during the 2010/11 year; and
- The desalination plant is expected to commence operation during the 2011/12 financial year and will allow restrictions to be relaxed back to stage 1 and then permanent water saving rules as the dams begin to fill with up to an additional 150GL pa.

However, Government is intending to make an announcement in late November 2008 regarding the status of water restrictions following the end of the filling season. If restrictions and/or inflow scenarios change significantly, South East Water will need to review its demand forecasts for the 2009/10 to 2012/13 period prior to the Commission's final determination.

Price Elasticity Assumptions

South East Water has used the following price elasticities for residential and non-residential water:

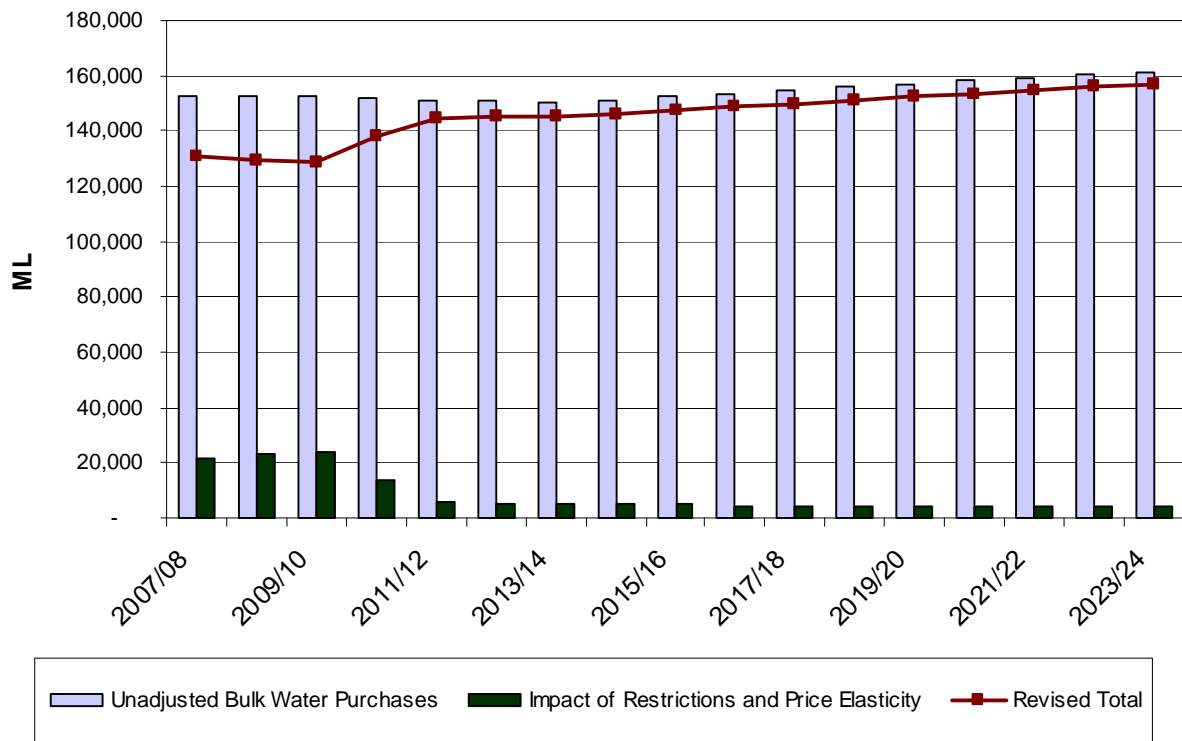
Price Elasticity	
Residential – Block 1	0
Residential – Block 2	-0.1
Residential – Block 3	-0.15
Non-residential	-0.185

The residential elasticity assumptions were drawn from work commissioned by the Water Services Association of Australia and conducted by KPMG. This research was based on a sample of customers across Melbourne and concluded that while the demand for water is relatively inelastic, the demand for water for indoor use is less elastic than outdoor use. Therefore the conclusion was drawn that Block 1 water is for essential purposes and is generally not responsive to price change, Block 2 water is indicative of indoor use and an elasticity of -0.1 was used and Block 3 water is indicative of outdoor use and an elasticity of -0.15 was used.

The non-residential elasticity assumptions were drawn from a report commissioned by the Smart Water Fund and undertaken by ACIL Tasman. This report concluded that for customers outside the top 100, those that would change their consumption in response to price have a price elasticity of -0.6. However, taking into account both customers who would and would not change their behaviour the elasticity is estimated at -0.185. South East Water has adopted the -0.185 estimate as not all customer will or will be able to change their behaviour in response to price rises. Also, South East Water needs to apply this estimate across the non-residential customer base so a more general estimate is preferred to one that better represents the top 100 customers whose water savings have already been documented through the “Water Map” process.

The following chart demonstrates the impact of restrictions, demand management activities and customer's response to higher prices on the volumes of water South East Water purchases from Melbourne Water.

Bulk Water Purchases Adjusted for the Impacts of Restrictions and Price Elasticity

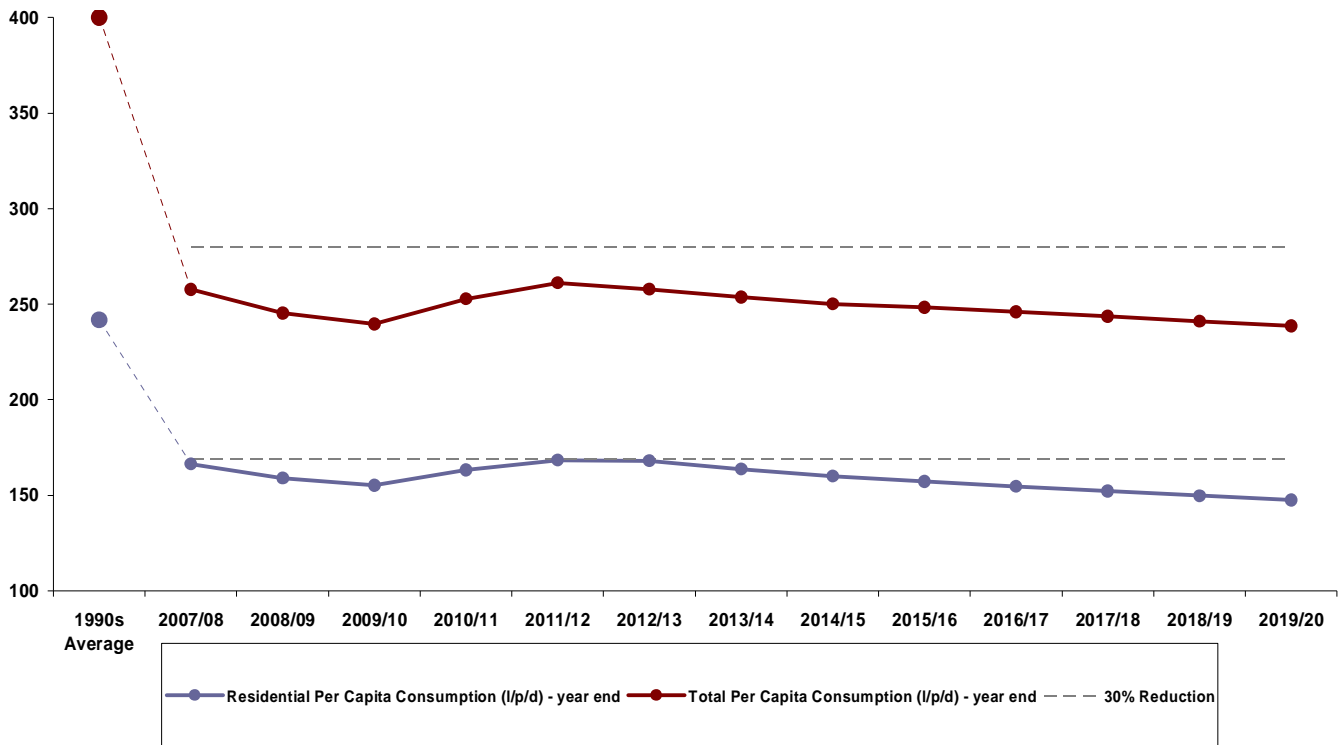


Note: Includes the impact of restrictions assumed to be as follows:

2008/09	3A
2009/10	3A
2010/11	2
2011/12	1
2012/13	Permanent Water Saving Rules

The following chart confirms that South East Water is expecting to deliver the 30% reductions for both total and residential litres per person per day, required by the CRSWS. The achievement of these reductions as early as possible is particularly important as the first supply augmentation is not expected to come on line until 2010.

Forecast Litres Per Person Per Day - Residential and Total



Note: Includes the impact of restrictions assumed to be as follows:

2008/09	3A
2009/10	3A
2010/11	2
2011/12	1
2012/13	Permanent Water Saving Rules

10.1.2 Population Growth

The foundation of South East Water’s forecasts of population is the 2004 Victoria in Future document published by the Department of Sustainability and Environment. (This document is scheduled to be revised shortly.)

In the absence of a revised Victoria in Future document, South East Water has adjusted its volume forecasts to take into account the increased number of people within its area today and the forecasts of higher growth rates in the future, based on 2006 Census data. These estimates will be revised when the new Victoria in Future estimates are released.

The jump in the estimate of current population has had the effect of driving down previous estimates of litres per person per day. The increase in future population growth estimates is the major factor underlying the forecast increase in total water volume. However, this increase is being partially offset by a reduction in the water used per person. This is consistent with the expected trend to higher occupancy rates and increased density.

10.2 Forecasts for Tariff Setting

In addition to volume forecasts for bulk water purposes, South East Water is required to make forecasts for revenue purposes. These forecasts need to identify number of customers and sales volumes for all tariff categories.

10.2.1 Number of customers

In recent years, lot growth has been extremely high particularly in the south eastern growth corridor. This growth is one of the fundamental drivers of South East Water's capital program.

South East Water's forecasts of lot growth for the Water Plan period are as follows and have been based on Department of Sustainability and Environment dwelling and population forecasts, as well as recent updates provided by the Australian Bureau of Statistics derived from the 2006 census data.

Customers*	2008/09	2009/10	2010/11	2011/12	2012/13
Number of customers - residential	566,434	575,576	584,705	593,846	602,945
Number of customers – non-residential	48,479	49,503	50,526	51,549	52,568
Total	614,913	625,079	635,231	645,395	655,513

* Customers charged a water service charge

10.2.2 Water and Sewer Volumes

Residential demand for water is built up through application of an End Use Model which considers the major reasons for water usage in and outside the home, including:

- Toilet
- Clothes washing
- Shower
- Dishwasher
- Other Indoor (eg taps, evaporative air conditioning)
- Lawn and garden
- Other Outdoor (eg car washing, pools)

For each of these categories of water usage, the expected demand for water has taken into account the take up of new technology such as water efficient shower heads or rain water tanks, where applicable.

Non-residential consumption is forecast based on a five year historic average of usage per non-residential customer, taking into account growth in customer numbers and the impact of restrictions for affected customers.

The forecast billable sewerage volume is estimated on the basis of South East Water's published seasonal factors and the known sewage disposal charge factors assigned to customers.

Trade waste forecasts reflect the success of targeted environmental improvement and regulatory cleaner production programs. The resulting reductions in pollutant volumes are offsetting growth in customer numbers.

This process has delivered water, sewer and trade waste forecasts as follows:

Water and Sewer Forecasts					
	2008/09	2009/10	2010/11	2011/12	2012/13
BULK					
Bulk Water Purchases (GL)	129.4	128.5	137.8	144.8	145.4
Bulk Sewage Discharged to Melbourne Water Treatment Plants (GL)	95.4	95.2	106.0	109.5	109.4
Bulk Recycled Water Purchased (GL)	0.2	0.3	0.4	0.5	0.7
SALES					
Water					
Residential Water Sales (GL)	86.2	85.7	91.9	96.5	96.0
Non-Residential Water Sales (GL)	30.1	29.9	33.4	35.7	36.7
Sewer					
Residential Sewer Sales (GL)	59.1	58.6	61.9	64.4	63.9
Non-Residential Sewer Sales (GL)	14.5	14.4	15.9	16.8	17.1
Trade Waste (Billable volumes to South East Water Customers)					
Trade Waste Volume (GL)	5.5	5.5	5.5	5.5	5.5
Billable Biochemical Oxygen Demand (Tonnes)	8,607	8,575	8,567	8,536	8,504
Billable Suspended Solids (Tonnes)	3,121	3,109	3,106	3,095	3,083
Billable Total Kjeldahl Nitrogen (Tonnes)	464	462	462	460	458
Billable Sulphur (Tonnes)	212	211	211	210	209

11. Expenditure Forecasts

South East Water's expenditure program has been prepared taking into account the service standards required by customers, the regulatory requirements imposed on South East Water, expected customer growth rates, the impact of the current drought and water industry market conditions.

South East Water's expenditure requirements can be broadly grouped into the following categories:

- Asset;
- Corporate/IT; and
- Bulk Charges.

11.1 Asset

As part of the process of developing its Water Plan, South East Water's Asset Management Plans have been reviewed and audited. These plans document South East Water's asset management process and provide a rational framework for the management of hydraulic assets. Development of South East Water's Asset Management Plans involved assessment of stakeholder requirements, system performance and demands, identification and quantification of risks and trends and determining appropriate performance targets and KPIs for the system.

In recent years, South East Water has formed an operating, maintenance and capital works alliance ('us' Utility Services) with Thiess Services and Siemens. This alliance contract was awarded following a competitive tender process and includes direct performance incentives to continuously improve efficiency without compromising quality, safety or environmental performance.

The 'us' Alliance, in conjunction with South East Water, continues to focus on delivering efficiency improvements through a significant focus on investment in technology and an innovation culture. This effort is expected to deliver significant improvements during the coming regulatory period. As a result, South East Water expects to be able to deliver efficiency

savings in relation to core business as usual activities of 1% with respect to today's costs (excluding new obligations), taking into account the impacts of growth in customer numbers.

South East Water has also used independent research provided by Econtech to estimate expected cost increases above CPI for a range of inputs to capital programs. These input costs have increased significantly in recent years, and are expected to increase further during the 2009/10 – 2012/13 period.

11.1.1 Water Program

Capacity - The objective of the water capacity program is to ensure that South East Water's system has sufficient capacity to deliver water to customers. There are few areas in the South East Water network where minimum flow requirements (represented by pressure levels at customer taps) are not being met, so expenditure is focussed on maintaining standards and extending services to meet the requirements of new customers, based on land release forecasts provided by the 2007 Urban Development Program.

The largest extension of the water supply network is into the previously undeveloped Officer area which requires significant infrastructure to be provided prior to development. This factor, together with the full effects of the Commission's previous decision regarding customer contributions and construction costs increasing faster than CPI drives the increase in the water capacity program throughout the Water Plan period.

The largest single project in the Officer servicing strategy involves construction of a storage tank in the East Officer area, with the remainder consisting of extensions and expansion of other pipelines. In addition to these works, there is in the order of \$19 million of reimbursements to developers for works constructed for South East Water, mostly in the same areas, driven by the timing of individual developments.

Beyond the 2009/10 to 2012/13 Water Plan period investments in water supply capacity are expected to reduce, as although growth is assumed to continue at a relatively constant rate, it can be met by progressive upgrading and duplicating supply.

