South East Water

healthy water for life

2013-18 Water Plan

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Overview

At South East Water, we are committed to delivering healthy water for life.

Our Water Plan outlines how we will deliver our number one priority – providing safe, reliable and affordable water and sewerage services to our customers for the 2013–18 regulatory period. It outlines our proposals for the service levels we will provide our customers, the investment in our network that is needed to ensure a sustainable future and our proposed prices.

We have sought to strike the right balance between minimising customer bills, expanding and maintaining our water and sewerage systems and delivering high standards of service.

This plan has been developed in consultation with our customers, stakeholders and the broader community and will be reviewed by the independent regulator, the Essential Services Commission (ESC).

While no one wants prices to rise, there are a range of changes that will lead to a substantial price increase in the plan's first year. These changes result in a one-off increase in an average customer's bill of 33.6 per cent in 2013–14, before inflation. In the following four years prices will only increase by inflation.

The increase is largely due to the fixed costs associated with the Victorian Desalination Plant (VDP), a correction for current low water demands and an increase in the environmental contribution paid to government, and a small contribution from South East Water's capital programs.

South East Water is a leader among comparable metropolitan water utilities in customer responsiveness, cost efficiency, network reliability and drinking water quality.

Supporting our customers

We share the community's concern about how the price changes will affect our customers, particularly people on low, fixed incomes and we plan to strengthen assistance for those in need.

We already have a range of measures in place under our South East Water Assist program to support customers who are experiencing financial difficulty. In light of the first year price increase, we will strengthen customer support by:

- offering customers choice in timing of payments - for example, monthly - to give customers more flexibility and budgeting certainty
- launching our mySouthEastWater customer portal offering alternative payment schedules and the opportunity to request bill extensions 24 hours a day, seven days-a-week without having to speak with someone
- partnering with community and social service organisations so we can better understand customers in need and find effective ways to help
- investing in additional training for front line staff to assist customers in need
- leading and participating in a water industry and community taskforce on customer support.

Minimising our costs, maintaining high performance

South East Water is rated by National Water Commission benchmarking as a leader among comparable metropolitan water utilities, specifically in customer responsiveness, cost efficiency, water and sewer service network reliability and drinking water quality.

Our customer engagement has found that customers are satisfied with the current standards of service and do not believe additional expenditure is warranted to deliver improved performance, so we are aiming to maintain our current high performance levels.

There are three areas where performance standards are proposed to be outside the recent average: unplanned

water supply interruptions, telephone calls answered within 30 seconds and complaints to the Electricity and Water Ombudsman Victoria (EWOV). Our research indicated these changes will not negatively impact on customers, but will help us keep costs down.

We are focussed on minimising our operating costs while maintaining performance and have already reduced controllable operating expenditure by 7.5 per cent from 2009–10 to 2011–12. A decrease in our controllable operating costs in the 2013–18 regulatory period is also offsetting the average bill increase by 0.9 per cent.

These controllable costs are critical to our performance as careful management allows us to operate and maintain our extensive water and sewerage pipelines and pump stations, and our local sewage treatment plants. It also enables us to support our customers and undertake long-term planning.

Sustainable planning for a better future

Capital expenditure is necessary to maintain our high levels of service and cater for the growth of Melbourne. Innovation, increased efficiency and strategic planning will also play an ever-increasing role in our future operations.

Our key capital investments for 2013–18 include:

- the proactive upgrade of approximately 54 kilometres of aging critical water and sewerage infrastructure per year to reduce risks of major service disruptions
- appropriate upgrades to our sewage treatment plants to meet the demands of the growing population and protect the environment
- the connection of approximately 4,600 customers with failing septic tanks to the sewerage network, resulting in significant public health and environmental benefits
- additional water and sewer capacity and system extensions to service new developments in our growth corridors and inner city infill areas.

We have sought to strike the right balance between minimising customer bills, expanding and maintaining our water and sewerage systems and delivering high standards of service.

The Water Planning process and customer engagement

Feedback from our customers and stakeholders has been critical to the development of this Water Plan. The engagement process is summarised below and discussed in more detail in section 2.1.

Stage one – prior to the draft Water Plan

As part of developing the draft Water Plan, we consulted with our Customer Advisory and Recycled Water Customer Committees, customer representative groups and individual customers to understand their needs.

We specifically focussed on the key elements of the Water Plan that impact on customers, such as tariff structures and service levels.

Stage two – draft Water Plan feedback

Following the release of the draft Water Plan in May 2012 and an addendum in August 2012, we asked customers for their feedback on key proposals. Customer support was demonstrated for:

- charges that reflect the service provided (for example, water prices pay for water services and sewerage prices pay for sewerage services rather than spreading the costs evenly across the two services)
- providing information and support around sustainable water use
- maintaining a tiered pricing model for residential variable water charges
- ensuring service charges apply equitably to all dwellings
- simplifying the residential sewage disposal charge (SDC)
- discounting the residential recycled water usage charge
- making annual trade waste, backlog and other charges more cost reflective.

It is important to note that these changes will not increase our revenue. Instead, they will ensure that all customers pay for the services they receive and that one customer group does not subsidise another.

We incorporated the feedback received from the draft Water Plan into this Final Water Plan, with customer responses highlighted in relevant sections.

The ESC's primary role as the independent regulator is to promote the long-term interests of Victorian consumers by regulating the prices and service standards we deliver.

The ESC will undertake its formal review of our Water Plan prior to releasing a draft decision, which will be available for further public consultation before its final decision in June 2013.

Feedback from our customers has been a critical part of developing this Water Plan.

1. About South East Water

South East Water provides water, sewerage and recycled water services to over 1.6 million people living and working in Melbourne's south east – from Port Melbourne to Portsea and from Parkdale to east of Pakenham.

South East Water's vision is healthy water for life, and our mission is to deliver water and sewerage services that our customers value.

Figure 1 – South East Water's service area

We purchase approximately 340 million litres of high quality drinking water per day from our wholesaler, Melbourne Water, which we distribute to customers through a secure, closed network that includes 8,951 kilometres of pipelines.

South East Water, one of three government-owned retail water companies in Melbourne, also collects the sewage and trade waste from our customers' homes and businesses through another 8,570 kilometres of sewer pipes.

The majority of the wastewater is transferred to Melbourne Water's Eastern Treatment Plant. The remainder is treated at either Melbourne Water's Western Treatment Plant or one of our eight sewage treatment plants. As part of the sustainable management of Melbourne's water supplies, we also supply recycled water to 7,500 customers each year and provide water efficiency education programs and other initiatives.

	Sewer pipes (km)	Water pipes (km)	Recycled water pipes (km)
Mains	8,570	8,951	240
Property connections	1,200	4,236	98
TOTAL	**9,770**	**13,187**	**338**

1.1 Strategic direction

South East Water's vision is healthy water for life, and our mission is to deliver water and sewerage services that our customers value.

We are motivated by delivering value, efficiency and innovation to our customers. Our strategic focus areas are assets, customers, employees and sustainability, as detailed below.

Assets	Customers
Manage our assets to meet customer needs, optimise long-term value, and protect the environment, our community and our people.	Ensure we deliver the best customer experience, efficiently.
Employees	**Sustainability**
Develop a safe and high-performing culture and provide the tools, processes and programs to ensure our people reach their full potential.	Drive industry-leading customer value for money through efficient service delivery and increase community liveability and environmental benefits from these services.

2. Serving our customers

2.1 Engagement

2.1.1 Prior to the draft Water Plan

As part of developing the draft Water Plan, we consulted with a range of customers including our Customer Advisory and Recycled Water Customer Committees, customer representative groups and individual customers.

The engagement process helped us understand customers' views, which guided the development of the draft Water Plan. Areas explored included proposed tariff structure changes and service levels, an accelerated backlog program (replacing septic tanks by connecting to our sewerage system) and water resource planning.

As part of understanding customer preferences for the 2013–18 pricing period, South East Water also undertook an extensive program of market research. This included focus groups, willingness to pay surveys and choice modelling. The survey involved 400 residential and 86 non-residential South East Water customers, and tested their willingness to pay for:

- increased treatment and reuse of wastewater
- increased treatment and reuse of stormwater
- reduced greenhouse gas emissions
- reduced frequency of water supply interruptions
- reduced duration of water supply interruptions
- reduced frequency of sewage spillages
- expansion of water efficiency programs and education services.