Significant water supply augmentations including the Tarago Reservoir and the Wonthaggi Desalination plant will be completed during the Water Plan period (as part of Melbourne Water's capital works program). These augmentations which will significantly increase water

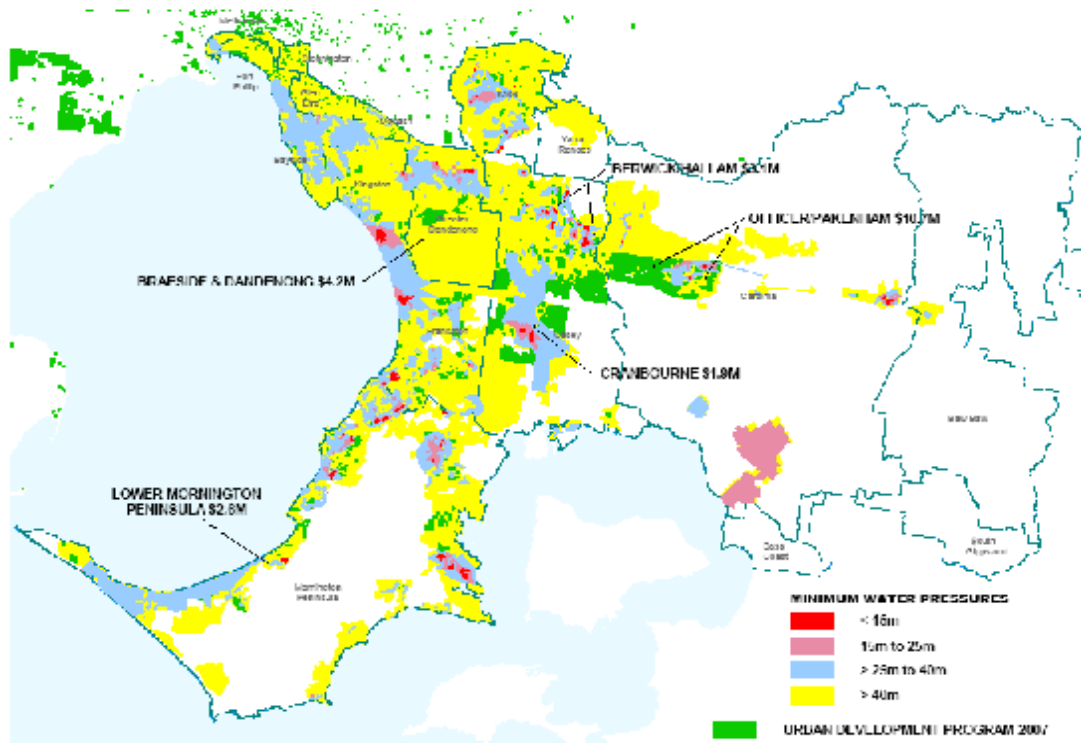
resource availability, will require minimal augmentation of water supply system capacity. The associated works in the Water Plan are connection of the townships of Koo Wee Rup and Lang Lang to the passing desalination pipe at a cost of \$1.5M to increase supply security and avoid future internal supply augmentations.

Expected water capacity capital expenditure levels have taken into account the recent mandating of dual pipe (recycled water and potable water) supplies, which has allowed downsizing of reticulated water pipe sizes in the affected areas (Officer, North, West and East Cranbourne).

In the future, there may also be additional savings obtained from reductions in the peak hour pipe network design standard as water consumption patterns change. However significant research needs to be done to quantify the potential reduction in requirements and/or increase in capacity and ensure that they are sustainable. It is expected that these savings will be most evident in delayed upgrades in future years.

Pressure management trials are proposed, which may lead to reduced customer demand and leakage rates. The cost / benefit of this initiative will be evaluated during the Water Plan period and, if required, expenditure for an extensive rollout program will be incorporated into the 2013/14 to 2017/18 Water Plan period. Should it be the case that this pilot program is concluded prior to the end of the Water Plan period, with positive outcomes, South East Water may consider approaching the Commission to allow the full program to commence within the current Water Plan period.

Pressure Levels and Major Water Capacity Expenditure Areas



Reliability - The objective of the water reliability program is to ensure that South East Water's systems operate to provide customers with reliable standards of supply and without excessive levels of service interruption. South East Water plans to achieve this objective via rigorous assessment of the trade-offs between emergency maintenance, preventative maintenance and asset renewals.

Given consistent proposed KPI targets, the reliability program is based on generally maintaining similar levels of activity as past years. However, the dollar value of some programs is expected to increase as a result of increased unit costs.

An increase in capital expenditure on renewal of critical distribution mains from an average of \$1M per annum in the 2005/06 to 2007/08 Water Plan period to \$5.9M in the 2009/10 to 2012/13 Water Plan is planned. 12.4km of critical mains (out of approximately 1,000km in the total system) have been identified for renewal as they are nearing the end of their life. These mains have been selected taking into account not only their condition assessments but also the total economic cost to the community of disruption caused by potential bursts in these very congested areas. Bursts on these high profile mains are also counter productive to the water

saving effort and communication campaigns. The unit cost of replacement is high because of restricted access, risk of damage to other services and stringent work requirements imposed on work in these areas by customers, local councils, transport authorities and government agencies.

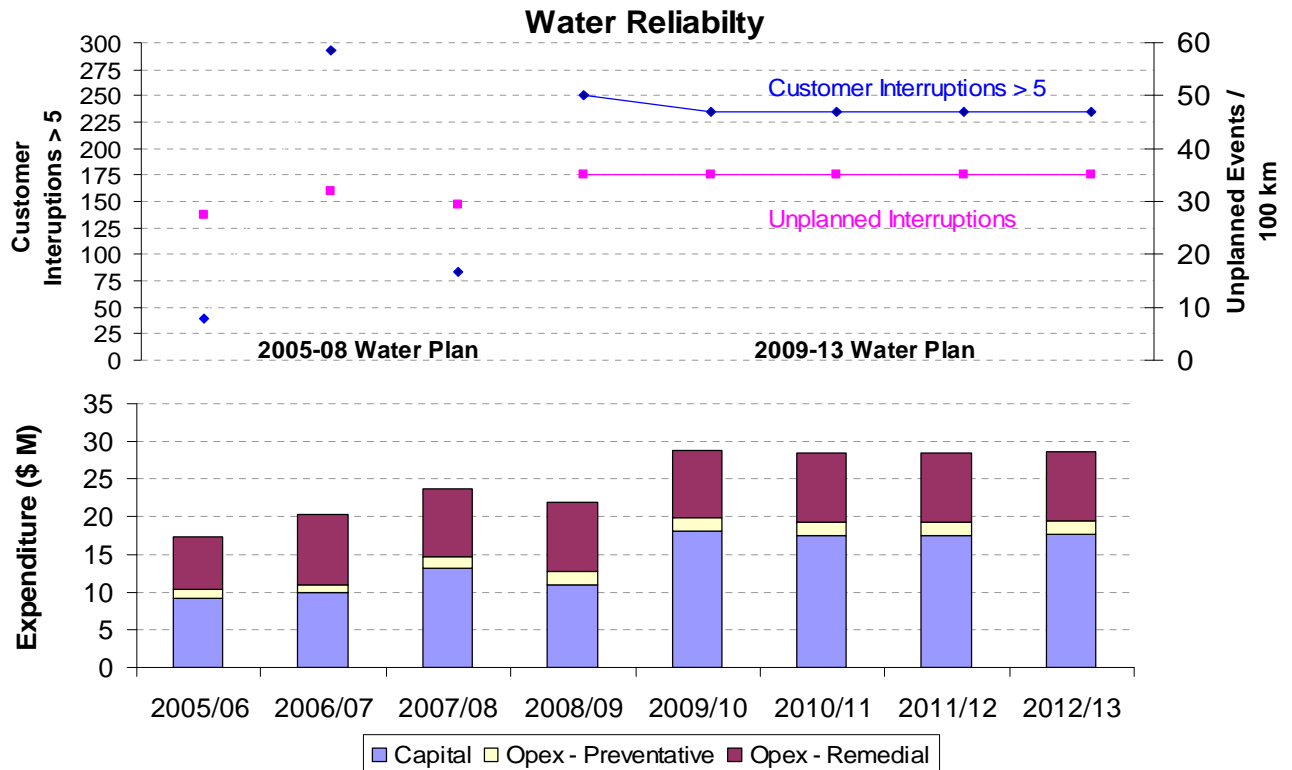
Beyond the 2009/10 to 2012/13 pricing period South East Water's water supply reticulation system will require increased investment in replacement as the pipework constructed in the early part of this century and post First World War reaches the end of its operating life. However the largest cost increases will not begin to appear until beyond 2030.

The water reliability maintenance budgets include all the recurrent costs of running and maintaining the water supply system. Included are costs related to maintaining water quality and those driven by capacity growth.

Enhanced water conservation programs have been included for both 2008/09 and the 2009/10 to 2012/13 Water Plan period.

\$0.2M p.a. has also been included in the preventative maintenance budget for doubled leak detection programs as part of the Government's Central Region Sustainable Water Strategy. This program has been effective in reducing leakage by some 450 ML per year over the past 6 years. By 2007/08 all of South East Water's system had been investigated and leak detection returned to areas investigated 5 years earlier. These repeat investigations in the inner city areas of Melbourne still show a relatively high level of leakage.

Water Reliability Program - Capital and Maintenance Budgets and KPI Performance



Quality – The objective of the water quality program is to maintain 100% compliance with South East Water’s regulatory/licence requirements and minimise customer complaints.

In order to maintain existing standards, South East Water will need to manage a number of potential impacts on water quality including:

- The potential removal of restrictions and increased usage patterns may result in the dislodgement of materials deposited in the system during the recent periods of reduced flow;
- Should the supply shortage worsen and storage levels reduce, there is increased likelihood of sediment laden water entering the system; and
- Customers in the southern Mornington Peninsula and Western Port areas will have a change in supply source during the period, from water sourced from non-treated, pristine catchments in the Yarra system to treated water from Tarago. It is expected that the introduction of water from Tarago could result in an increase in customer

complaints/inquiries. Similar queries may occur with the introduction of desalination plant water.

South East Water's overall capital expenditure on water quality will remain at low levels. This program consists of asset alterations to address water quality complaints and ensure regulatory compliance, additional monitoring equipment for Tarago (as discussed above) and programmed equipment replacement at chlorination plants. The increase in expenditure from the current water plan reflects the Tarago influenced modifications and the asset transfer of Melbourne Water chlorination plants.

Operating costs relating to the introduction of Tarago flows (and desalinated supplies later in the period) will mostly be embedded in Melbourne Water's bulk charges. However provision has been made in the capital budget for additional monitoring equipment and asset alterations as well as a provision in the operating budget for extra consultation and community communication to address the issues associated with changes in water quality, including customer impacts and perceptions. We have assumed that the bulk supplier and DSE will also be conducting communication campaigns for the wider metropolitan community.

Meters – The drivers for this capital program are growth in customer numbers and replacement of meters as they age.

The proposed domestic and industrial exchange programs for the regulatory period (involving some 40,000 meters per year) will provide greater meter and bill accuracy, assist in maintaining revenue adequacy, identification of water leakage and other system losses and assessment of the effectiveness of water conservation initiatives.

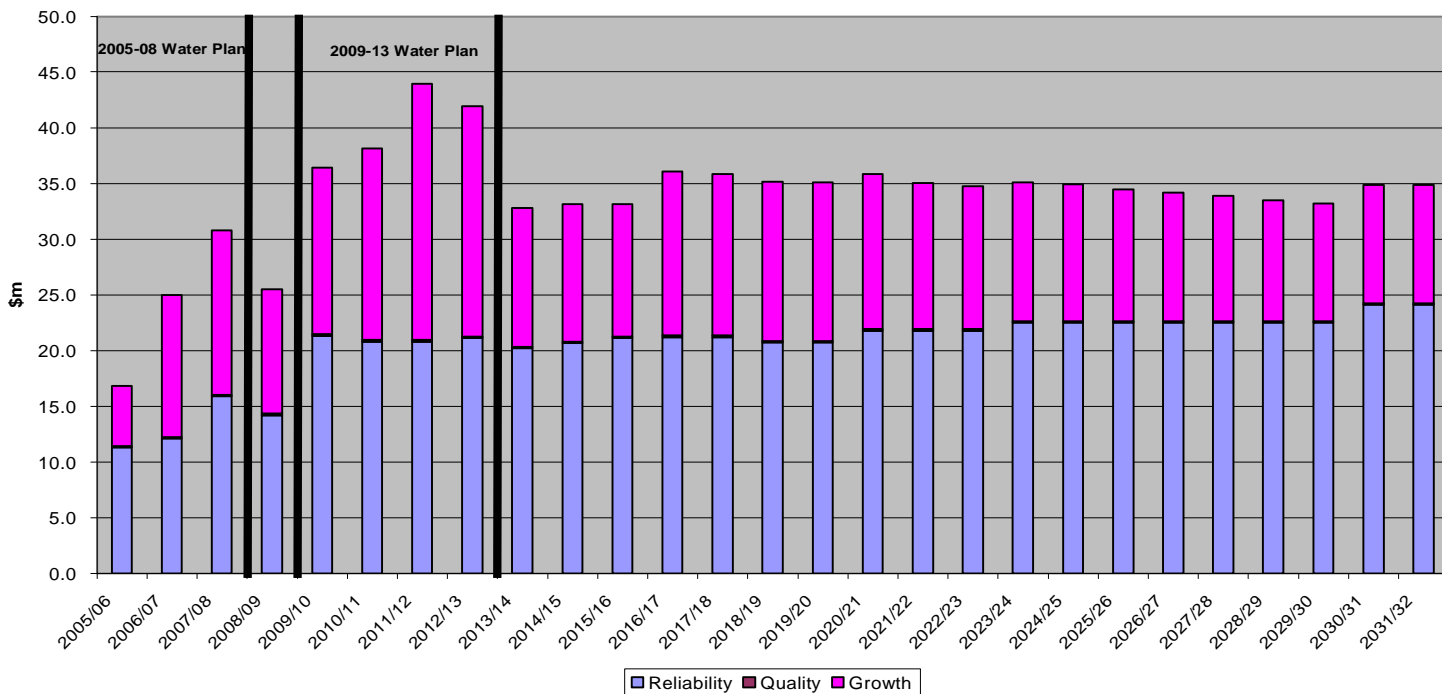
Additional expenditure has also been incorporated to meet regulatory compliance programs arising from the Utility Meters (Meteorological Control) Act changes which took effect in 2007/08.

11.1.2 Summary of Water Supply System Expenditure

Component	Water Program Annual Capital Expenditure (\$M 2008/09)							
	2005-2008 Water Plan			2008/09	Water Plan 2009/10 – 2012/13			
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	Actual	Actual	Actual	Target	Budget	Budget	Budget	Budget
Water System Capacity	\$4.2	\$11.9	\$13.3	\$8.9	\$12.6	\$14.8	\$20.6	\$18.2
Water Quality	\$0.1	\$0.1	\$0.1	\$0.2	\$0.2	\$0.2	\$0.1	\$0.1
Water System Reliability	\$10.0	\$10.6	\$13.8	\$11.0	\$18.0	\$17.6	\$17.5	\$17.7
Meters	\$4.3	\$4.0	\$4.9	\$5.5	\$5.6	\$5.5	\$5.7	\$5.9
Total	\$18.5	\$26.7	\$32.1	\$25.5	\$36.4	\$38.1	\$43.9	\$41.9

The above table focuses on expenditure required during the 2009/10 – 2012/13 period, while the graph below demonstrates the expected long term profile of water supply capital expenditure.