The research identified two key findings:

- Overall, there was an average level of willingness to pay of 50 per cent for each initiative. This indicates that as many customers are willing to pay as are not willing to pay for the majority of the initiatives.
- Those who indicated a higher willingness to pay across all initiatives (55 per cent) showed a stronger preference for increasing the treatment and reuse of recycled water and stormwater.

Based on these results, we concluded that there is not significant willingness to pay for increased service levels, such as reduced duration and frequency of water and sewerage interruptions.

2.1.2 Feedback on the draft Water Plan

Following the release of the draft Water Plan in May 2012 and an addendum in August 2012, we asked customers for their feedback on key proposals. This consultation involved:

- letters to key customers inviting them to comment on our draft Water Plan
- advertising in local newspapers within our region, inviting customer comment and online feedback
- a survey of 400 South East Water residential customers, in conjunction with City West Water and Yarra Valley Water, to determine customer preferences for key tariff proposals
- interviews with customers and stakeholders on the draft Water Plan's key proposals
- workshops with the South East Water Customer Advisory Committee to test key proposals in the draft Water Plan
- a series of focus groups with representative residential customers to test their tariff and price path preferences.

The following table outlines the feedback we received on the key aspects of the draft Water Plan and our subsequent proposal in this final Water Plan.

Table 2.1 Summary of customer feedback on our draft Water Plan

draft Water Plan – we suggested	Feedback from customers	Our final Water Plan proposal
A one-off price increase was proposed in the first year of the pricing period, with no increases scheduled in the following four years (apart from inflation). In the subsequent draft addendum two price path options were proposed: • Matched – where the majority of costs associated with the price increases are incurred in the first year – consistent with the draft Water Plan. • Smoothed – where price increases are smoothed over the five year period. This option results in a larger bill increase for customers by 2017–18.	**Focus group outcomes** The results from the focus groups options were fairly even, however, there was a slightly stronger overall preference for the smoothed option. The preference was driven by the individual's life stage, future plans and general behaviour. Consumer groups believe a smoothed option would allow low income customers to better manage payments.	We are proposing a matched price path, as this best reflects the actual costs and revenue over the pricing period. However, we will be increasing our focus on hardship measures, working with social service organisations and assisting customers in need to help them manage their bills.
To move to a two tiered pricing model for the residential water charge.	**Interview feedback** While there was some support for a two tier pricing structure, on balance the preference was to maintain the status quo. **Survey feedback** Overall, support for retaining three tiers (42 per cent) was almost equal to support for moving to two tiers or one tier (40 per cent).	Based on customer support, we propose to retain the current three tiered approach. However, we are proposing to reduce the price differential between the second and third tiers.
That all dwellings are charged service charges (to be phased in the period).	**Interview feedback** Overall, interviewees thought the suggested change was equitable and were happy to see it phased in. **Survey Feedback** There was strong support for the suggested change, with 49 per cent supporting and only 22 per cent opposing the change. Customers agreed that these charges should be phased in.	A common water service charge for all residential properties, billed to the property owner. We propose to introduce this service charge over two years from 2014 onwards.

draft Water Plan – we suggested	Feedback from customers	Our final Water Plan proposal
Simplification of the residential sewage disposal charge (SDC).	**Interview feedback** Simple methodology is a better idea and makes the cost of water and sewerage services easier to understand and transparent. **Survey feedback** There was no clear preference for any particular change to the tariff. Market research suggested customers see it as a technical matter for South East Water to address and there was an underlying preference for simplicity. Customers are comfortable with a variable charge for sewage disposal and treatment. This helps to maintain the current proportion of variable charges on the bill.	To simplify the SDC charge by: • removing seasonal factors • introducing a flat discharge factor > Houses at 75 per cent of water usage > Apartments at 85 per cent of water usage • removing incremental decrease in discharge factor for large water usage • continuing to make individual adjustments for customers who are substantially and systematically overcharged.
To discount the residential recycled water usage charge.	**Interview feedback** There were mixed feelings about recycled water subsidies paid by non-recycled water customers, particularly if those customers do not have access to the resource and/or can't afford the subsidy. The Purple Pipe Association supported the decoupling of recycled water from drinking water on day one of the pricing period. Since water restrictions have eased, the new price should represent value when taking into account the impact. **Survey feedback** There was a mixed response – 37 per cent wanted prices kept at current levels, 39 per cent favoured a reduced price.	To set the recycled water usage charge at 85 per cent of the first step of the water usage charge for the first year of the pricing period.

draft Water Plan – we suggested	Feedback from customers	Our final Water Plan proposal
Moving the annual trade waste charges from volume based to risk rank based.	**Interview feedback** Non-residential stakeholders interviewed understood our drivers for proposing a change to risk based charges and indicated it was a logical approach. Interviewees also suggested the ranking should be based on risk and performance, and incentives should be offered to reduce risk ranking through careful waste management.	Consistent with our draft Water Plan, we propose that the annual trade waste fixed charges are based on a risk ranking for each trade waste customer, rather than the volume of trade waste. We propose to remove our current food waste annual charges and for those customers to move onto the standard annual trade waste charges.
Trade waste customers who generate waste containing inorganic total dissolved solids (TDS) bear the costs of this directly.	**Interview feedback** All interviewees considered that the suggested changes to the inorganic TDS charge would not be a sufficient incentive to reduce this type of waste, as the charge would be small.	Not to introduce an inorganic TDS charge.
Remove the sulphur pollutant charge.	**Interview feedback** Interviewees considered the suggested approach was logical as removing the charge would not be a big motivator to change behaviour.	We propose to remove the sulphur charge.
Customers with a fire service to pay the same charge for their fire service as for their water service. Charge customers for metered water from fire services used for non-fire fighting purposes – the rate would be the same as for non-residential water.	**Interview feedback** Interviewees supported the suggested changes to fire service charges.	We propose that customers with a fire service pay the same charge for their fire service as for their water service. We also propose to charge customers for metered water from fire services that is used for non-fire fighting purposes – the rate will be the same as for non-residential water.
Introduce a credit card fee surcharge for credit card payments.	**Interview feedback** All interviewees were comfortable with us passing on payment processing costs to customers choosing to pay by credit card but suggested this needed to be clearly communicated to customers.	Consistent with the draft Water Plan, we propose to introduce a merchant service fee for credit card payments.
Maintain water efficiency programs in 2013–18.	**Interview feedback** All interviewees suggested if customers are strongly committed to saving water, we should try to reinforce that behaviour.	Deliver core water efficiency programs, primarily targeted at water efficiency research, education and customer support.

2.2 Hardship and customer support programs

We understand that price increases can create financial difficulty for some and we are proposing to strengthen our efforts to assist customers facing hardship.

After consultation with community and social service organisations, customers and other stakeholders through the Water Planning process, we know that early engagement is key to working with customers in financial hardship.

We have a strong 20 year partnership with the Good Shepherd Youth and Family Service, a not-for-profit welfare organisation supporting the disadvantaged. Through this program, customers who are experiencing financial hardship have access to free independent financial counselling.

In 2010–2011, we funded three financial counsellors to assist 2,500 customers in need.

Good Shepherd Youth and Family Service works with our customers and also provides training for our staff in how best to support customers experiencing financial difficulties.

This alliance will be strengthened further in the next regulatory period.

We are already working with local councils to introduce a community care program that will provide important early intervention, referral and assistance to customers with multiple debt issues.

Our work with the Adult Multicultural Education Service also supports new arrivals from overseas to our region in understanding water services, their obligations and support available to them.

We will continue to offer these programs, but in light of the first year price increase in the 2013–18 Water Plan and the feedback from stakeholders about general community pressures, we will further increase our support by:

- offering customers choice in timing of payments - for example, monthly - to give customers more flexibility and budgeting certainty
- launching our mySouthEastWater customer portal offering alternative payment schedules and the opportunity to request bill extensions 24 hours a day, seven days-a-week without having to speak with someone
- strengthening our partnerships with welfare organisations so we can better understand customers in need and find effective ways to help
- investing in additional training for front line staff to assist customers in need
- leading and participating in a water industry and community taskforce on customer support
- contributing to public forums to provide information and resources across a range of topics, such as budgeting and water efficiency.

3. Service levels

3.1 Service standards

At South East Water, we strive to provide our customers with high levels of service.