Water 25 Year CAPEX Program



The above chart indicates that expenditure on capacity provision stabilises as growth rates stabilise and provision of additional capacity becomes more efficient as a larger proportion of additional customers locate in areas where initial servicing has already been provided. Periodically, there may be ‘one-off’ increases in expenditure as the need to install a particularly costly single item such as a tank occurs.

South East Water does not envisage any water quality issues that will impact significantly on the water quality budget over the period and therefore the current low level of capital expenditure is expected to remain constant over the long term.

Total expenditure over 25 years reflects the increasing need for pipe replacement as South East Water’s system ages. However system condition is currently good and with the steadier expenditure on capacity and savings relating as a result of reduced demand due to the permanent water saving rules and dual pipe systems, total expenditure on the water program will remain at manageable levels.

Component	Water Operating and Maintenance Expenditure (\$M 2008/09)							
	2005/06-2007/08 Water Plan			2008/09	Water Plan 2009/10 – 2012/13			
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	Actual	Actual	Actual	Target	Budget	Budget	Budget	Budget
Preventative	\$1.3	\$1.1	\$1.9	\$1.8	\$1.8	\$1.8	\$1.8	\$1.8
Remedial	\$8.1	\$10.1	\$8.5	\$9.2	\$9.2	\$9.3	\$9.3	\$9.4
Water Supply Operations	\$4.1	\$5.0	\$5.8	\$5.6	\$5.8	\$5.9	\$6.0	\$6.0
Total	\$13.5	\$16.2	\$16.2	\$16.6	\$16.7	\$16.9	\$17.0	\$17.1

Note: Excludes corporate costs and operating costs associated with meter reading, includes new obligations.

11.1.3 Sewerage Program

Capacity - The primary objective of the sewer system capacity program is to ensure that there is sufficient capacity in the sewer system to safely collect and transfer sewage to treatment and disposal systems without risking community health or environmental impact.

The key drivers of expenditure in this area are the need to extend the network to service growth and the EPA requirement to cater for storm flows of up to a one in five year return period without spills.

South East Water's sewer capacity program is designed to deliver services to developers based on the land release forecasts provided by the 2007 Urban Development Program and ensure that a small number of catchments that are not currently meeting the one in five year standard are improved.

Three catchments (Elster Creek, Elster Creek South and Mile Creek) have been identified as currently not meeting EPA requirements to contain a 1 in 5 year wet weather event. \$10.1m has been scheduled to address these issues. The driver for these upgrades is partly past growth, but also relatively high inflow and infiltration. In dealing with inflow and infiltration, South East Water's first preference is to address the source of the problem through the rehabilitation of leaking South East Water owned sewers and requesting property owners to

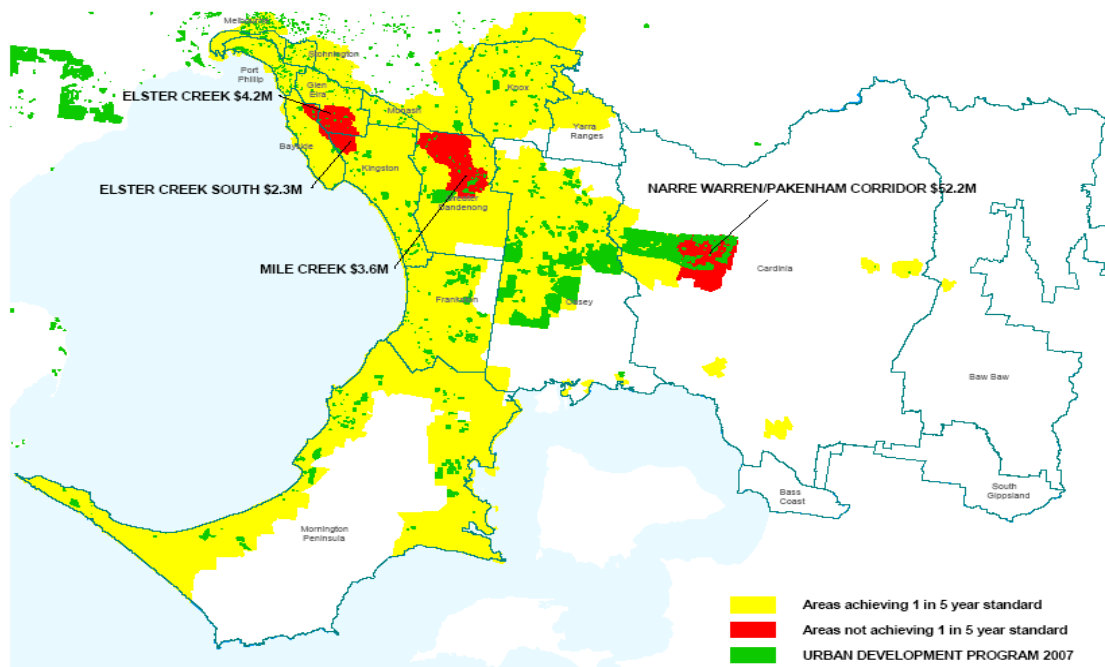
similarly rehabilitate their portion of the sewerage system. If these solutions are not practical or cost effective then sewer capacity expansion to cater for the increased flow is considered. In the case of the three catchments mentioned above, capacity expansion is more cost effective than sewer rehabilitation.

The Elster Creek and Elster Creek South catchments are the most critical catchments in that they are modelled as containing close to the one in one year storm only. The Mile Creek catchment is less critical and has been programmed for later in the Water Plan period as it meets a one in one year criteria but not the one in five year storm. Each of these catchments have similar rates of future development – now mostly infill – which is not expected to lead to higher risk.

The Pakenham catchment has a high rate of growth and relatively high infiltration in the existing catchment. A significant initial investment has been proposed to identify and rectify the cause of Pakenham’s high infiltration. The primary driver is to ensure that not only current system deficiencies are rectified but that future sewer system asset development in the area (which is substantial) does not suffer from the same poor performance.

The other significant areas of expenditure are responding to growth in the Pakenham to Narre Warren corridor and in the Cranbourne area.

South East Water Catchments Not Achieving the 1 in 5 Year Standard & Significant Capacity Program Projects



The proposed capital expenditure profile reflects the extra investment required for extending the system to the Officer area and to relieve the Pakenham STP. This meets an EPA requirement to relieve Pakenham STP (refer EPA SEPP for Western Port) and cease discharging to waterways in the catchment by 2011, except in very wet years. Since the 2005 price determination a major increase in expenditure reflects changes to DSE's land planning strategy – the 2030 strategy – which increased urban density and moved the Urban Growth Boundary significantly in this area. These changes have increased the capacity requirements of this upgrade by 330%.

The Pakenham – Narre Warren Scheme is well underway with detail design complete for a number of key elements and construction underway. The large capital expenditure budget in 2009/10 largely is as a result of the planned construction of the two large pump stations in the scheme. Allowance has been made for stream quality monitoring programs to back up future management of residual discharges in very wet years.

Similar to water capacity, a significant effect on the program has been the additional cost of reimbursements (an increase of \$2M to \$3M pa) due to the determination at the last price review that developers no longer need to contribute to shared assets.

Reliability - The objective of the sewer reliability program is to ensure provision of a reliable collection system for sewage without excessive levels of service disruption for customers and without significant environmental or social impact.

The primary driver of this expenditure category is the avoidance of spills due to system failure as a result of blockages, pipework collapse or equipment breakdown.

South East Water has recently experienced an increase in sewer blockages, driven by increased tree root penetration due to the drought.

Structural or equipment failure may also lead to spills and potential social disruption. Poor structural condition can lead to increased susceptibility to infiltration of groundwater, capacity issues and leakage of sewage which results in groundwater and stream flow contamination.

South East Water has assessed the risk associated with blockages and structural condition and has identified areas where there is significant exposure unless pro-active action is taken. These risks involved have been assessed in the context of:

- The EPA taking a more stringent approach to dry weather flow management;

- Government policy initiatives aimed at reducing impacts on waterways - particularly the Yarra; and
- Customer survey results which showed that customers are in favour of South East Water improving its environmental performance.

As a result, the principal program aimed at managing spills in the sewer system, the sewer cleaning maintenance program, has already been increased by 50% in order to stabilise the growth in blockages and spills and to target environmentally sensitive areas. This increased expenditure will be maintained through the Water Plan period.

The rate of system inspections (to provide earlier detection of potential structural failure or blockages) has also been increased in sensitive areas and on the larger mains where there is a greater risk of environmental damage. The principal tools used to deliver this will be the CCTV program.

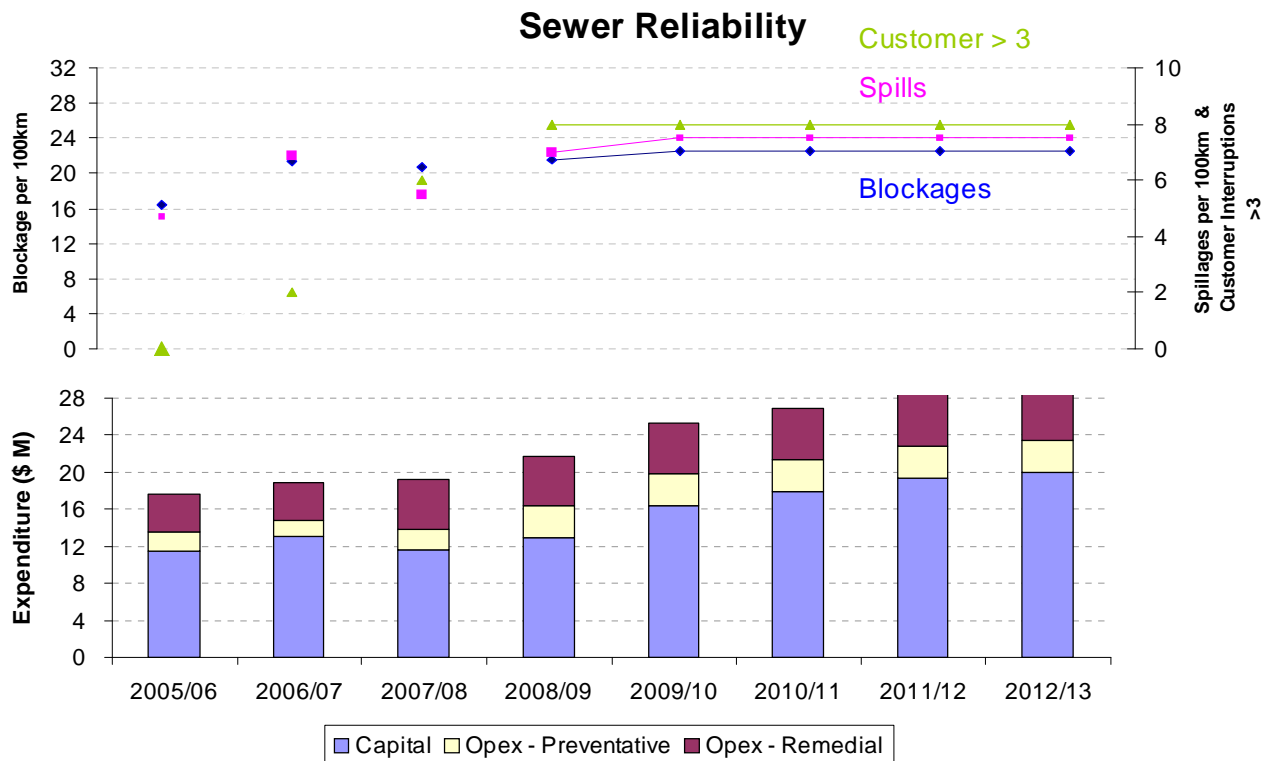
Mains are replaced when CCTV inspection programs identify that they require replacement. In 2005/06 South East Water engaged CSIRO to assist with development of a risk based program for the CCTV sewer main inspections. This program commenced in 2007/08 and should result in better targeted CCTV inspections therefore reducing the risk of undetected mains in poor condition.

In general, the structural condition of the sewer system remains good and the number of collapses has remained low, varying between 20 and 45 over the past five years.

The rate of replacement of sewers in the South East Water reticulation network will be increased from 15km per annum to 25km per annum to better match the current deterioration rates and the replacement program will continue to be focused on the older concrete mains. Significant investigative work will be undertaken to better understand this cohort of pipes. These pipes are unique to South East Water and evidence suggests that they are deteriorating at a rate in excess of the current replacement rate. An increased allowance has been made to address the extra renewals that will result.

A significant increase in rising main monitoring and replacement is forecast as a result of a number of mains reaching the end of their life in the Mornington Peninsula area. Increased renewal allowances have also been made for pump station civil works and creek crossings in environmentally sensitive areas.

Sewer Reliability Program - Capital and Maintenance Budgets and KPI Performance



Quality – The sewer quality plan involves dealing with trade waste from industrial customers and odour issues associated with the network.

Trade Waste – South East Water is proposing programs to address priority trade waste parameters that are either problematic to the Melbourne Water treatment plants or cause issues at either South East Water treatment plants or localised parts of the sewerage network. The critical issues to be addressed include:

- Colour – to reduce the plume at Boags Rocks outfall and ensure acceptability of recycled water in residential dual pipe estates.
- Salt – To ensure that salt levels remain at a level such that recycled water can be used for irrigation, South East Water plans to expand its cleaner production program to reduce salt at the source. Industrial waste has been identified as the primary source of salt.
- Cadmium and Mercury – South East Water has initiated a program involving partnerships with industry associations in order to reduce the concentrations of these pollutants to maximise biosolids recycling opportunities.

With the introduction of widespread recycling, South East Water is implementing an ISO 22000 management system as part of its overall sewerage and recycling management system to better manage health risks. Associated costs have been included in the Water Plan.

Odour – South East Water is concerned that customers and the community do not experience obnoxious odours generated by the sewerage system. This is reflected in our Customer Charter and is subject to specific Environmental Protection Authority (EPA) requirements both through South East Water's licences and the State Environment Protection Policy.

The most common sources of odour in the network are pump stations. Since 2004 South East Water has had a proactive odour reduction program in place to address these sources. Odour sources with repeat odour complaints are generally physically isolated in order to address the immediate issue. However isolation of these assets causes accelerated system corrosion if not addressed.

The network odour control program is therefore aimed at treating sources of odour and re-opening ventilation systems to prevent long term damage to assets. The works planned for the 2009/10 to 2012/13 period are a continuation of the program addressing past "hot spots" as well as ensuring that new "hot spots" are addressed as development encroaches on existing assets. As the program is now addressing some of the more technically problematic sites, there will be a relative increase in this programs capital costs.

Sewage Treatment Plants – South East Water operates eight sewage treatment plants (STPs) with the requirement to maintain 100% compliance with EPA waste discharge licences for discharge quality.

South East Water has reviewed the operation of these treatment plants and concluded that five of the plants (Boneo, Mt Martha, Pakenham, Lang Lang and Koo Wee Rup) now require upgrades to address capacity bottlenecks at these facilities.

The sewerage treatment plant program has a number of different drivers:

- **Growth** in both flows and loads has an effect on capacity. This is a driver of expenditure not only at those sewage treatment plants (STPs) in high growth areas but any plant that is close to process capacity (Boneo, Mt Martha, Pakenham, Lang Lang

and Koo Wee Rup). The major growth driven upgrades for the 2009/10 to 2012/13 Water Plan period will be at these plants. Mt Martha will involve the largest capital project \$14.5M principally to provide additional sludge management capacity. The first year of the 2009/10 to 2012/13 Water Plan should also see completion of the Boneo STP and Pakenham STP upgrades.

- The **Backlog** sewerage program will also impact on plant capacity requirements and in some areas will drive an upgrade. As well as growth in new customers driven by developers, a significant proportion of the proposed Boneo and Longwarry upgrades are driven by the backlog program. These costs have been included in the backlog program.

- **Class A Requirement in CRSWS**

A provision of \$24.6M has been made in the STP capital program to provide for Class A upgrades at Mornington Peninsula plants since the CRSWS obligates South East Water to prepare businesses cases for the treatment effluent at Boneo, Mt Martha and Somers to Class A by 2012 and make this effluent available for recycle purposes. These plants discharge to the South Eastern Outfall and their upgrade is consistent with the requirement that Melbourne Water complete upgrades to Eastern Treatment Plant to produce effluent “equivalent to Class A” at the outfall by 2012. It should be noted that the raw sewage entering these South East Water owned plants does not have the “colour” content of the raw sewage entering the Eastern Treatment Plant. Accordingly, colour removal will not be included in the South East Water upgrade works regardless of the decision taken by Melbourne Water regarding future colour removal at their Eastern Treatment Plant.

Although completion of these projects is not required by Government until 2012, most of the Class A expenditure at Boneo STP has been brought forward to 2009 to meet the objectives of the recycling program.

- **Environmental - General** – Other than Class A upgrades at South East Water’s plants that discharge to the South Eastern Outfall in order to meet regulatory requirements, there are a number of major expenditure programs required for environmental purposes:
 - Reduced ammonia levels in effluent going to the South Eastern Outfall (completion of Boneo STP project);

- Changes to the EPA Guidelines for Wastewater recycling for Helminth control (affects customers served by Pakenham STP);
- An existing requirement under the Western Port State Environment Protection Policy (SEPP) that plants achieve no discernible impact on waterways leading to Western Port by 2011 (this will be achieved by ceasing discharge to waterways from the Pakenham and Koo Wee Rup STPs);
- 100% of biosolids produced by plants annually to be beneficially recycled; and
- Groundwater management programs to ensure that the requirements of the Ground Water SEPP are met.

All these programs arise from changes in Regulation or EPA policy that pre-existed the current Water Plan period.

- **Reliability** – the development of programs to ensure structural integrity, equipment replacement and maintenance to prevent uncontrolled failure. Expenditure has been based on reliability centred maintenance analysis for most of the equipment but major equipment and civil structural budgets are based on expected life and condition assessments. In general expenditure on this program, both capital and maintenance, is relatively constant over the period.
- **Odour Management** – In order to avoid obnoxious odours at near neighbours, a standard of 4OU¹ at the nearest residence has been selected. (4OU is the maximum level at which South East Water and independent experience has shown that odours do not generate complaints). As existing facilities are upgraded this odour level is the maximum allowed standard for design purposes.

In the longer term, the EPA has an objective of achieving 1 OU at the boundary of all facilities, and where technology is available it will be achieved in the proposed upgrades. These costs will form part of the process costs included in the capacity and reliability upgrades.

In addition odour can be mitigated via land use management. Where feasible, South East Water will work with local councils to keep land uses around STPs appropriate to the plant's operation.

¹ OU or Odour Units is a level of odour.

Recycled water customer requirements – At some treatment plants, expenditure will be required to achieve standards in excess of EPA licence requirements to meet the needs of particular groups of recycled water customers. In particular, these requirements affect Pakenham STP as the source of effluent for the Officer dual pipe mandated area, timing of the Class A upgrades at Boneo STP and upgrades including salt reduction to serve an industrial customer out of the Somers STP. Projects that are driven solely by the recycling program objectives have capital costs included in that program. Treatment operation costs remain in the sewage treatment budgets.

Sewage Backlog Program – South East Water has an existing program to provide reticulated sewerage facilities for a number of properties (in defined areas) that are currently served by failing septic tank systems. Domestic Wastewater Management Plans are developed by Local Government and it is the responsibility of Councils to identify and justify areas within their municipality that require backlog sewerage. Councils involve the Environment Protection Authority and the Department of Health and Community Services in this process.

South East Water is proposing to complete its backlog sewerage program in 20 years on the basis of support from customers, Councils, DSE and EPA. An extensive review of the program was completed in conjunction with local Council reviews of Domestic Wastewater Management Plans. The proposed 20 year program is based on the jointly agreed risks posed by the existing septic tank systems. These risks have been verified through an environmental monitoring program.

While conventional systems use gravity to collect and transfer the flow, advances in technology are now allowing wider use of pressure sewer systems. Gravity systems require pipes to be laid to specific levels which would, in the topography that exists in much of the currently unsewered areas of the Mornington Peninsula, result in pipe installation many metres below ground. However, pressure systems are preferred as they have smaller diameter pipelines, can follow ground level, have shallower pipes and make greater use of trenchless techniques. Although they do involve installation of a small pump station at each property, these systems provide a significant advantage in terms of overall cost compared with conventional systems for much of the backlog area. Just as significantly, the smaller, shallower pipes and trenchless techniques associated with pressure sewers reduces overall disruption to customer properties and roadways and causes less environmental disturbance.

The pressure system also provides an early opportunity for connection but delays a significant proportion of the expenditure (pump stations) until the customer actually connects. This overcomes the issue of significant investment incurred upfront to service properties, only to experience many years delay before customers actually connect.

The Flinders Backlog Scheme, servicing Flinders, Shoreham and, ultimately Pt Leo, has been largely completed and connection rates of around 85% in the first year appear likely.

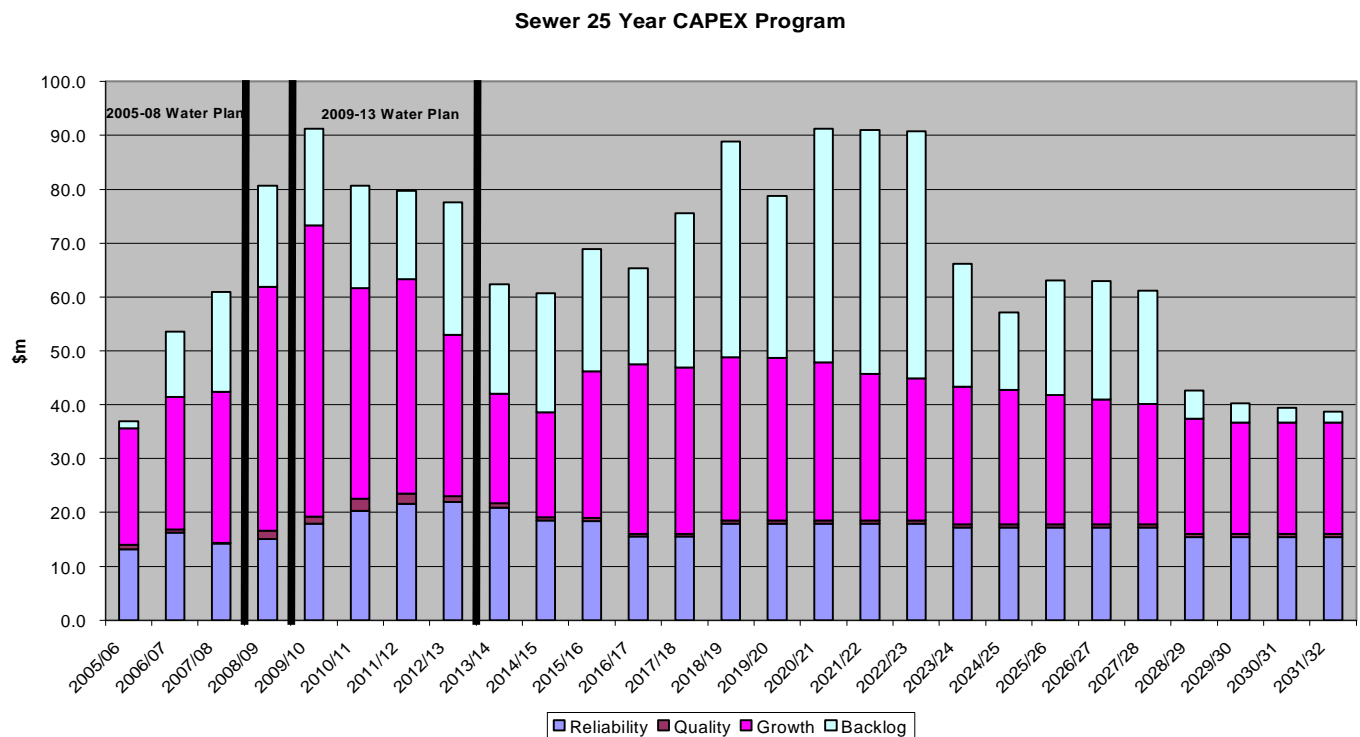
Over the 2009/10 to 2012/13 period around 2,800 properties will be provided with the opportunity to connect to the system. The areas planned to be serviced include Nar Nar Goon, Tynong, Upper Beaconsfield, Belgrave South, Officer and properties in the Lower Peninsula area.

11.1.4 Summary of Sewerage Program Expenditure

Component	Sewerage Program Capital Expenditure (\$M 2008/09)							
	2005/06–2007/08 Water Plan			2008/09	2009/10 - 2012/13 Water Plan			
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	Actual	Actual	Actual	Target	Budget	Budget	Budget	Budget
Network Capacity	\$22.9	\$22.6	\$19.1	\$37.4	\$41.0	\$29.8	\$16.5	\$13.5
Network Reliability	\$12.6	\$15.5	\$12.2	\$12.9	\$16.4	\$17.9	\$19.4	\$20.0
STP (General)	\$2.8	\$5.6	\$12.8	\$10.1	\$11.8	\$9.5	\$14.8	\$9.2
STP Class A Upgrade at STP	\$0.0	\$0.0	\$0.0	\$0	\$2.7	\$2.0	\$10.6	\$9.2
Network Odour	\$0.8	\$0.6	\$0.2	\$1.5	\$1.3	\$2.3	\$2.0	\$1.1
Backlog	\$1.5	\$12.9	\$19.2	\$18.8	\$17.9	\$19.1	\$16.4	\$24.6
Total	\$40.6	\$57.1	\$63.5	\$80.7	\$91.2	\$80.7	\$79.7	\$77.6

The above table focuses on capital expenditure required during the 2009/10 – 2012/13 period, while the graph below demonstrates the expected long term profile of sewer system capital expenditure.

The following chart, clearly shows the effect of the large network capacity and STP upgrade programs over the next eight years. After that period, expenditure on these items and the reliability program reduces to a more even level with the 20 year backlog program being substantially complete in 2028/29.



Component	Sewerage Program Operating Expenditure (\$M 2008/09)							
	2005/06–2007/08 Water Plan			Water Plan 2009/10 – 2012/13				
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	Actual	Actual	Actual	Target	Budget	Budget	Budget	Budget
Network Maintenance	\$6.1	\$6.1	\$6.0	\$8.8	\$9.0	\$9.0	\$9.0	\$9.1
Network Operations	\$3.5	\$4.0	\$4.4	\$3.1	\$3.5	\$3.6	\$3.6	\$3.7
STP Maintenance	\$1.2	\$1.2	\$1.3	\$0.8	\$0.9	\$0.9	\$1.0	\$1.1
STP Operations	\$3.6	\$3.7	\$3.6	\$4.5	\$5.5	\$5.9	\$6.4	\$7.1
Total	\$14.4	\$15.0	\$15.3	\$17.1	\$18.8	\$19.4	\$20.0	\$21.0

Note: Excludes corporate costs and includes new obligations

11.1.5 Recycling

South East Water's recycling program is principally driven by:

- government requirements to deliver 20% recycling of effluent by 2010 and 10GL of potable substitution by 2030, across Melbourne; and
- Specific EPA requirements in STP Licences. Expenditure in this area is shown in the STP program because it is driven by the need to maintain EPA Licence compliance.

In order to ensure Melbourne wide targets are achieved at least cost, South East Water has participated in a collaborative process with the other water retailers and Melbourne Water to rank all the known potable replacement opportunities on a triple bottom line basis and compare these potential projects with the cost of other sources of additional supply. In this manner, South East Water is confident that only projects that represent the best value to customers have been incorporated into this Water Plan.

- Work with relevant Councils to ensure that the requirement for installation of recycling infrastructure is included in planning documentation; and
- Liaise and consult with developers or project proponents to agree timing and location of supply.

In these areas, South East Water will invest in treatment and trunk infrastructure, developers will install, and handover to South East Water, reticulation assets as per traditional developer activity.

This program will however, require increased expenditure to bring forward South East Water treatment plant upgrades to deliver Class A recycled water, (as well as relying on the Melbourne Water upgrade at Eastern treatment Plant), undertake other works at treatment plants and operate and maintain recycled water assets.

In its “Next Stage of the Government’s Water Plan”, the Government announced its intention to upgrade Eastern Treatment Plant to Class A by 2012, and at the same time investigating/evaluating options for its use, including the Eastern Water Recycling Proposal and Yarra River environmental flow substitution. While South East Water’s Water Plan contains a number of potable substitution projects from this plant, a suite of other projects may need assessment and/or construction, if the larger scale projects do not proceed.

South East Water has not included these projects in the Water Plan and would like to classify them as uncertain projects. South East Water will approach the Commission in relation to a potential amendment to its final decision, should these projects become viable.

Alternatively, should the Eastern Treatment Plant upgrade be deferred or cancelled then South East Water will need to make additional investment in treatment assets to supply recycled water to residential estates in the Cranbourne and Officer areas. The most likely supply option would be a capacity upgrade to the Eastern Irrigation Scheme in conjunction with a possible further upgrade to South East Water’s Pakenham sewerage treatment plant. South East Water has not included expenditure associated with these projects in the Water Plan, but would seek to classify them as uncertain projects that are contingent on the Eastern Treatment Plant not proceeding. Should this occur, South East Water will approach the Commission in relation to a potential amendment to its final decision.

An increase in recycling volumes occurs in 2009/10 when the first phase of the Boneo Recycling Scheme is commissioned. The costs associated with the provision of a Class A

treatment system at Boneo STP have been included in the sewerage program in accord with the requirement for Class A effluent in the South Eastern Outfall (SEO). The cost associated with bringing forward the treatment plant upgrade to ensure that the 2010 target can be met is part of the business case for this scheme.

Phase 2 of this Boneo scheme, occurs post 2012/13 following the completion of Melbourne Water's Class A upgrade at Eastern Treatment Plant and is expected to contribute an additional 2GL to the recycling volumes.