We have a number of service standards in place, designed to measure the level of service provided such as the duration and frequency of water supply interruptions, sewage blockages and spills, and the responsiveness of our customer contact centres.

For the 2009–13 period to date, South East Water has outperformed the majority of our Essential Services Commission (ESC) approved customer service targets. Benchmarking shows we are one of the best performing Australian water utilities, specifically in customer responsiveness, water and sewer service network reliability and drinking water quality.

3.2 Core service standards – current period outcomes

Overall, South East Water has outperformed the majority of its ESC approved customer service targets in the 2009–13 period to date, including:

- unplanned water interruptions per 100 km
- average time a customer was without water supply (both planned and unplanned)
- average duration of planned water supply interruptions
- average time to attend bursts and leaks (priorities one, two and three)
- average time to attend spills and blockages
- total time taken to rectify blockages
- spills contained within five hours (percentage)
- sewer blockages per 100 km
- customers with more than three sewer blockages in a year
- calls answered in 30 seconds (includes faults and account enquiries).

While South East Water is among the best performing water utilities in Australia, there were some areas where the ESC approved customer service targets were not achieved:

- The average duration of unplanned water supply interruption (minutes) – South East Water met this target each year except for 2010–11. Factors such as the need for increased traffic management and additional safety regulations when working under power lines have led to a steady increase in the duration of interruptions.
- The target to restore planned water supply interruptions within five hours was not achieved during the current period. South East Water has focused on undertaking works at a reduced frequency but over a longer duration to improve customer outcomes and efficiencies, and will continue this approach for 2013–18.
- The target for complaints to the Electricity and Water Ombudsman Victoria (EWOV) per 1,000 customers was based on performance during the early years of the EWOV scheme. While we receive a relatively low number of EWOV complaints, compared to other Melbourne utilities, EWOV cases have continued to increase, largely due to:

> bill queries as a result of rising prices

> increased awareness of water issues

> increased awareness of the existence of EWOV.

We aim to reduce the number of EWOV complaints by resolving issues in a timely manner and improving our customers' overall experience.

3.3 Core service standards – 2013–18 proposed targets

The ESC has proposed default core service standards for South East Water, with targets based on performance over the last five years. It is recognised by the ESC that this may not be appropriate in all instances and adjustments to targets may be required to account for changes in the operating environment.

South East Water has therefore taken its five year historical average as the starting point for developing core service standard targets for the 2013–18 pricing period and reviewed them taking into account:

- changes in the operating environment
- customers' willingness to pay for changes in service levels
- the trade-off between cost and customer service levels.

We are not proposing to set any standards above current performance levels because research shows that our customers are not prepared to pay for increases in service. Benchmarking also demonstrates that we are already one of the best performing water companies. Nevertheless, South East Water will continue to drive innovations to achieve cost-effective ways to increase performance, such as advanced monitoring of our drinking water networks. South East Water is proposing to maintain service levels consistent with the five year average of actual performance for all service standards, with the exception of:

- unplanned water supply interruptions restored within five hours (per cent)
- telephone calls answered within 30 seconds, account and fault calls (per cent)
- complaints to the EWOV, per 1,000 customers.

The following table outlines the proposed service levels, the comparison with the 2009–13 price determination and the five year average, and also provides commentary on areas where a performance target below the five year average is proposed.

Table 3.1 Proposed core service standards 2013–18

Core service standard	2009-13 price determination	Five year average	Proposed target
Unplanned water supply interruptions restored within five hours (per cent)	99.6	99.6	99.4
Comment Interruption times are expected to increase due to the impact of safety regulations (such as rules governing work under power lines) and traffic management requirements. It is estimated that additional resources costing approximately $200,000 per annum (assets and labour) would be required to meet the five year average. South East Water believes that this additional investment to deliver a slightly higher level of service is not justifiable, taking customers preferences into account.			
Unplanned water supply interruptions (per 100 km)	31.2	27.5	27.5
Average time to attend burst and leaks, priority 1 (minutes)	40	36	36
Average time to attend burst and leaks, priority 2 (minutes)	120.0	92.3	92.0
Average time to attend burst and leaks, priority 3 (minutes)	550	264	264
Planned water supply interruptions restored within five hours (per cent)	78.5	80.1	80.1
Average unplanned customer minutes off water supply (minutes)	17.6	16.6	16.6
Average planned customer minutes off water supply (minutes)	7.7	5.9	5.9
Average frequency of unplanned water supply interruptions	0.21	0.19	0.19
Average frequency of planned water supply interruptions per customer	0.04	0.03	0.03

Core service standard	2009-13 price determination	Five year average	Proposed target
Average duration of unplanned water supply interruptions (minutes)	87.8	86.6	86.6
Average duration of planned water supply interruptions (minutes)	205.6	179.2	179.2
Customers experiencing more than five unplanned water supply interruptions per annum (number)	209	167	167
Unaccounted for water (per cent)	9.5	11.3	10.4
Sewer blockages (per 100 km)	21.3	18.8	18.8
Average time to attend spills and blockages (minutes)	48.3	47.0	47.0
Average time to rectify blockages (minutes)	161	137	137
Sewer spills contained within five hours (per cent)	100	100	100
Customers receiving more than three sewer blockages (number)	0	0	0
Complaints to the EWOV (per 1,000 customers)	0.164	0.06	0.08
Comment In the current regulatory period, our target for EWOV complaints included assisted referrals and investigated complaints. In future, we are proposing to remove assisted referrals from our targets as these cases are relatively minor in nature and cost. Investigated complaints document when we have failed to reach a resolution with a customer and the matter is under investigation by EWOV. With the proposed price increase in 2013–14, complaint cases are expected to increase over the 2013–18 period and we are proposing a target of 0.08, or approximately 55 complaints per annum. We intend to increase our focus on call quality and first call resolution to help mitigate the increase.			
Telephone calls, account and fault, answered within 30 seconds (per cent)	94.0	94.9	82.7
Comment Our customers are engaging with us in a variety of ways (for example, customer website queries, email, our customer portal and social media), which requires a reallocation of resources to support these channels as customer preferences and contact patterns change. Our contact centres will also focus on first call resolution and increased call quality during the 2013–18 period. Based on call projections, if we were to maintain service levels at the five year average it would require additional staff with associated costs of approximately $1.2 million per annum.			

3.4 Additional service standards

In addition to the core service standards set by the ESC, South East Water may elect to set additional service standards for the 2013–2018 pricing period. These service standards should reflect identified customer demands and be relevant to the delivery of our key programs and obligations.

In the current pricing period, we adopted a number of additional service standards in response to the prolonged period of low rainfall, the introduction of water restrictions and the community focus on carbon emissions. These included:

- CO2 emissions (net tonnes)
- recycled water (ML)
- biosolids reused
- demand by drinking substitution schemes (ML)
- residential drinking water use targets (litres per person per day)
- total drinking water use (litres per person per day)
- planned water supply interruptions (per 100 km).

While we will continue to focus on reducing our own carbon emissions, with the introduction of the carbon price we no longer propose to set a service standard for carbon emissions.

We are continuing with our water efficiency, recycled water and biosolids reuse programs, but the level of expenditure will be reduced and the efficiency targets such as T155 are no longer required. Therefore, measures in these areas are no longer required.

Planned water supply interruptions are adequately monitored through our core service standards so they do not require additional targets to be set.

The additional service standards we are proposing to retain in 2013–2018 are outlined in the table below.

Table 3.2 Proposed additional services standards – 2013–18

Service standard	2009–13 target	Five year average	Proposed target for 2013–18
Compliance with drinking water quality regulations (per cent)	100	100	100
Sewer backlog connections (number)	675	650	930
Compliance with environment discharge licence requirement (per cent)	100	100	100
Account enquiries answered within 30 seconds (per cent)	93.0	94.4	80.0
Fault calls answered within 30 seconds	96.0	97.0	97.0

3.5 Guaranteed service levels

Guaranteed Service Levels (GSL) are financial payments that South East Water makes to any customer who experiences service levels below defined thresholds. The GSLs relate to services that are important to our customers and the payments are in recognition of the inconvenience caused to them. The services for which GSLs are payable remain under constant review to ensure that the appropriate service levels are included. These payments are made automatically to customers when the service level has not been met. At this stage, we propose to continue with our current GSL scheme as follows:

A $50 rebate will be given when a customer experiences:

- more than five unplanned water supply interruptions in any 12 month period
- more than three sewerage interruptions during any 12 month period
- a delay of more than five hours to restore supply in an unplanned water supply interruption (the interruption time commences when the water supply is lost and ends when supply is fully restored). No rebate will be given for an interruption to the water supply when we are not responsible for the interruption
- a delay of more than four hours to restore service in the event of a sewerage service interruption. This does not include interruptions from customers' own pipe works.