The peak capital expenditure in 2010/11 is driven by two potable substitution projects:

- An industrial recycled water project in conjunction with Blue Scope Steel which requires salt reduction treatment facilities at Somers STP. Timing is based on meeting customer requirements. The customer and State Government are also making substantial capital contribution's to this project in excess of South East Water's capital cost.
- Class A provision at Pakenham STP to meet dual pipe recycled water demand from the mandated residential area in Officer.

A range of other industrial and irrigation projects (Class A and C) are also planned to meet the Government recycling targets. These include projects with Boneo growers, Frankston City Council and Mornington Peninsula Shire Council.

Component	Recycle Program Capital Expenditure (\$M 2008/09)							
	2005/06-2007/08 Water Plan			2008/09	Water Plan 2009/10 – 2012/13			
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	Actual	Actual	Actual	Target	Budget	Budget	Budget	Budget
Total	\$0.5	\$1.4	\$1.5	\$9.2	\$21.3	\$31.5	\$18.4	\$15.6

Component	Recycle Program Annual Operational & Maintenance Expenditure (\$M 2008/09)							
	2005/06-2007/08 Water Plan			2008/09	Water Plan 2009/10 – 2012/13			
	2005/06 Actual	2006/07 Actual	2007/08 Actual	2008/09 Target	2009/10 Budget	2010/11 Budget	2011/12 Budget	2012/13 Budget
Remedial Maintenance	\$0.0	\$0.0	\$0.0	\$0.0	\$0.1	\$0.1	\$0.1	\$0.1
Preventative Maintenance	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.1	\$0.1	\$0.1
Operational	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.1	\$0.1	\$0.1
Total	\$0.0	\$0.0	\$0.0	\$0.0	\$0.1	\$0.3	\$0.3	\$0.3

Note: Excludes bulk charges and corporate costs. Includes new obligations

11.2 Corporate

The operating expenditure categorised as Corporate Services includes finance, human resource management, communications, regulatory and legal services. Also included are costs associated with the Smart Water Fund, the Environmental Contribution and water demand management initiatives.

11.2.1 Corporate Wide Assumptions

South East Water has factored into its operating cost forecasts, cost reductions associated with productivity improvements on internal costs of 1% based on current cost levels. However, productivity improvements will be more than offset by real increases in cost inputs such as:

- Labour – 2.5% real wages increase are forecast due to a tight market for skilled labour particularly in technical disciplines;
- Fuel costs – increases in fuel costs of 20% incorporated in 2009/10 and 10% per annum thereafter;
- Electricity – 39% increase in electricity prices in 2009/10 to reflect the commencement of new 3 year contracts with energy retailers;
- Costs associated with customer billing services are forecast to grow in line with population at 1.2% per annum;
- Transaction costs associated with collecting customer payments are forecast to grow by 15% per annum to reflect value-based bank charges increasing as a proportion of customer bills; and
- Bad debts are forecast to increase by 15% per annum over the regulatory period due to price rises placing further financial pressure on customers.

11.2.2 Corporate Programs and New Obligations

Key corporate expenditure items are:

- The Environmental Contribution is forecast to remain at \$16.6M in nominal terms over the regulatory period;
- Water conservation programs detailed in the Central Region Sustainable Water Strategy (CRSWS) are forecast to increase by \$4.2M to \$9.8M in 2009/10 mainly due to programs such as showerheads, washing machines and Watersmart. CRSWS programs are expected to remain in the order of \$9.0M through to 2012/13. An allowance of \$0.4M has also been made for South East Water's contribution towards development of the new CRSWS;
- Operating expenditure associated with administering water restrictions is expected to remain constant at around \$1M per annum throughout the regulatory period;
- The graduate recruitment program began in 2007/08 and is forecast to increase by \$1M to \$2M in 2009/10 to reflect its full deployment. The program is forecast to remain in the order of \$2M per annum during the regulatory period; and
- Expenditure forecasts include \$0.1M per annum in relation to new reporting requirements mandated by the Bureau of Meteorology.

11.2.3 New Obligations

The Commission has previously defined new obligations expenditure as expenditure incurred as a result of changed obligations that will take effect after the commencement of the regulatory period. While South East Water has forecast few changed obligations and minimal expenditure in this category, the expenditure increases that have occurred as a result of changed obligations during the past regulatory period and in 2008/09 have also been isolated. These expenses will continue during the 2009/10 to 2012/13 regulatory period. Should it be the case that this expenditure was classified as "business as usual", for the purpose of benchmarking operating efficiency, the comparison with previous years would be somewhat distorted.

The majority of the additional ongoing expenditure is related to water conservation eg programs introduced as part of the Central Region Sustainable Water Strategy. These programs have

already commenced and involve programs to provide water efficient showerheads for exchange, promote water conservation in the non-residential sector and reduce leakage. These programs are integral to achieving the 30% reduction in litres per person per day, as required by the Government's Water Supply Demand Strategy and the Joint Water Conservation Plan.

In addition, South East Water has included expenditure to implement the outcomes of the VCEC inquiry as a new obligation. This expenditure is required to both realise savings that may result from shared services, but also implement other findings such as ring-fencing, third party access arrangements and the transition to a statutory corporation.

Obligation	New Obligations - Annual Operational Expenditure (\$M 2008/09)							
	2005/06-2007/08 Water Plan			2008/09	Water Plan 2009/10 – 2012/13			
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	Actual	Actual	Actual	Target	Budget	Budget	Budget	Budget
2005/06-2007/08 New Obligations								
Restrictions	\$0.0	\$1.7	\$0.9	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0
WSDS	\$0.0	\$1.9	\$4.3	\$5.6	\$9.8	\$9.1	\$8.9	\$9.1
Terrorism Act	\$0.0	\$0.0	\$0.0	\$0.0	\$0.03	\$0.03	\$0.03	\$0.03
Reuse - Potable Substitution Schemes	\$0.0	\$0.0	\$0.0	\$0.0	\$0.2	\$0.3	\$0.5	\$0.7
2008/09 New Obligations								
Metro Sewerage Strategy	\$0.0	\$0.0	\$0.0	\$0.4	\$0.0	\$0.0	\$0.0	\$0.0
2009/10-2012/13 New Obligations								
Independent Trade Waste Regulator	\$0.0	\$0.0	\$0.0	\$0.0	\$0.1	\$0.1	\$0.1	\$0.1
EPA Audit	\$0.0	\$0.0	\$0.0	\$0.0	\$0.2	\$0.0	\$0.0	\$0.0
Development of revised CRSWS	\$0.0	\$0.0	\$0.0	\$0.0	\$0.2	\$0.2	\$0.0	\$0.0
Bureau of Meteorology Reporting	\$0.0	\$0.0	\$0.0	\$0.0	\$0.1	\$0.1	\$0.1	\$0.1
Implementation of VCEC outcomes	\$0.0	\$0.0	\$0.0	\$0.0	\$0.5	\$0.5	\$0.0	\$0.0
Total	\$0.0	\$3.6	\$5.2	\$7.1	\$12.1	\$11.3	\$10.6	\$11.1

11.2.4 Shared Services Savings

South East Water has factored in additional productivity savings associated with the implementation of the shared services model detailed in the VCEC recommendations and subsequently adopted by Government subject to a business case. While these savings are expected to reach \$2M pa by the end of the Water Plan period, a number of projects will need to be initiated during the Water Plan period to ensure these savings are delivered. South East Water has included estimated savings relating to shared services as follows, to recognise the fact that savings will begin to be realised during the period, but will not be fully achieved until the end of the period, at the earliest.

An allowance of \$1M has also been included in respect of the cost of implementing VCEC recommendations including the shared services model, ring-fencing, third party access arrangements and the transition to a statutory corporation.

Shared Services (\$M 2008/09)	2009/10 Budget	2010/11 Budget	2011/12 Budget	2012/13 Budget
Savings from shared services	0.5	1.0	1.5	2.0
Implementation costs – shared services and other VCEC recommendations	0.5	0.5		

11.2.5 Information Technology

The information technology expenditure requirements are guided by the continuing need to provide modern and efficient technology to support the innovation culture of South East Water. Key programs during the regulatory period include:

- Annual investment in infrastructure based on equipment lifecycles, required to maintain service capability;

- Investment in information management strategies including data warehouse, business intelligence, enterprise content management, project management and document management projects;
- Investment in customer service access strategies including automation of business processes through workflow, voice recognition and e-business projects; and
- Investment in asset management strategies including upgraded/replacement systems for GIS, SCADA, and Field Services maintenance activities.

A breakdown of the proposed IT capital expenditure for the 2009/10 to 2012/13 regulatory period is as follows:

IT Capital Expenditure (\$M 2008/09)	2008/09	2009/10-2012/13 Water Plan Period			
	2008/09	2009/10	2010/11	2011/12	2012/13
	Target	Budget	Budget	Budget	Budget
End of Lifecycle Replacement	\$1.4	\$1.1	\$0.9	\$0.9	\$0.9
Upgrades to core systems	\$0.5	\$0.6	\$0.6	\$0.5	\$0.6
Information Management Strategies	\$1.9	\$1.4	\$0.6	\$0.9	\$0.9
Major Application Integration and Enterprise Architecture Planning	\$0.9	\$1.1	\$0.7	\$0.4	\$0.1
Customer Services Initiatives	\$1.1	\$1.1	\$1.6	\$1.5	\$1.5
Asset Management Services	\$1.8	\$1.3	\$1.0	\$1.0	\$2.1
TOTAL	\$7.5	\$6.5	\$5.4	\$5.1	\$5.9

Total corporate capital and operating expenditure are detailed in the following two tables:

Component	Corporate Capital Expenditure (\$M 2008/09)							
	2005/06-2007/08 Water Plan			2008	Water Plan 2009/10 – 2012/13			
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	Actual	Actual	Actual	Target	Budget	Budget	Budget	Budget
Plant & Equipment	\$0.6	\$0.5	\$0.5	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3
Information Technology	\$4.9	\$6.0	\$5.3	\$7.5	\$6.5	\$5.4	\$5.1	\$5.9
Land & Buildings	\$0.1	\$1.4	\$0.2	\$0.3	\$1.5	\$0.3	\$0.2	\$0.2
Total CAPEX	\$5.6	\$7.9	\$6.0	\$8.1	\$8.3	\$6.0	\$5.6	\$6.4

Component	Corporate Annual Operational & Maintenance Expenditure (\$M 2008/09)							
	2005/06-2007/08 Water Plan			2008	Water Plan 2009/10 – 2012/13			
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	Actual	Actual	Actual	Target	Budget	Budget	Budget	Budget
Operations and Maintenance	\$14.0	\$13.5	\$13.8	\$13.2	\$13.5	\$13.6	\$13.8	\$14.0
Asset Planning	\$1.8	\$2.0	\$2.2	\$3.4	\$3.9	\$3.7	\$3.9	\$3.9
Customer Service & Billing	\$23.2	\$23.1	\$26.2	\$25.7	\$26.9	\$28.0	\$29.0	\$30.2
Corporate IT	\$2.5	\$3.7	\$4.1	\$3.6	\$3.7	\$3.9	\$4.1	\$4.2
Corporate Services	\$24.7	\$28.6	\$34.8	\$31.2	\$37.9	\$37.3	\$36.1	\$37.0
Government Contributions	\$17.8	\$17.4	\$17.1	\$18.1	\$17.6	\$17.1	\$16.6	\$16.1
Total OPEX	\$84.0	\$88.3	\$98.2	\$95.3	\$103.4	\$103.5	\$103.6	\$105.4

Note: Minor changes were made to cost classification between 2005/06 and 2006/07. Includes new obligations

11.3 Water and Sewer Bulk Charges

South East Water pays Melbourne Water in accordance with their tariff schedule for provision of water and sewage. The charges payable to Melbourne Water are based on a schedule, approved by the Commission, consisting of both variable and fixed charges.

However, as Melbourne Water is reviewing its prices at the same time as the water retailers, South East Water's Water Plan has been developed on the basis of preliminary estimates of the prices to be charged by Melbourne Water. South East Water understands that these estimates have been developed on the basis of the VCEC recommendations in regard to cost allocation and government advice about the transfer of regulatory asset value from Melbourne Water to South East Water. It is anticipated that the Commission's Water Plan review process will ensure clarity and transparency in Melbourne Water's cost allocation model.

South East Water expects there to be further adjustments to these amounts prior to the 2009/10 to 2012/13 prices being finalised.

The estimated potable water and sewerage bulk charges payable by South East Water are as follows:

Bulk Charges (\$M 2008/09)	2008/09	2009/10-2012/13 Water Plan Period			
	2008/09	2009/10	2010/11	2011/12	2012/13
	Target	Budget	Budget	Budget	Budget
Total	\$161.3	\$203.9	\$258.6	\$322.4	\$393.4

Note: The above figures include South East Water's share of costs associated with the Government's recently announced supply augmentation program.

11.4 Summary of Total Capital and Operating Expenditure Requirements

11.4.1 South East Water's Top Ten Projects

Project/ Program	Description	Driver	Water Plan Value \$M	Outcomes	Expected Delivery Date	08/09 (\$M)	09/10 (\$M)	10/11 (\$M)	11/12 (\$M)	12/13 (\$M)
Sewer Backlog	Backlog sewerage to be provided to Upper Beaconsfield, Belgrave Heights and Rye (Part).	SoO Compliance	78.0	2,800 backlog properties serviced	June 2013	19.2	17.9	19.1	16.4	24.6
Water Main Replacements	Replacement of water mains that have reached the end of their effective life including the high risk distribution mains.	System reliability	61.8	30 km water reticulation main replaced p.a. High risk distribution mains replaced.	June 2013	19.0	16.0	15.0	15.2	15.6

Project/ Program	Description	Driver	Water Plan Value \$M	Outcomes	Expected Delivery Date	08/09 (\$M)	09/10 (\$M)	10/11 (\$M)	11/12 (\$M)	12/13 (\$M)
Dual Pipe Recycled Water	Supply customers in developing areas with dual pipe supply of recycled water; and Residential growth areas of Cranbourne and Officer	SoO Compliance	42.9	5,000 properties supplied with recycled water	June 2013	1.6	8.1	18.9	6.5	9.4
Pakenham – Narre Warren Sewer	Completion of construction of the Pakenham to Narre Warren sewer system to cater for residential and industrial development within the Casey & Cardinia Growth Area corridor and divert excess flows away from the Pakenham STP	Growth EPA Compliance	27.5	No discharge of treated effluent from the Pakenham STP to waterways by 2011	December 2010	14.8	23.7	3.8		
Sewer Renewals, Gravity	Replacement of gravity sewers that have reached the end of their effective life.	System Reliability	35.1	18 km sewer main replaced p.a.	June 2013	6.3	8.1	7.9	9.5	9.6

Project/ Program	Description	Driver	Water Plan Value \$M	Outcomes	Expected Delivery Date	08/09 (\$M)	09/10 (\$M)	10/11 (\$M)	11/12 (\$M)	12/13 (\$M)
Sewer Renewals, Pressure Mains	Replacement of critical sewer pressure mains that have reached the end of their effective life	System Reliability	17.8	Pressure mains replaced taking into account asset condition and/or assets located in high risk environmental areas.	June 2013	2.0	3.6	4.7	4.7	4.8
Mt Martha Sewerage Treatment Plant Upgrade	Upgrade the plant to produce Class A effluent.	SoO Compliance	20.2	All effluent to be Class A standard	June 2013		0.5	2.0	10.6	7.1
Bluescope ¹	Provision of recycled water to Bluescope Steel's Westernport Plant	Water Conservation	12.8	0.7 GL per year of treated effluent recycled	June 2011	2.0	6.4	6.4		

Project/ Program	Description	Driver	Water Plan Value \$M	Outcomes	Expected Delivery Date	08/09 (\$M)	09/10 (\$M)	10/11 (\$M)	11/12 (\$M)	12/13 (\$M)
Nepean Sustainable Water	Completion of the first stage of the Nepean Sustainable Water Recycling Project. with a capacity of 4.9GL per year by 2010	SoO Compliance	3.1	4.9 GL of treated effluent recycled	June 2010	1.0	3.1			
Customer Meter Replacements	Exchange customer water meters that have reached their meter accuracy replacement trigger.	Reliability	15.6	40,000 meters exchanged per year	June 2013	3.7	3.9	3.8	3.9	4.0

1. Blue Scope Steel and the State Government will also contribute to this project

11.4.2 Expenditure Summary

The capital and operating expenditure requirements for South East Water for the 2009/10 to 2012/13 regulatory period are summarised as follows.

Capital Expenditure

Capital Expenditure (\$M 2008/09)	2008/09	2009/10-2012/13 Water Plan Period			
	2008/09 Target	2009/10 Budget	2010/11 Budget	2011/12 Budget	2012/13 Budget
Water					
Capacity	\$8.9	\$12.6	\$14.8	\$20.6	\$18.2
Quality	\$0.2	\$0.2	\$0.2	\$0.1	\$0.1
Reliability	\$11.0	\$18.0	\$17.6	\$17.5	\$17.7
Meters	\$5.5	\$5.6	\$5.5	\$5.7	\$5.9
Sewerage					
Capacity	\$45.3	\$54.0	\$39.0	\$39.7	\$29.9
Reliability	\$15.1	\$18.0	\$20.3	\$21.6	\$21.9
Quality	\$1.5	\$1.3	\$2.3	\$2.0	\$1.1
Backlog program	\$18.8	\$17.9	\$19.1	\$16.4	\$24.6
Recycled	\$9.2	\$21.3	\$31.5	\$18.4	\$15.6
Corporate					
Plant & Equipment	\$0.3	\$0.3	\$0.3	\$0.3	\$0.3
Information Technology	\$7.5	\$6.5	\$5.4	\$5.1	\$5.9
Land & Buildings	\$0.3	\$1.5	\$0.3	\$0.2	\$0.2
Total Capital Expenditure	\$123.5	\$157.2	\$156.2	\$147.7	\$141.5

Note: May not add due to rounding

Operating Expenditure Summary

Operating Expenditure (\$M 2008/09)	2008/09	2009/10-2012/13 Water Plan Period			
	2008/09	2009/10	2010/11	2011/12	2012/13
	Target	Budget	Budget	Budget	Budget
Water Preventative	\$1.8	\$1.8	\$1.8	\$1.8	\$1.8
Water Remedial	\$9.2	\$9.2	\$9.3	\$9.3	\$9.4
Water Supply Operations	\$5.6	\$5.8	\$5.9	\$6.0	\$6.0
Total Water	\$16.6	\$16.7	\$16.9	\$17.0	\$17.1
Sewerage Preventative	\$3.4	\$3.4	\$3.5	\$3.5	\$3.5
Sewerage Remedial	\$5.4	\$5.5	\$5.6	\$5.6	\$5.6
Sewerage Operations	\$3.1	\$3.5	\$3.6	\$3.6	\$3.7
STP Preventative	\$0.6	\$0.7	\$0.8	\$0.8	\$0.9
STP Remedial	\$0.1	\$0.2	\$0.2	\$0.2	\$0.2
STP Operations	\$4.5	\$5.5	\$5.9	\$6.4	\$7.1
Total Sewerage	\$17.1	\$18.8	\$19.4	\$20.0	\$21.0
Total Recycled	\$0.0	\$0.1	\$0.3	\$0.3	\$0.3
Corporate Ops & Maintenance	\$13.2	\$13.5	\$13.6	\$13.8	\$14.0
Corporate Asset Planning	\$3.4	\$3.9	\$3.7	\$3.9	\$3.9
Customer Service & Billing	\$25.7	\$26.9	\$28.0	\$29.0	\$30.2
Corporate IT	\$3.6	\$3.7	\$3.9	\$4.1	\$4.2
Corporate Services	\$31.2	\$37.9	\$37.3	\$36.1	\$37.0
Government Payments	\$18.1	\$17.6	\$17.1	\$16.6	\$16.1
Total Corporate	\$95.3	\$103.4	\$103.5	\$103.6	\$105.4
Total South East Water	\$129.0	\$139.2	\$140.1	\$140.9	\$143.9
Bulk Costs	\$161.3	\$203.9	\$258.6	\$322.4	\$393.4
Total Operating Expenditure	\$290.3	\$343.1	\$398.7	\$463.2	\$537.3

Note: May not add due to rounding

12. Revenue Requirement

In order to determine South East Water's revenue requirement, the expected value of its regulatory asset base must be estimated for each year of the regulatory period. South East Water's regulatory asset base was originally set as part of the previous price determination and has been escalated based on subsequent capital expenditure and inflation.

12.1 Context

In August 2007, Government announced that it would ensure that water prices no more than doubled over the five year period to 2012/13, initiated the Victorian Competition and Efficiency Commission Review Inquiry into reform of the Metropolitan Retail Water Industry and initiated an Essential Services Commission review of retail tariff structures.

In order to develop a Water Plan for the remaining four years of the regulatory period that delivers on the requirement for bills to "no more than double" in real terms, South East Water has thoroughly analysed expenditure programs and the regulatory model to ensure that this objective can be achieved, while ensuring that business viability is maintained.

12.2 Regulatory Asset Value Transfer

In order to maintain the financial viability of all water businesses and relative consistency between the prices charged by retailers, a regulatory asset value transfer between Melbourne Water and South East Water has been implemented by the Department of Sustainability and Environment.

South East Water has assumed that this transfer will occur at the commencement of the 2009/10 financial year and will result in an increase of \$189M in South East Water's Regulatory Asset Value, as shown below. The impact of this regulatory asset value increase on prices has been partially offset by a reduction in Melbourne Water's regulatory asset value which has resulted in lower bulk charges to South East Water.

Regulatory Asset Value (\$M 08/09)	2008/09	2009/10	2010/11	2011/12	2012/13
Opening RAV	\$1,864.4	\$2,117.3	\$2,207.3	\$2,295.6	\$2,394.4
<i>Plus</i>					
Gross Capital Expenditure	\$146.9	\$180.6	\$179.6	\$171.1	\$164.7
<i>Less</i>					
Customer Contributions – cash	\$23.4	\$23.2	\$23.4	\$23.2	\$23.0
Customer Contributions-gifted assets	\$23.5	\$23.3	\$23.4	\$23.4	\$23.2
Government Contributions ²	\$2.3	\$4.0	\$0.0	\$0.0	\$0.0
Disposals	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Regulatory Depreciation ³	\$33.8	\$40.0	\$44.6	\$47.7	\$50.6
<i>Less</i>					
Regulatory Depreciation Deferred ⁴	\$0.0	\$0.0	\$0.0	\$22.0	\$30.1
Closing RAV	\$1,928.3	\$2,207.3	\$2,295.6	\$2,394.4	\$2,492.4
Average RAV	\$1,896.4	\$2,162.3	\$2,251.5	\$2,345.0	\$2,443.4

- 1 Includes an additional \$189m transfer from Melbourne Water based on Government advice to achieve more uniform prices across Melbourne.
- 2 Government contributions are expected to be received in relation to the Blue Scope Steel and Frankston City Council recycling projects.
- 3 The regulatory depreciation calculated above is based on a weighted average remaining life of 62 years for existing assets and specific assets lives for new assets.
- 4 Regulatory depreciation has been deferred from 2011/12 and 2012/13 for recovery during the 2013/14 to 2017/18 regulatory period.

12.3 Deferred Depreciation

In order to ensure that the Government's commitment to prices no more than doubling in real terms can be achieved, South East Water has deferred regulatory depreciation into the next regulatory period as a balancing item. Should it be the case that there are changes to any of the key Water Plan inputs prior to the Commission's final decision, South East Water intends to adjust the amount of depreciation deferred. The most likely scenarios that would impact on the amount of depreciation deferred include:

- Weighted average cost of capital varies from the current 5.8% assumption;
- Changes are made to Melbourne Water's prices as a result of the review process;
- Forward estimates of restriction levels are revised;
- Changes are made to South East Water's expenditure estimates as a result of the review process; or
- The Minister varies the initial advice provided in relation to the amount of regulatory asset value transferred between Melbourne Water and South East Water.

12.4 Weighted Average Cost of Capital

For the purpose of calculating return on assets, South East Water has used a weighted average cost of capital of 5.8%, consistent with the Commission's Final Decision for Regional and Rural Water Businesses. South East Water understands that this figure may be revised closer to the date of the final decision.

12.5 Revenue Requirement

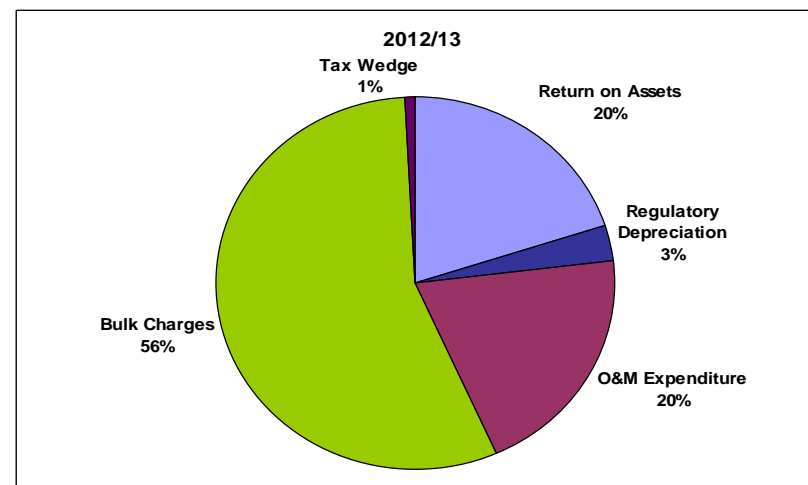
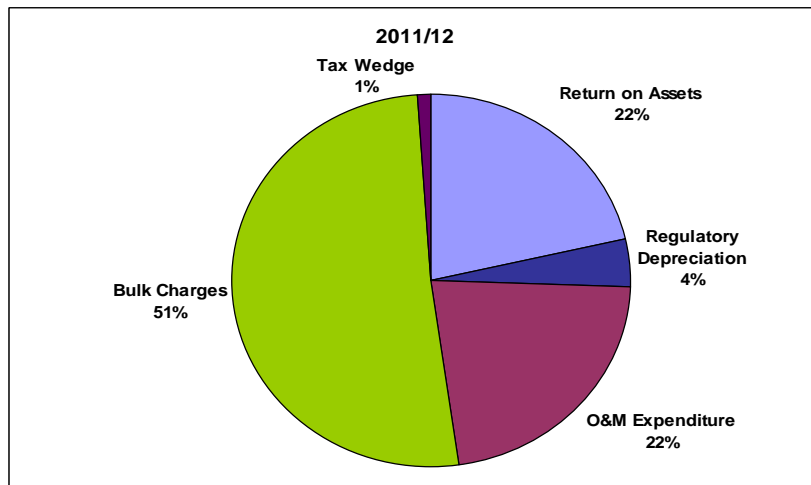
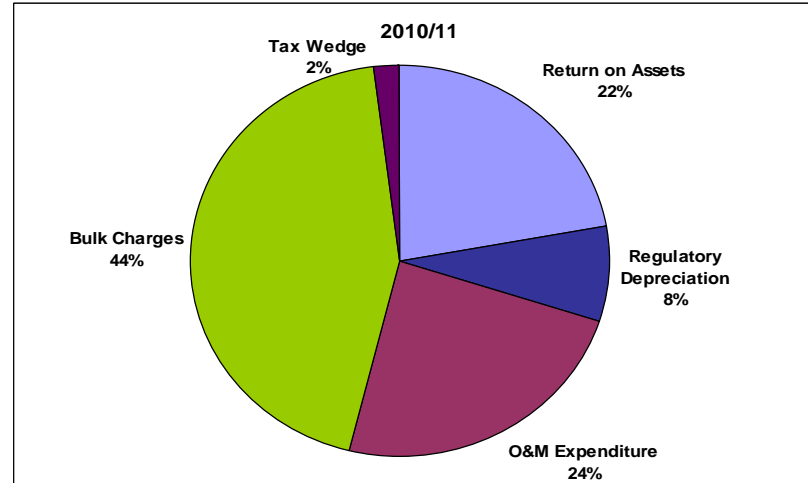
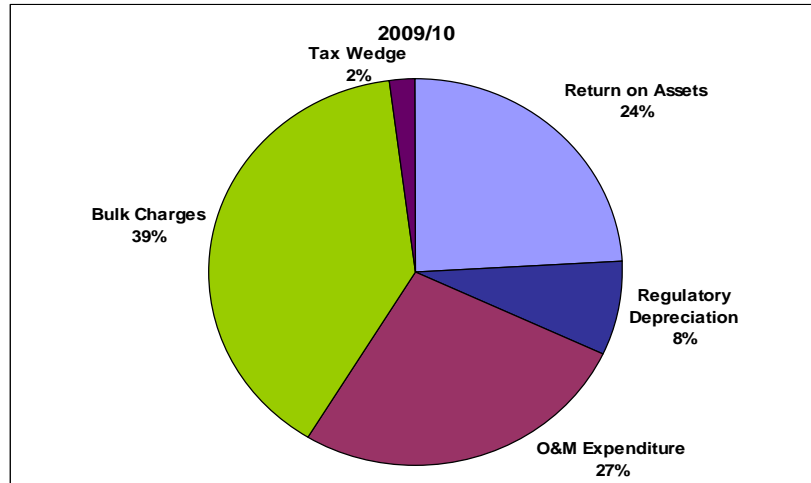
Revenue Requirement (\$M 2008/09)	2008/09	2009/10	2010/11	2011/12	2012/13
Return on Assets	\$110.0	\$125.4	\$130.6	\$136.0	\$141.7
Regulatory Depreciation ¹	\$33.8	\$40.0	\$44.6	\$25.7	\$20.4
O&M Expenditure	\$129.0	\$139.2	\$140.1	\$140.9	\$143.9
Bulk Charges	\$161.3	\$203.9	\$258.6	\$322.4	\$393.4
Efficiency Carry-Over	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Carryforward from 1st Period ²	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Tax Wedge	\$9.2	\$10.3	\$11.0	\$7.5	\$6.4
Benchmark Revenue Requirement	\$443.3	\$518.8	\$584.9	\$632.4	\$705.9

- 1 Regulatory depreciation has been deferred from 2011/12 and 2012/13 for recovery during the 2013/14 to 2017/18 regulatory period.
- 2 On the basis of the Commission's Supplementary Guidance, South East Water has removed an amount equivalent to approximately \$3M that related to carry forward from the first regulatory period to recover the following:
 - licence fees greater than forecast; and
 - financing costs to correct a material error made at the last determination with respect to growth related capital expenditure.