A $300 rebate will be given:

- when we restrict the water supply of, or take legal action against, a residential customer prior to making reasonable endeavours (as defined by the ESC) to contact the customer to discuss the matter and offer assistance.

A $1,000 rebate will be given:

- when there is a sewage spill on a customer's property caused by a failure in our sewer system and we take longer than five hours to contain it
- when we fail to contain a sewage spill on a customer's premises that is caused by a failure in our system, within one hour. This does not apply if the spill was caused by a blockage in the property connection branch due to the action of the occupier, or a failure of a customer's overflow relief gully.

4. Operating expenditure

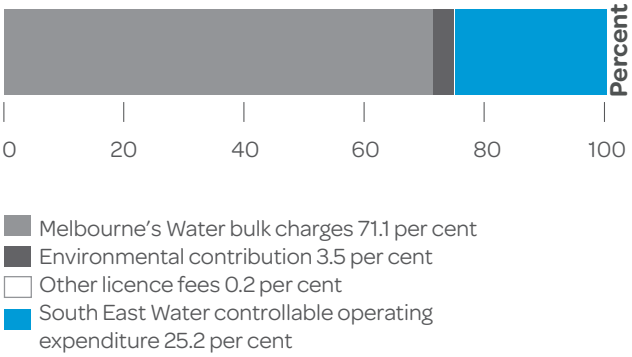
The key components of South East Water's controllable expenditure include the day-to-day costs of running our water and sewerage network and treatment plants (maintenance, electricity and labour), as well as customer service and billing components.

The operating expenditure that South East Water does not control includes:

- Melbourne Water's bulk charges for collection and treatment of drinking water and treatment of sewage
- an environmental contribution made to the government
- other licence fees and charges.

The following chart provides a breakdown of our current total operating expenditure.

Figure 4.1 – Breakdown of total operating expenditure in 2011–12

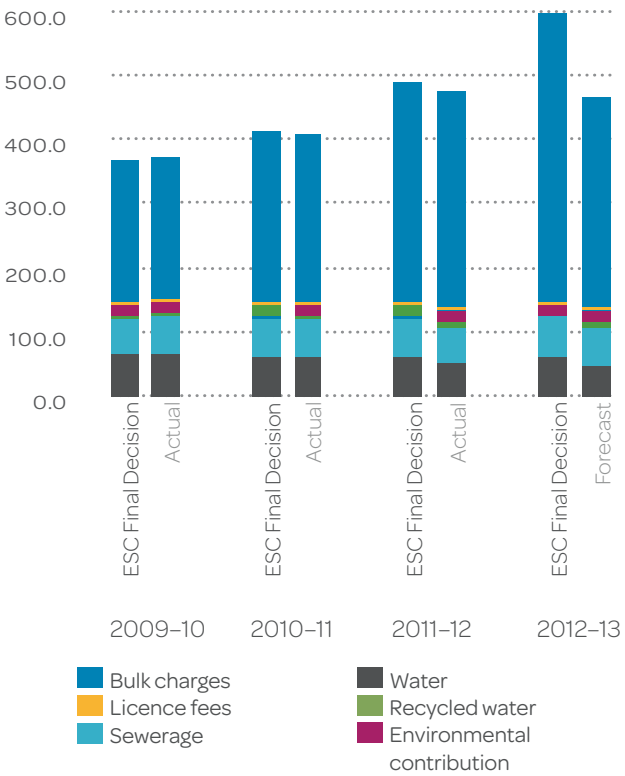


The following sections outline the proposed key changes to our controllable and non-controllable operating expenditure for 2013–18.

4.1 Current period outcomes

When compared with the expenditure forecast in the Essential Services Commission's 2009–13 price determination, South East Water's operating expenditure was consistent with forecast in the first two years of the current regulatory period; was less than forecast in 2011–12 and is expected to be less than forecast in 2012–13. This is largely due to efficiencies achieved in our controllable operating expenditure, which are expected to continue in 2012–13, as well as bulk charges being lower than forecast, due to reduced sales volumes. Bulk charges are expected to be lower than forecast again in 2012–13 due to lower volumes and the price freeze that Melbourne Water has implemented to return desalination funds to customers. Refer to Section 4.8 for further information on the price freeze.

Figure 4.2 – Total operating expenditure: current period actuals compared with the ESC price determination ($ million, 1 January 2013 dollars)



4.2 South East Water controllable operating expenditure

South East Water's controllable operating expenditure largely comprises operations and maintenance expenditure for water, sewerage and recycled water services, customer services, billing and other corporate costs.

For the purposes of this Water Plan, actual expenditure for 2011–12 has been used as a basis for our forecasts. Given our strong efficiency drive – we have reduced controllable operating expenditure by 7.5 per cent from 2009–10 – we consider this to be an appropriate level of expenditure on which to base 2013–18 forecasts.

An assessment has been undertaken for 2013–18 to identify areas where further efficiencies can be achieved to reduce operating expenditure and also areas where additional costs may be required to meet new obligations or external cost pressures. The impact of the carbon price has been reflected in our electricity forecasts (see section 4.2.2) and we are proposing to absorb any indirect costs due to the carbon price. We have also reflected the impact of expected customer growth and applied a one per cent per year productivity improvement to our controllable expenditure. As a consequence, South East Water passes the Essential Services Commission's (ESC) expected productivity gains, set out in its guidance paper.

The following section outlines the key changes in South East Water's controllable forecast operating expenditure for the 2013–18 pricing period.

4.2.1 Labour

In its guidance paper, the ESC stated that businesses should use the latest information to forecast real wage growth for the 2013–18 regulatory period.

South East Water has assumed that the recently negotiated enterprise bargaining agreement for officer level staff, which includes a four per cent per annum nominal increase in labour costs, will continue for each of the five years of the regulatory period. However, for senior level and executive staff, no real increase has been assumed with wage increases projected to be in line with CPI.

During the current regulatory period, South East Water initially had an increase in its full time equivalent (FTE) employees (included in operating expenditure) due to drought related activities, before reducing to a level consistent with historical levels. Further reductions in FTEs have been forecast in 2012–13 based on the capitalisation of FTEs, which have been directly identified as contributing to capital works.

The forecast reduction in FTEs will be offset by small increases in FTEs in 2012–13 and 2013–14 due to a number of key positions not being filled in 2011–12. These positions are required to deliver core business functions.

The small increase in FTEs also includes additional FTEs to maintain the standard of calls answered within 30 seconds at 80 per cent and to assist customers through newer service channels such as web, email and our customer portal, as outlined in the service standards section. Contact volumes have been increasing in the current period due to issues such as the early recovery of funds for the desalination plant and other pricing matters.

Customer calls are also projected to grow due to the introduction of new prices in 2013–14. South East Water has assumed a 10 per cent increase in call volumes from 2013–14, followed by two per cent in the remaining years, consistent with customer growth. This is in-line with historical experience of price increases and increased call volumes in the current regulatory period. A small increase in FTEs has also been projected to continue to provide support programs for customers in financial hardship.

4.2.2 Electricity

South East Water's current electricity costs make up approximately two per cent of our controllable operating expenditure and are forecast to increase to approximately four per cent during the 2013–18 regulatory period. This is driven by the running of our sewage treatment plants, water and sewage pump stations, and offices. In forecasting our electricity costs during this period, we have factored in expected changes to electricity volumes and prices.

Electricity volumes

Forecast electricity expenditure also takes into account expected increases in usage, due to customer growth and the operation of our sewage treatment plants to treat sewage for the delivery of Class A recycled water (in order to comply with EPA obligations). The following table shows the significant increase in electricity usage required at our local treatment plants for the delivery of Class A recycled water.