As noted in Section 7 above, while no provision for an efficiency carryover or carryforward from the first period has been made, South East Water supports the introduction of an efficiency carryover mechanism and a means to make adjustments for other changes during the period, such as variations in licence fees. South East Water would expect that the Commission will confirm its intention to allow these variations in future as part of the Water Plan process and develop a methodology to ensure that efficiency gains (or variations in licence fees and government charges) delivered during the 2009/10 to 2012/13 regulatory period are incorporated into the revenue requirements for the third regulatory period.

The contributions of the various components of the revenue requirement to the total are shown as follows:

Profile of South East Water Revenue Requirements



13. Proposed Price Increase

13.1 2009/10 to 2012/13

In order to recover the above revenue, South East Water proposes real price increases as follows for the 2009/10 to 2012/13 regulatory period:

Real Price Increase	2009/10	2010/11	2011/12	2012/13
Price Increase	18%	16%	12%	11%

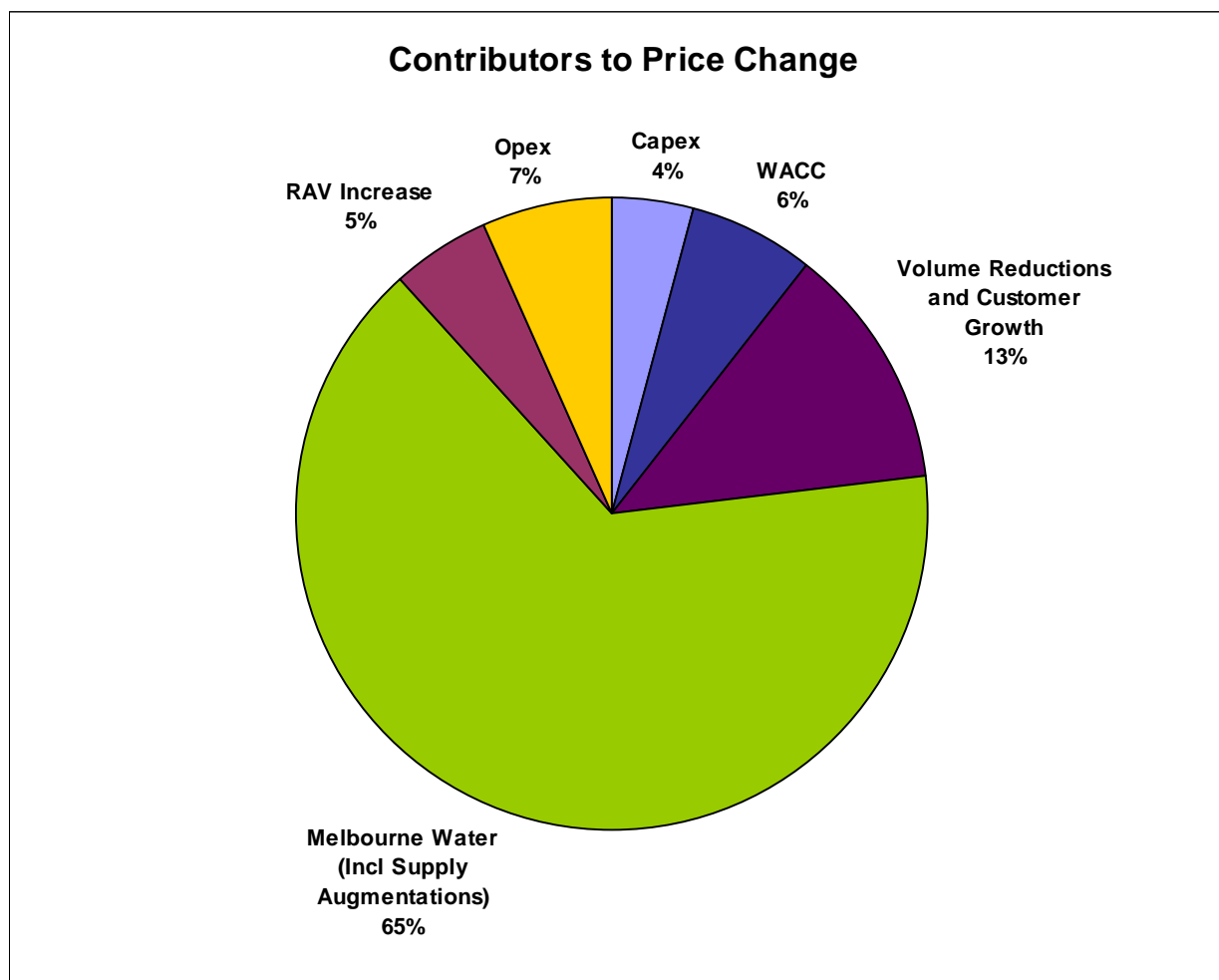
The price increases proposed are weighted towards the early years of the period in order to:

- Provide additional price incentives for customers to save water prior to the completion of the planned augmentation options;
- Ensure that prices do not increase too sharply towards the end of the period and hence achieve a smooth transition into the 2013/14 to 2017/18 regulatory period; and
- Improve business cash flow and ensure that revenue levels return to be approximately equivalent to the revenue requirement in the early part of the regulatory period.

The impact of these price increases is to provide all customers with a 95% price increase over the five year period.

13.2 Drivers of Price Increase

The following chart shows the major drivers of South East Water's price increase, on an average basis over the 4 year period.



13.3 2012/13 to 2017/18

In order to provide indications to customers and stakeholders, preliminary estimates of price increases in the subsequent regulatory period (2012/13 to 2017/18) have been provided in this Water Plan. They are estimated on the basis of:

- Current programmed capital works and priorities;
- Operating costs (including bulk charges) escalating at 2% pa in real terms;
- No additional changes to the Regulatory Asset Value;
- Weighted average cost of capital of 5.8%;
- Consistent service level and external obligations; and
- No water restrictions

South East Water has modelled the likely outcomes for this period to ensure that:

- There is a smooth transition between regulatory periods;
- Customers are provided with additional information about ongoing price increases; and
- A better understanding of the impact on future prices of any depreciation deferred from the current regulatory period into the next.

South East Water's modelling currently indicates a 1.4% per annum average price increase in real terms for the 2013/14 to 2017/18 period is expected.

14. Tariff Structural Changes

In the lead up to the development of the deferred 2008/09 to 2012/13 Water Plan and the subsequent development of the 2009/10 to 2012/13 Water Plan, the three Metropolitan Water Retailers and Melbourne Water jointly considered the merits of recommending tariff structural change.

This process included individual customer research, internal analysis and culminated in engaging a consultant to look at the drivers that may cause the industry to recommend change and the potential long term options for tariff structural change that may result. These long term options are not likely to present themselves until at least late in the current regulatory period or the beginning of the 2013/14 regulatory period.

Also, in September 2007, the Essential Services Commission was asked to conduct an enquiry into tariff structures for the Victorian Water Industry. This review specifically considered the proposals made by the retailers as part of the discontinued price review process, and did not provide significant support for any of the tariff structural changes proposed.

The key findings from the Commission's Water Tariff Structures Review were:

- Volumetric charges should reflect marginal cost;
- Adverse customer impacts need to be addressed; and
- The Commission sought changes to the WIRO to allow it to reject proposed tariff reforms that did not best meet the relevant Regulatory Principles.

Ultimately, implementing tariff structural change in the short term is problematic as tariff structure changes will result in differential movements in price between customers and or customer segments. Should this occur, South East Water would not be able to meet the Government's direction to ensure that prices "no more than doubling in real terms" over the five year period to 2012/13.

As a result of the above, no major tariff structural changes are proposed for the 2009/10 to 2012/13 period. While there are some fundamental "house keeping" changes required to ensure that all customers have tariffs applied in an equitable and cost reflective manner, these are expected to be pursued potentially under the Commission's price control outcomes this period or more likely for incremental introduction during the 2013/14 to 2017/18 Water Plan

period. The three retailers and Melbourne Water will continue to undertake further work on tariff structures during the 2009/10 to 2012/13 period.

It is expected that by this stage a number of issues will have been considered in further detail. These may include:

- The introduction of alternative sources of supply and their impacts on cost;
- The declaration of an access regime as recommended by Government as part of the VCEC review;
- The financial ringfencing of the current retail businesses into distribution, wastewater collection and retail costs as recommended by Government through the VCEC review;
- The potential introduction of “water markets” and trading;
- Future technological advancements eg smart metering;
- Further opportunities to enhance recycling and treat sewage as a resource; and
- The long term impact of restrictions on demand levels.

Any changes proposed will be developed in accordance with the following fundamental principles of good tariff design:

- Efficiency;
- Equity;
- Management of customer impacts / customer acceptability;
- Simplicity;
- Revenue adequacy; and
- Recognition of externalities.

The current tariff structure, in particular the inclining block tariff, is an essential element of the demand management program. Without clarity on future marginal costs of supply (augmentation costs will not be known until these projects are completed) the current variable prices provide a strong signal to customers about the impacts of not conserving water and incentivise lower demands.

15. Proposed Water and Sewer Tariffs

South East Water proposes the following tariffs for the 2009/10 to 2012/13 regulatory period:

15.1 Residential

Residential (\$ 2008/09) ¹	2008/09	2009/10	2010/11	2011/12	2012/13
Water Service Charge	\$56.96	\$67.22	\$77.97	\$87.33	\$96.93
Sewer Service Charge	\$192.67	\$227.35	\$263.72	\$295.37	\$327.86
Variable Charge (Water) (kL)					
Block 1 (0-440 litres/day)	\$1.0052	\$1.1861	\$1.3759	\$1.5410	\$1.7105
Block 2 (440 – 880 litres/day)	\$1.2206	\$1.4403	\$1.6708	\$1.8712	\$2.0771
Block 3 (>880 litres/day)	\$1.9745	\$2.3299	\$2.7027	\$3.0270	\$3.3600
Variable Charge (Sewer) (kL) ²	\$1.2565	\$1.4827	\$1.7199	\$1.9263	\$2.1382

1. These prices are expressed in real 2008/09 dollars (ie not including inflation)
2. To determine the total variable sewer charge, the variable charge for sewer is applied to:

$$\text{Metered Water Volume} \times \text{Discharge Factor} \times \text{Seasonal Factor}$$

15.2 Non-Residential

Non Residential (\$ 2008/09) ¹	2008/09	2009/10	2010/11	2011/12	2012/13
Water Service Charge	\$56.96	\$67.22	\$77.97	\$87.33	\$96.93
Sewer Service Charge	\$228.81	\$269.99	\$313.19	\$350.78	\$389.36
Fire Service Charge	\$37.00	\$43.66	\$50.65	\$56.72	\$62.96
Variable Charge (Water) (kL)	\$1.2206	\$1.4403	\$1.6708	\$1.8712	\$2.0771
Variable Charge (Sewer) (kL) ²	\$1.2565	\$1.4827	\$1.7199	\$1.9263	\$2.1382

1. These prices are expressed in real 2008/09 dollars (ie not including inflation).
2. To determine the total variable sewer charge, the variable charge for sewer is applied to:

$$\text{Metered Water Volume} \times \text{Discharge Factor}$$

15.3 Trade Waste

Trade Waste (\$ 2008/09) ¹	2008/09	2009/10	2010/11	2011/12	2012/13
Annual Agreement Fee					
<2,500kL	\$341.51	\$402.98	\$467.46	\$523.56	\$581.15
>2,500kL,<OR=25,000kL	\$990.34	\$1,168.60	\$1,355.57	\$1,518.24	\$1,685.25
>25,000kL,<OR=100,000kL	\$,3301.34	\$3,895.59	\$4,518.88	\$5,061.15	\$5,617.87
>100,000kL	\$9,904.18	\$11,686.93	\$13,556.84	\$15,183.66	\$16,853.86
Vol of Trade Waste (kL)	\$0.5589	\$0.6595	\$0.7650	\$0.8568	\$0.9511
BOD (kg)	\$0.5303	\$0.6258	\$0.7259	\$0.8130	\$0.9024
SS (kg)	\$0.2974	\$0.3509	\$0.4071	\$0.4559	\$0.5061
TKN (kg)	\$1.1645	\$1.3741	\$1.5940	\$1.7852	\$1.9816
Oxidised Sulphur (kg)	\$0.9918	\$1.1703	\$1.3576	\$1.5205	\$1.6877

1. These prices are expressed in real 2008/09 dollars (ie not including inflation)

15.4 Customer Impact Analysis

Based on the above prices, South East Water expects to see the following changes to the average residential customer's bill. Note, these increases have been calculated on the basis of a customer using 165kL of water per annum and are expressed in 2008/09 dollars (ie not including inflation).

Average Residential Bill (165kL pa) ¹	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% Increase 2007/08 to 2012/13
ANNUAL Water & Sewer Bill	\$491.47	\$560.07	\$665.77	\$772.28	\$864.96	\$960.10	95%
WEEKLY Water & Sewer Bill	\$9.45	\$10.77	\$12.80	\$14.85	\$16.63	\$18.46	95%

1. These prices are expressed in real 2008/09 dollars (ie not including inflation).

The expected increase for a range of other customer profiles is shown below. Note, these creases are expressed in 2008/09 dollars (ie not including inflation).

Annual Residential Water & Sewer Bill ¹	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% Increase 2007/08 to 2012/13
Pensioner Couple (80kL) ²	\$183.69	\$208.84	\$248.81	\$288.61	\$323.25	\$358.80	95%
Tenant – Family of four – house (230kL)	\$395.00	\$447.54	\$535.08	\$620.69	\$695.17	\$771.64	95%
2 adults, 2 children small garden (230kL)	\$612.45	\$697.17	\$829.65	\$962.38	\$1,077.87	\$1,196.43	95%
Family 6, average garden (370kL)	\$911.36	\$1,036.81	\$1,234.56	\$1,432.09	\$1,603.93	\$1,780.37	95%

1. These prices are expressed in real 2008/09 dollars (ie not including inflation).

2. Assuming pensioner concessions increase at the same rate as prices.

Annual Non Residential Water & Sewer Bill ¹	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% Increase 2007/08 to 2012/13
Small Business Customer	\$740.53	\$850.12	\$1,003.14	\$1,163.64	\$1,303.28	\$1,446.64	95%
Large Business Customer	\$1,859.46	\$2,134.62	\$2,518.85	\$2,921.87	\$3,272.49	\$3,632.47	95%
Large Trade Waste Customer	\$27,076.14	\$31,080.96	\$36,675.54	\$42,543.62	\$47,648.86	\$52,890.23	95%

1. These prices are expressed in real 2008/09 dollars (ie not including inflation).

16. Miscellaneous Charges

In forecasting its revenue from miscellaneous charges, South East Water has continued to trend miscellaneous services prices towards cost reflectivity. This process commenced as part of the 2008/09 price reset. As part of its 2008/09 price determination, the Commission published a set of principles for determining miscellaneous charges prices.

The business will determine actual cost of miscellaneous service based on:

direct third party or contractor invoice cost

plus

direct marginal internal costs (including labour, materials and transport)

plus

a fair contribution to overheads.

South East Water has used these principles to determine the prices to be applied to miscellaneous charges except where these principles would result in charges greater than the average price increases expressed above. This methodology is consistent with the approach taken by the Commission in 2008/09.

Once prices reach their cost reflective level, South East Water is proposing to maintain them in nominal terms for the four years of the regulatory period.

Consistent with the 2008/09 determination, this Water Plan includes the ten key services for review and approval by the Commission. These services and their proposed prices include the following:

Miscellaneous Service (\$2008/09)	2008/09	2009/10	2010/11	2011/12	2012/13
20 mm meter + delivery and installation	\$120.00	\$90.38	\$87.83	\$85.36	\$82.95
20 mm service connection to mains of up to 300 mm	\$320.00	\$310.98	\$302.22	\$293.70	\$285.42
Removal and testing of water meters	\$64.60	\$73.86	\$83.11	\$89.95	\$96.33
Application fee for connection of single residential property to water and/or sewer	\$80.00	\$58.31	\$42.50	\$41.30	\$40.14
Plan showing sewer location within a Property (Property Sewerage Plan)	\$20.00	\$19.44	\$18.89	\$18.36	\$17.84
Information Statements – All forms of lodgements	\$20.00	\$17.49	\$17.00	\$14.68	\$12.49
Restoration of supply at the meter	\$53.85	\$61.22	\$66.11	\$64.25	\$62.44
Application fee to build over South East asset or easement	\$31.00	\$34.99	\$38.72	\$41.30	\$43.71
Application fee for connection –works not required	\$108.90	\$124.39	\$139.78	\$151.44	\$163.23

Note: - These prices are expressed in real 2008/09 dollars (ie not including inflation)

17. Recycled Water

South East Water has developed its proposed recycled water charges consistent with the outcomes of the Commission's 2008/09 price determination.

- **Residential reticulated class A recycled water** – the service charge and price per kilolitre for this product were approved by the Commission and published on South East Water's tariff schedule for the first time in 2008/09.

South East Water is proposing that the volumetric price for this product remain tied to the lowest tier of potable water and increase according to the average overall price increase. The service charge is also proposed to increase according to the average price increase. In maintaining a price consistent with the bottom tier, South East Water is:

- Incentivising customers to connect by providing customers with water for outdoor use at a price equal to or in most cases less than the price that would have been paid for potable water. Many customers in detached homes would pay either the second or third tier price for water used outside.
- Providing customers with the ability to water gardens regardless of the level of restrictions.

Residential Reticulated Class A Recycled Water Tariffs (\$2008/09)	2008/09	2009/10	2010/11	2011/12	2012/13
Recycled Water Service Charge	\$20.00	\$23.60	\$27.38	\$30.66	\$34.03
Recycled Water Variable Charge (per kL) (as per first tier potable water)	\$1.0052	\$1.1861	\$1.3759	\$1.5410	\$1.7105

Note: - These prices are expressed in real 2008/09 dollars (ie not including inflation).

- **Recycled Water provided under existing contracts** – recycled water provided under existing contracts will continue to be supplied based on the contracted rates.
- **New agreements to supply recycled water** – any new agreements to supply recycled water will be negotiated based on the principles established by the Commission in its 2008/09 final decision. These principles require recycled water prices to be set so as to:
 - “have regard to the price of any substitutes and customers’ willingness to pay;
 - cover the full cost of providing the service (with the exception of services related to specified obligations or maintaining balance of supply and demand); and
 - include a variable component.”

18. New Customer Contributions

18.1 Background

As part of the Commission's recent price determination for 2008/09, the decision was made to levy scheduled new customer contributions based on the following categories:

- Category 1: a minimum \$550 per lot per service for water, sewerage and dual pipe recycled water (total \$1,650 per lot) for developments which are designed in a manner that will have minimal impact on future water resource demands and can be catered for without additional investment to upgrade the medium-term distribution capacity. These developments are typically a lot with an area no greater than 450 square meters.
- Category 2: \$1,100 per lot per service for water, sewerage and dual pipe recycled water (total \$3,300 per lot) for urban developments which will require further investment in infrastructure. These developments are typically traditional Greenfield urban developments with lot sizes between 450 square meters and 1,350 square meters.
- Category 3: \$2,200 per lot per service for water, sewerage and dual pipe recycled water (total \$6,600 per lot) — for developments designed in such a way that properties will create demand for water resources over and above high-density developments which will require further investment in infrastructure. These developments are typically Greenfield developments with lot sizes exceeding 1,350 square meters, for example, lots with potentially large outside water use which will influence near term investment in infrastructure decisions.

Developments also connecting to recycled water will be subject to a 50 per cent reduction in the applicable scheduled charge for water.

South East Water proposes to maintain this charging methodology and these charges in real terms for the 2009/10 to 2012/13 regulatory period.

On advice from the Department of Sustainability and Environment, South East Water also proposes to maintain the existing \$500 charge for backlog customers (charged over 5 years in nominal terms) for backlog customers connecting to the network.

Water and Sewerage (\$2008/09)	2008/09	2009/10	2010/11	2011/12	2012/13
Water per lot					
Category 1 – less than 450m ²	\$550	\$550	\$550	\$550	\$550
Category 2 - between 450m ² and 1,350m ²	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100
Category 3 – greater than 1,350m ²	\$2,200	\$2,200	\$2,200	\$2,200	\$2,200
Sewer per lot					
Category 1 – less than 450m ²	\$550	\$550	\$550	\$550	\$550
Category 2 - between 450m ² and 1,350m ²	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100
Category 3 – greater than 1,350m ²	\$2,200	\$2,200	\$2,200	\$2,200	\$2,200

Water, Sewerage & Recycled (\$2008/09)	2008/09	2009/10	2010/11	2011/12	2012/13
Dual Pipe Recycled Water Developments					
Water per lot					
Category 1 – less than 450m ²	\$275	\$275	\$275	\$275	\$275
Category 2 - between 450m ² and 1,350m ²	\$550	\$550	\$550	\$550	\$550
Category 3 – greater than 1,350m ²	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100
Recycled Water per lot					
Category 1 – less than 450m ²	\$550	\$550	\$550	\$550	\$550
Category 2 - between 450m ² and 1,350m ²	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100
Category 3 – greater than 1,350m ²	\$2,200	\$2,200	\$2,200	\$2,200	\$2,200
Sewer per lot					
Category 1 – less than 450m ²	\$550	\$550	\$550	\$550	\$550
Category 2 - between 450m ² and 1,350m ²	\$1,100	\$1,100	\$1,100	\$1,100	\$1,100
Category 3 – greater than 1,350m ²	\$2,200	\$2,200	\$2,200	\$2,200	\$2,200

Note: - These prices are expressed in real 2008/09 dollars (ie not including inflation).

Backlog Connection Charge (\$2008/09)	2008/09	2009/10	2010/11	2011/12	2012/13
Backlog Connection Charge	\$500.00	\$485.91	\$472.21	\$458.91	\$445.97

Note: - These prices are expressed in real 2008/09 dollars (ie not including inflation), assuming 2.9% inflation.

18.2 Bring Forward Charges

South East Water imposes bring forward charges where shared assets are required to be constructed ahead of schedule to service a particular development. The baseline development schedule used by South East Water is the 2007 Urban Development Program.

18.2.1 Greenfields and Other

South East Water proposes to determine bring forward costs, for assets outside defined backlog areas, as specified in the Commission's recent 2008 final decision including the process for internal setting of that price.

This decision established ranges for brought forward charges, depending on the number of years that the shared assets were being brought forward, as follows:

- Where the shared assets could be reasonably considered to form part of a logically sequenced network expansion and could reasonably be expected to be required by the business within a short to medium term planning horizon, no bring forward contribution is to apply (scheduled charge applies).
- Where the shared assets do not form part of a logically sequenced network expansion, but could reasonably be expected to have been required by the business in respect of a long term planning horizon, then a non-scheduled contribution equivalent to 40 per cent of the as constructed cost of the shared assets will apply.
- Where the shared assets do not form part of a logically sequenced network expansion, and could not reasonably be expected to have been required by the business in respect of a long term planning horizon, then a non-scheduled contribution equivalent to 70 per cent of the as constructed cost of the shared assets will apply.

South East Water is working to ensure that more detailed guidelines are established across the industry to allow this decision to be implemented with greater certainty.

18.2.2 Backlog

South East Water has, under its Statements of Obligations (SoO), an obligation to provide reticulated sewerage services to unsewered properties where the properties cannot adequately treat and dispose of their wastewater onsite and where reticulated sewerage has been identified as the preferred option in a Domestic Wastewater Management Plan.

Domestic Wastewater Management Plans are developed by Local Government and it is the responsibility of Councils to identify and justify areas within their municipality that require backlog sewerage. Councils involve the Environment Protection Authority and the Department of Health and Community Services in this process. The relative priority ranking of the areas to be served is primarily undertaken by the South East Water (with input from stakeholders such as Councils, DSE, and EPA) and an efficient program is developed to take advantage of economies of scale, maximising environmental outcomes and social benefits. Works can comprise major pump stations, trunk sewer and reticulation sewers – all of which is funded by South East Water under the backlog program.

However, South East Water regularly receives requests from developers subdividing land for development and some individual property owners to bring forward backlog works ahead of when the works are programmed, in backlog areas. This raises two issues:

1. the current Commission definition for reticulation / shared assets and hence developer / South East Water funding allocations is incompatible with practice, and
2. the drivers behind a simplified brought forward methodology approved by the Commission for the 2008/09 determination are not appropriate for backlog works

With respect to definitions, to ensure it is clear that South East Water funds all reticulation assets in planned backlog programs, it is proposed to treat backlog sewer assets that fit the Commission's definition of reticulation assets under Schedule 4.3 of its 2008 Determination, as shared assets via a Special Reticulation Backlog sewer assets category. This approach is consistent with South East Water's current practice.

Additional assets required to meet a developer's specific needs will be funded by the developer.

With respect to the Commission's brought forward methodology contained in its 2008 Determination; the logic behind a three category model (0%, 40% and 70%) was that there was a degree of contention about the period of brought forward and that the process was not simple. This is not the case with backlog programs. South East Water has a clearly defined plan –

developed with stakeholders – that removes this uncertainty and would hence allow a more specific period to be set.

It is therefore proposed that the financing costs be calculated as follows:

$$DeveloperCharge = 1 - \left[\frac{1}{(1+r)^n} \right] \times \text{Cost of Shared Assets}$$

Where:

R is the implied pre-tax WACC as defined in Essential Services Commission

N is the number of years that the provision of the works has been brought forward

Appendix 1: Environment Protection Authority Letter

Our Ref: 54702 - 10

Kate Vinot
Acting Managing Director
South East Water Limited
PO Box 1382
MDORABBIN VIC 3189

Dear Ms Vinot

DRAFT WATER PLAN

Thank you for the opportunity to provide comment on your Draft Water Plan for the Essential Services Commission pricing review 2008-2013.

As you are aware, environmental obligations for water businesses are set out in the paper *Principles to establish EPA environmental obligations for water businesses for the 2008-2013 pricing determination*.

The water plan provides an opportunity to reduce environmental impacts whilst delivering economic benefits to your water business through increased resource efficiency. Careful planning for protection of the environment will reduce future risks and costs to water businesses.

Overall the draft plan has addressed the required obligations and puts your water business on a sustainable footing for the future. I am particularly pleased to see the following items in the draft water plan:

WATER CONSERVATION AND RESOURCE EFFICIENCY

EPA supports the measures South East Water has proposed to meet the 30% reduction per capita target as required by the Central Region Sustainable Water Strategy. The initiatives targeting industrial customers including water audits and implementation of water conservation measures that are intended to save 1100 ML are commendable.

SEWAGE MANAGEMENT

Implementing the waste hierarchy for sewage management

EPA is supportive of the water recycling initiatives that South East Water have proposed for 2008-13, which are aimed at delivering on the Central Region Sustainable Water Strategy for an additional 10 GL of potable substitution from water recycling by 2030. It is noted that the implementation of individual schemes will depend on detailed assessments and the support of the recycling customers.

Sewage Treatment and Disposal

EPA is supportive of the move by South East Water to cease discharge from all sewage treatment plants (STPs) to the Westport Bay catchment as required by Policy and licence conditions. Wastewater from these plants will be used in various agricultural projects. It is noted that these STPs may need to discharge to the environment during a 90 percentile wet weather year, in accordance with EPA requirements.



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EPA is supportive of proposed recycling schemes that would see supply of Class A recycled water from sewage treatment plants that discharge to the South East Outfall, to supply local demand. The sustainable reuse of recycled water from these plants will result in reduced discharge via the South East Outfall.

Sludge and Biosolids management

EPA commends South East Water's work to achieve 100% sustainable reuse of biosolids in the 2008-2013 water plan period.

Sewerage Planning

EPA supports the 20 year sewage backlog program for unsewered areas. EPA suggests that the prioritisation for sewage connection should also consider the findings of the Domestic Wastewater Management Plans developed by local government, and any options for decentralised sewage management where appropriate. EPA is available to assist South East Water to promote connection by residents to sewer where appropriate.

Management of the Sewerage System

EPA supports measures by South East Water to ensure that sewers are capable of managing 1 in 5 year rainfall events. EPA notes that South East Water will implement the waste hierarchy in reducing flows to sewers prior to increasing the capacity of sewers.

EPA commends South East Water's management of the sewer network, which when benchmarked nationally has shown that the company is in the top 5% for least number of spills. EPA supports the increased spending of 25% to inspect areas of greater environmental risk.

Trade Waste Management

EPA is supportive of the trade waste initiatives and looks forward to working closely with South East Water to reduce trade waste loading.

Odour Management

EPA supports South East Water's strategy to manage odour now and into the future, noting that historically very few complaints from the community have been received. EPA notes that South East Water's default target of 4 odour units (OU) (99.9 percentile) at customer's residences is not in accordance with policy, and for new works EPA would require 1 OU to be met. Please note that EPA is currently working in conjunction with the water industry, and South East Water in particular, to develop an odour policy document for the water industry.

Greenhouse management

EPA commends South East Water's proposal to achieve net zero annual greenhouse emissions through avoiding and reducing emissions, as well as projects such as energy recovery and sequestration at STP sites. EPA's Carbon Innovators Network is available to assist South East Water in achieving this goal.

Specific comments are as follows:

ASSESSMENT, MONITORING, AUDITING AND REPORTING

EPA notes that South East Water have not allocated funds to undertake water quality monitoring of receiving environments, due to the planned cessation of discharge from treatment plants to the water environment. Whilst this may be appropriate, EPA notes there may also be occasions where discharge to the environment may occur.

As South East Water's sewage treatment plants are designed to manage flows in a 90th percentile wet weather year, in the event of a 90th percentile wet weather year South East Water may require EPA approval to discharge to the environment. Therefore, EPA

suggests that South East Water allocate funds to cater for additional monitoring that would be required in these events.

EPA looks forward to working collaboratively with South East Water to ensure the Victorian community is living sustainably. If you have any questions, please do not hesitate to contact your regional client manager, Robert Medley on 8710 5573 or Stephen Lansdell in the Water and Catchment Unit on 9695 2629.

Yours sincerely



MICK BOURKE
CHAIRMAN

1/10/2007

cc: Sean Crees, ESC; Jan Bowman, DHS; Philip Reed, DSE.