Table 4.2 Actual and forecast treatment plant electricity usage

Kilowatt hours per year	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Pakenham	1,884	1,955	1,984	2,012	2,041	2,069	2,098
Mt Martha	3,395	3,410	10,122	10,203	10,285	10,373	10,464
Somers	1,726	2,584	2,626	2,669	2,713	2,758	2,803
Boneo	2,762	3,316	3,749	4,034	4,319	4,481	4,622

Electricity prices

In developing electricity forecasts, South East Water has taken its 2011–12 electricity unit costs and considered the expected contracts for its sewage treatment plants, pump stations and offices. South East Water has also factored in the expected impact of the carbon price in forecasting the change in electricity prices over the 2013–18 regulatory period.

The findings of a Water Services Association of Australia (WSAA) study, which forecasts electricity prices from 2012 to 2032[1] , have also been taken into consideration.

The WSAA study modelled the impact of factors affecting electricity prices, including:

- carbon prices
- capital costs of new entrant plant
- gas prices
- large-scale Renewable Energy Target
- small-scale Renewable Energy Scheme.

From this modelling, the WSAA study forecast retail prices for residential, commercial and industrial customer types, where the key component impacted by the carbon price is the electricity pool price. For small residential and commercial customers, network charges make up a larger proportion of their total retail price. However, for industrial customers, network charges are a smaller component with pool prices making up a larger proportion of costs. Therefore, the carbon price has a larger impact on prices for industrial customers compared with residential and commercial customers.

South East Water's electricity costs are largely made up of treatment plant and pump station electricity costs. South East Water has assumed that this electricity consumption falls within the industrial customer type as defined by the WSAA. The office electricity costs have been assumed to fall under a commercial customer type.

The WSAA also modelled high, medium and low scenarios based on the carbon price expected. South East Water considers that the medium scenario reflects the government's expected carbon price of $23 per tonne, and moderate carbon emission reductions.

However, we understand that this report is being updated during the review process so we will update our assumptions based on the report's projections. South East Water has applied the low scenario from the WSAA study for the Water Plan expenditure forecasts. The industrial and commercial retail price indices from the low scenario used to determine South East Water's electricity forecasts are outlined in the table below.

Table 4.3 Forecast electricity retail price increases, 2011–12 to 2017–18

Retail price indices	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Industrial	1.0	1.34	1.36	1.41	1.45	1.47	1.51
Commercial	1.0	1.17	1.21	1.26	1.30	1.34	1.38

Source: WSAA – Energy Price Forecasts 2012 to 2032 – Appendix K, table K–1, October 2011.

1 WSAA study, October 2011

Based on the forecast prices and volumes described above, the following table outlines our proposed electricity expenditure for the 2013–18 regulatory period.

Table 4.3 Actual forecast electricity expenditure, 2011–12 to 2017–18 ($ million, 1 January 2013 dollars)

	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Electricity expenditure	2.8	3.9	4.8	5.1	5.4	5.5	5.8

4.2.3 Chemicals

South East Water's chemical costs are largely related to the treatment of sewage at our local treatment plants. In 2011–12 chemical costs were $0.5 million, which was in-line with historical levels of expenditure.

Consistent with our electricity volume forecasts, South East Water has forecast growth in chemical usage to reflect increased flows due to customer growth in the treatment plant catchment areas, and an increase in chemical costs from 2013–14 due to increased levels of treatment required to deliver Class A recycled water.

The contract price used to forecast chemical costs is based on a shared services chemical supply agreement between Melbourne Water, City West Water, Yarra Valley Water, Barwon Water and South East Water. It is due to expire in mid 2013, however costs are expected to remain at current unit price levels.

4.2.4 Customer service and billing

Billing and collection fees

Customer service and billing collection fees make up approximately three per cent of South East Water's controllable operating expenditure. Our customers pay bills through different channels including Australia Post, BPAY, credit card and direct debit payments. During 2013–18, there will be a number of expected real cost and volume increases for each payment channel, including:

- BPAY collection costs – increases relate to customer growth, costs linked to revenue size, which is increasing from 2013–14, and increased usage of BPAY as a preferred method of payment for many of our customers
- credit card payments – costs expected to increase due to higher processing charges.
- direct debit – expected increases due to customer growth and increased use of direct debit as a form of payment
- Centrelink – increases relate to customer growth.

Merchant service fee recovery

South East Water is charged a processing fee (which is a percentage of the total bill) for some of these payment methods, which is not currently passed on directly to those customers. Effectively, all customers cover the cost of the processing fees.

From 2014–15, South East Water is proposing to pass merchant fees associated with credit card payments directly on to customers. This will encourage our customers to consider paying by less costly payment channels, such as direct debit.

This fee will not increase South East Water's revenue, it will simply mean that those customers who pay by credit card will cover the merchant fees and other customers will not cross-subsidise them.

It will also mean that the current cap of $5,000 for credit card users can be removed, enabling non-residential customers, in particular, to pay via a preferred channel.

4.2.5 Water efficiency

During the prolonged period of low rainfall and heavy water restrictions, South East Water, along with the broader water industry, focussed strongly on demand management. We had several programs to support this, including water appliance retrofit programs (such as water efficient showerheads), widespread communication campaigns and several targeted programs for residential and non-residential customers. With water storages recovering, our focus has shifted to providing customers with flexibility and supporting them to maintain sensible water use through the provision of water efficiency information.

South East Water's customer research in the past year has indicated that a large percentage of our residential customer base (84 per cent) remains committed to sensible water use as part of managing Melbourne's water resources on an ongoing basis. In terms of business customers, 41 per cent were engaged, valued water and were interested in assistance from South East Water.

Industry investigations have also concluded that maintaining a modest level of water efficiency

investment and customer support would provide the lowest cost and most sustainable long-term management of Melbourne's water supplies.

We plan to continue a core set of water efficiency programs, primarily targeted at water efficiency research and customer support through information, education and engagement. This approach minimises the cost of the efficiency program, but still provides significant customer support and aligns with long-term planning.

4.2.6 Office accommodation

South East Water currently operates from three separate office locations. The lease on the head office building at Heatherton will finish in May 2015 after 17 years. South East Water has purchased land in Frankston and plans to construct its own building to house all staff, which is more cost-effective than leasing three offices. The capital expenditure section (5.6.1) provides further information.

South East Water expects to make savings in 2015 when it moves to the new building and the Heatherton and Dandenong South offices are no longer required. It is assumed that operating expenditure savings of $5.2 million per annum will be achieved from 2015–16 onwards.

4.2.7 IT expenditure

South East Water's IT costs in the current regulatory period have declined from $4.4 million in 2008–09 to approximately $3.1 million in 2011–12. In that period, South East Water has been developing a new customer database, which will require payment of additional licence fees from 2012–13 onwards. This will result in a step increase in IT expenditure of approximately $0.5 million. However, IT expenditure over the next regulatory period is forecast to remain consistent with historical levels.

4.2.8 Defined superannuation benefits scheme

In 2011–12, South East Water contributed an additional 10.2 per cent to the standard nine per cent contribution to the defined superannuation benefits scheme. Given that investment markets are still quite volatile and that an allowance has not been made for benefits accrued since 30 June 2012, South East Water is retaining this contribution rate for the 2013–18 regulatory period.

4.2.9 Water maintenance program

The recurrent expenditure for preventative and reactive water network programs is shown in the table below. It should be noted these costs exclude overheads for supervision, administration and corporate functions.

Table 4.5 Water supply systems operating expenditure ($ million, 1 January 2013 dollars)

	2013–14	2014–15	2015–16	2016–17	2017–18
Preventative Maintenance	1.2	1.2	1.2	1.2	1.2
Reactive	9.7	9.7	9.8	9.8	9.8

Based on the current regulatory requirements, South East Water does not envisage any water quality issues that will impact significantly on the water quality expenditure forecasts over this period. Expenditure has therefore been forecast to remain consistent with historical levels. But as we come out of water restrictions, there may be an increase in water quality complaints as more volume flows through the system.

4.2.10 Sewerage maintenance program

The sewage treatment plants have a principal KPI of maintaining 100 per cent compliance with their EPA Waste Discharge Licences. South East Water has maintained 100 per cent compliance with its licences since 1997 and will continue meeting its obligations during 2013–2018.

There is a need for programs to ensure structural integrity, equipment replacement and maintenance to prevent uncontrolled failure. Maintenance expenditure forecasts have been based on reliability centred maintenance (RCM) analysis for most of the equipment but major equipment and civil structural forecasts are based on expected life and condition assessments. These costs are forecast to be in-line with historical levels.

As a result of the additional treatment infrastructure (installed during 2009–2013) to provide Class A recycled water, expenditure is required to maintain the ongoing operation of these facilities. A summary showing the forecast sewerage maintenance expenditure for the 2013–18 regulatory period is provided below.

Mechanical and electrical equipment programs are based on RCM activities and historical activities, and variations in the forecasts reflect this process.

Table 4.6 Sewerage maintenance program operating expenditure ($ million, 1 January 2013 dollars)

	2013–14	2014–15	2015–16	2016–17	2017–18
Network preventative	3.4	3.4	3.4	3.4	3.4
Network reactive	5.8	6.1	6.2	6.3	6.3
Treatment plant preventative/ reactive	3.6	3.6	4.0	4.0	4.0

4.3 Shared services

In 2008, the Victorian Competition and Efficiency Commission (VCEC) inquiry sought to improve the structure of the metropolitan retail sector to ensure water services are provided at the least cost to the community. A number of services were investigated to find savings. Key savings in banking services, motor vehicles leases (now purchased), meter procurement and chemical costs have all been realised in the current regulatory period and the savings have been forecast to continue into the 2013–18 regulatory period.

4.4 New obligations

The following items have been identified as new obligations for the 2013–18 regulatory period:

- Electricity and chemical costs associated with the treatment of Class A recycled water. As outlined above, South East Water will begin treatment at its recycled water plants to Class A from 2013–14, in accordance with EPA requirements.
- Fringe benefits tax – the new legislation replaces the current progressive rates with a flat statutory rate of 20 per cent for motor vehicles that applies regardless of the distance travelled. This results in a $0.17 million increase in costs.
- Superannuation contributions – the Federal Government will be requiring the Super Guarantee contribution rate to increase to 11 per cent by the end of the next regulatory period.

4.5 Environmental contribution

South East Water currently makes an annual environmental contribution to the Department of Sustainability and Environment (DSE). This contribution funds initiatives to promote the sustainable management of water and address adverse water-related environmental impacts.

The DSE has advised that the environmental contribution (until 30 June 2016) will be based on five per cent of a water business's 2010–11 water and sewerage revenue, representing $28.7 million for South East Water. This will result in a 70 per cent increase in the environmental contribution in the 2013–18 pricing period.

4.6 Melbourne Water bulk charges

Bulk charges paid to Melbourne Water currently comprise approximately 71 per cent of our total operating expenditure. For the 2013–18 pricing period, Melbourne Water is forecasting a significant increase in its bulk charges, largely due to the additional costs of the Victorian Desalination Plant (VDP). It is also a result of Melbourne Water freezing prices in 2012–13 due to the return of over-collected funds for the VDP.

From July 2011, money was collected from South East Water by our water wholesaler, Melbourne Water to pay for the VDP. These costs were passed on to Melbourne households and businesses. With the VDP's completion behind schedule, these funds, plus interest and inflation, are being returned to customers by freezing water, sewerage and trade waste prices for 2012–13. Refer to section 11 for further explanation of the price impact for 2013–14.

The VDP is being delivered by the State Government as a public–private partnership. Melbourne Water has entered into an agreement with the State Government in relation to its obligations for the VDP. There are two parts to the desalination costs: capacity, which is a fixed charge, and the cost of a water order, which is a variable charge. If storages drop and we need to order water from the desalination plant in any year, prices will increase by a small percentage in that year to pay for the actual water ordered.

Melbourne Water's charges have been allocated between the metropolitan retailers based on the volumes of water and sewage services that each retailer has forecast it will require in the 2013–18 period. This reflects the actual costs each retail business places on Melbourne Water's system. In the 2013–18 period, we are expecting significant population growth in our region, which will increase the amount of sewage we send to Melbourne Water's Eastern Treatment Plant. Given this, and the costs directly attributable to the upgrades at the Eastern Treatment Plant, we will incur additional bulk water charges from Melbourne Water compared with our current share of Melbourne Water's costs.

Melbourne Water has developed its Water Plan on the basis of a default 0 GL order of water from the desalination plant. If Melbourne Water does purchase water from the VDP, we are proposing Melbourne Water pass these costs on to South East Water and the other water retailers and their customers through an annual price adjustment. This will ensure that customers only pay for water that is actually ordered – refer to section 8.1 for further detail.

4.7 Total operating expenditure summary

The following table outlines South East Water's total operating expenditure forecast for the 2013–18 period, demonstrating that bulk charges comprise the largest component. It shows the significant increase expected in bulk charges and environmental contribution from 2013–14 onwards. It also reflects that South East Water's controllable expenditure forecast is expected to remain relatively flat, with savings from centralised office accommodation forecast from 2015–16.

Table 4.7 – Actual and forecast operating expenditure ($million, 1 January 2013 dollars)

	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Operations and maintenance	48.3	49.5	50.0	50.2	50.3	50.2	50.3
Treatment	9.1	11.1	13.4	13.2	13.6	13.7	13.9
Customer service and billing	28.5	29.6	30.5	30.6	30.7	30.9	31.3
GSL payments	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Corporate	34.2	29.8	29.8	29.5	24.4	24.2	24.1
Bulk charges	341.9	487.7	542.4	538.7	538.2	537.7	536.3
Environmental contribution	16.6	16.7	27.9	27.9	27.9	27.9	27.9
Licence fees	1.0	1.0	1.1	1.1	1.1	1.1	1.1
Total	478.7	624.5	694.1	690.1	685.3	684.7	683.9

5. Capital expenditure

In determining our 2013–18 capital expenditure program, we considered our customers' service expectations, which drive the need to invest in the network. We also take a long-term view of the assets so that we deliver the most efficient outcome.

South East Water's proposed capital expenditure largely consists of programs to provide water and sewerage systems to new development areas and ensure reliable services across our water, sewerage and recycled water networks. To determine the capital expenditure program to meet these requirements, we have assessed the needs of our water and sewerage networks and treatment plants for the next 25 years, as well as for the 2013–18 period.

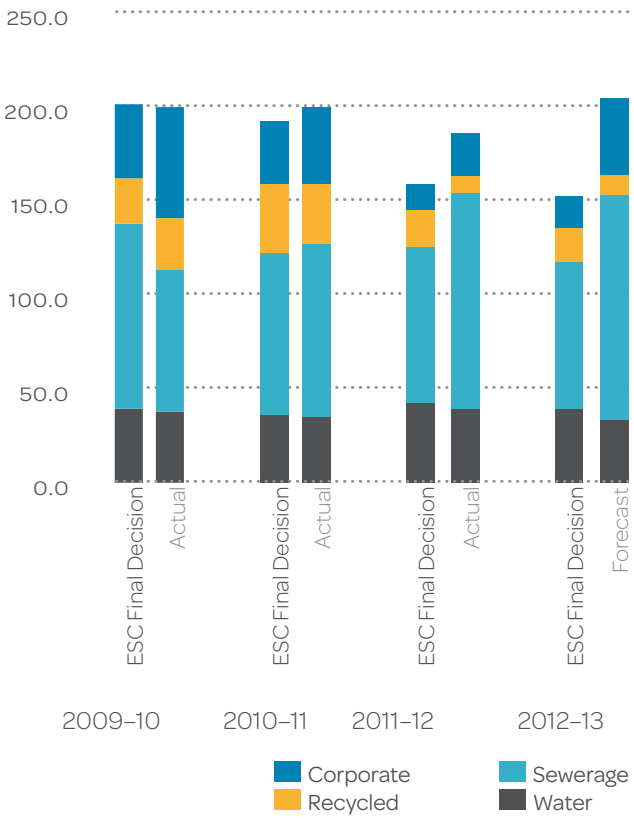
5.1 Current period outcomes

South East Water's capital expenditure in the current regulatory period has largely been focused on: the delivery of water and sewerage systems to support customer growth; asset renewal; sewer backlog programs; treatment plant upgrades; and the expansion of our recycled water network.

Figure 5.1 compares actual expenditure in the current regulatory period with the expenditure included in the Essential Services Commission (ESC) 2009 Final Determination. It shows that over the four years, capital expenditure is expected to be $80.7 million greater than was allowed for in the price determination. This expected variance is largely due to:

- additional costs for the Pakenham–Narre Warren sewage transfer scheme that were unforeseen at the time of forecasting expenditure for the 2009–13 Water Plan (a variance of $17.7 million)
- sewage treatment plants (including Class A upgrades) – at the time of forecasting capital expenditure, the need for colour removal treatment technologies and Class A criteria was not as stringent. Consequently, an additional $22.7 million was required
- accommodation – land purchase and initial construction costs for South East Water's new building in 2012–13 (refer to section 1.7 for further detail)
- vehicle fleet – additional expenditure associated with purchasing of vehicles, in lieu of leasing them, from 2010–11.

Figure 5–1 – Capital expenditure, current period outcomes ($millions, 1 January 2013)



The following table provides an overview of the progress made against the major capital projects that were forecast to be undertaken in the current regulatory period.

Table 5.1 Major capital projects 2009–13

Project	Project outputs to be achieved within regulatory period	Forecast completion	Comments
Sewerage backlog	Providing backlog sewerage to Upper Beaconsfield, Belgrave Heights and parts of Rye.	On schedule	2,974 properties have been serviced.
Water main replacements	Replacement of water mains that have reached the end of their effective life including the high risk distribution mains.	On schedule	Reticulation program is on target and savings achieved through reduced construction costs. Program was revised following a detailed assessment of the condition of the pipes, reducing the number of high risk pipes identified. We are scheduled to complete the identified replacement mains by 2013.
Dual pipe recycled water	Supply customers in developing areas with dual pipe supply of recycled water.	On schedule	As at 1 July 2012, 4,323 properties were supplied with recycled water, with another 4,757 properties connected and awaiting supply. Based on the historical development trend, it is forecast that the target of 5,000 will be serviced by the end of 2012–13.
Pakenham – Narre Warren sewage transfer scheme	Completion of construction of the Pakenham–Narre Warren sewer system to cater for growth and divert excess flows away from the Pakenham sewage treatment plant.	Completed	The Pakenham–Narre Warren transfer scheme has now been completed and has commenced transferring excess flows from the Pakenham sewage treatment plant to the Officer South pump station for onward transmission to the Eastern treatment plant.
Sewer renewals (gravity)	Replacement of gravity sewers that have reached the end of their effective life.	On schedule	Annual renewal rate is on target with cost savings achieved through reduced renewal costs. Our replacement rate in 2009–10 (22.8 km), 2010–11 (24.5 km) and 2011–12 (25.3 km) exceeded the 18 km per annum forecast.
Sewer renewals (pressure, mains)	Replacement of critical sewer pressure mains that have reached the end of their effective life.	On schedule	Reduced length of planned renewals, from 14.6 km to 11.8 km due to reassessment of priorities.
Mt Martha sewage treatment plant	Upgrade the plant to produce Class A treated wastewater.	To be operational by June 2013	Colour removal is required and, in addition, the requirements to meet Class A standards have become more stringent, so the cost of the project has increased. We expect the project to be operational by 30 June 2013, but final completion including Class A validation is currently expected in August 2013.

Project	Project outputs to be achieved within regulatory period	Forecast completion	Comments
BlueScope Steel recycling water pipe	Provision of recycled water to BlueScope Steel's Western Port plant.	Completed	Project delivered.
Nepean Sustainable Water (Boneo Recycling Scheme)	Completion of the first stage of the Nepean Sustainable Water Recycling project. With a total capacity of 4.9GL per year by 2010.	Completed (Stage 1)	Stage 1, renamed Boneo Recycling Scheme, is complete.
Customer meter replacements	Exchange customers' water meters that have reached their meter accuracy replacement trigger.	On schedule	40,919 meters were replaced in 2009–10, and 43,305 meters replaced in 2010–11, exceeding the annual target of 40,000. There have been savings in the unit rate, which has been reflected in lower expenditures.

5.2 Key considerations in developing the capital expenditure program

5.2.1 Growth predictions

Growth is the major driver behind our capacity expenditure programs for water, sewerage and recycled water. South East Water has limited ability to vary the program due to the criticality of the services for supporting development patterns.

Growth predictions used in planning for the 2013–2018 Water Plan period are based on the Urban Development Program 2010 (UDP) in respect to development timing. The Victoria in the Future 2008 (VIF 2008) document was used in regard to population and household projections. Precinct Structure Plans and actual developer activity are also used in the planning of works.

The updated population forecasts from Victoria in Future 2012 (VIF 2012) have also been assessed while developing the Water Plan and they are expected to have a minimal impact on the original forecasts based on the VIF 2008. Nevertheless, prior to approving the creation of any new asset, we will use the latest planning information, including VIF 2012, to ensure that our assets are designed for the long term.

In South East Water's area, the growth rates for the Water Plan period average approximately 10,000 residential and industrial and commercial lots per annum. Major infill development is centred around Southbank, Fishermans Bend, Dandenong and Frankston.

5.2.2 Customer preferences

As outlined in section 2.1, South East Water undertook a survey[2] of customer preferences (including choice modelling, surveys and focus groups), which tested willingness to pay for changes to service levels and new initiatives involving 400 residential and 86 non-residential customers.

The results showed that customers were not willing to pay for improved service levels, however, there was some willingness to pay for the expansion of alternative water programs. Therefore, South East Water has forecast its capital expenditure program to maintain service levels consistent with past performance, except where maintaining the service level increases costs without material benefit to the customer.

5.2.3 Environment Protection Authority

The Environment Protection Authority (EPA) released a document titled EPA Water Plan 3 Guidance[3] for the 2013–2018 pricing period to clarify its expectations of water businesses over this period. This document emphasises continuous improvement and a stronger focus on compliance and enforcement. South East Water provided the EPA with its proposed programs in the context of their requirements and expectations. See appendix 1 which outlines the EPA's endorsement of South East Water's programs for the 2013-18 regulatory period.

The EPA is also working with the water industry to develop a risk-based approach for determining investment priorities for the sewerage system. In the meantime, we will continue to meet the current standard of containing flows from one-in-five year rainfall events.

2 ORC International, (2011), Willingness to Pay & Annual Customer Satisfaction
3 EPA, (2011), Water Plan 3 Guidance, Publication 1406.1

The findings of a required EPA statutory audit in the current 2009–2013 regulatory period will also support some minor improvements to our practices in managing the sewerage system in the 2013–2018 regulatory period.

5.2.4 Water industry market conditions

There are several external water industry market conditions that need to be considered when forecasting capital expenditure over the 2013–18 Water Plan period.

The regulations developed under The Aboriginal Heritage Act 2006, have impacted on construction methods, resulting in an increased reliance on the use of boring techniques. It has also increased the approval times for works. The Victorian Aboriginal Heritage Council has been assessing applications by the recognised Aboriginal communities of the south eastern area to determine necessary heritage links. This can lengthen approval time and consultation periods.

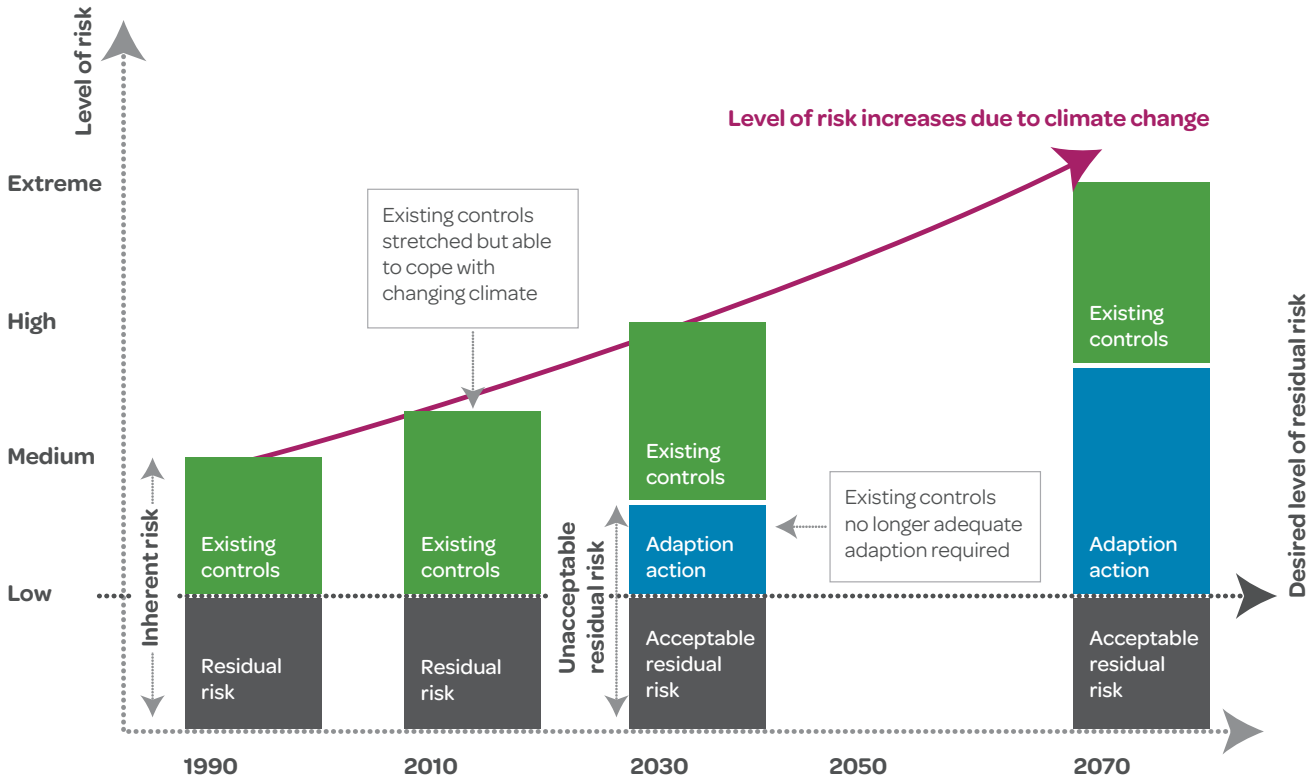
The high levels of construction activity in the resources sector have resulted in higher demand for skilled labour, materials and plant which can have an adverse effect on our capital program.

5.2.5 Climate variability

The water industry is acutely aware of the impact of climate variability. Current studies indicate that we will experience significantly reduced rainfall and river flows, with decreased amounts of water supplied by our reservoirs. Also, there is the likelihood of high intensity, short duration rainfall events putting added hydraulic pressure on the upper reaches of the sewerage system.

Higher temperatures will result in higher outdoor water demand. In the sewerage system, rising temperatures will increase odour and corrosion, and increase the incidence of tree root intrusion into sewers, leading to more sewer blockages and spills. We have developed a Climate Change Adaption Plan which uses a risk priority matrix for our business. Extreme weather events, such as heatwaves and storms, and changes in average climate feature in the highest-ranked risks. The management system for adaption action is shown in Figure 5 2. Although this is an issue for the long-term, it has minimal impact for the next five years.

Figure 5.2 – Climate change risk management plan



5.2.6 Program delivery

The delivery mechanism is a key component of efficient and effective infrastructure management. In 2005, South East Water formed an alliance, known as 'us' – Utility Services, with Thiess Services and Siemens Ltd to deliver the majority of its asset management programs. The alliance contract was awarded following a competitive, open market tender. It has direct performance incentives to continuously improve efficiency without compromising quality, safety or environmental performance. In 2009, engineering consultant MWH joined the alliance for design services as a sub-alliance partner.

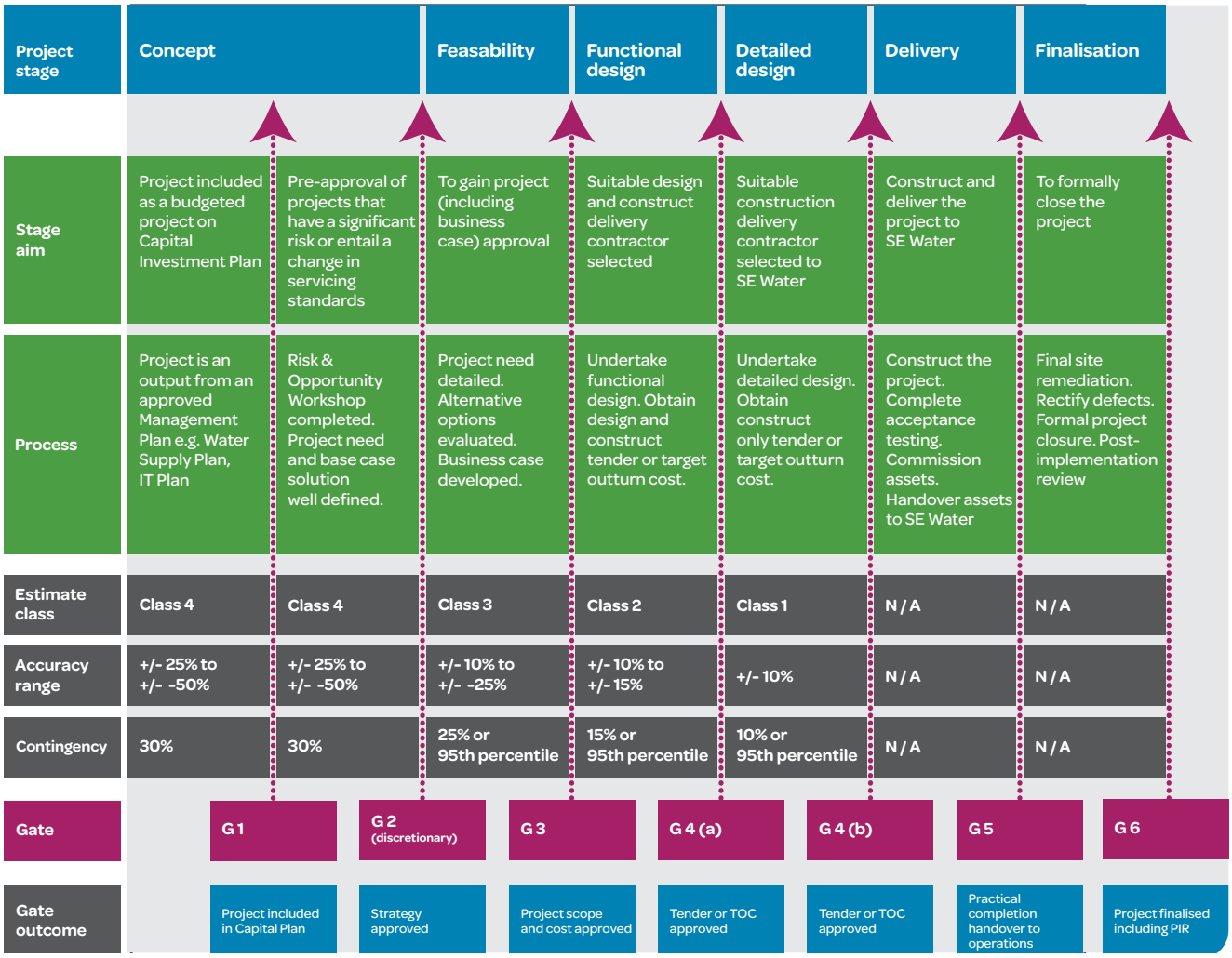
To deliver an extensive program of sewage treatment plant upgrades in the 2009–2013 Water Plan, which accommodates Class A recycling, another alliance was formed in 2009 called SERWA (South East Recycling Water Alliance) involving AECOM and Transfield.

The next generation of South East Water delivery mechanisms are being investigated for the works profile over the 2013–18 regulatory period. Costing of programs has been based on unit costs derived from the following:

- Maintenance works and operational activities – current direct cost performance by Utility Services.
- Capital works that are the subject of ongoing contracts are based on the current rates in those contracts.
- The Aquenta[4] database, which was established to track water project costs from various sources.
- The BECA[5] cost estimate database for sewerage projects.

Both the Aquenta and BECA cost estimate databases provide estimates within the 25–50 per cent range for projects at the conceptual stage, in-line with South East Water's Capital Investment Approval Process (Fig 5.3). This order of accuracy is consistent with the level of engineering and estimating effort available at early stages of project development. The ESC guidance paper for the 2013–18 regulatory period requires P50 cost estimates. South East Water understands this to mean that there is a 50/50 probability that the actual cost will be less or equal to the stated estimate. Based on experience, South East Water confirms that cost estimates align with ESC expectations.

Figure 5.3 – South East Water's Capital investment approval process



4 http://services.aquenta.com.au/index.php
5 BECA cost database 2008

5.2.7 Policy directions

In January 2011, a Ministerial Advisory Committee (MAC) was established to deliver the government's Living Melbourne, Living Victoria policy objectives. The key policy objectives were to:

- establish Victoria as a world leader in liveable cities and integrated water cycle management
- drive generational change in how Melbourne uses rainwater, stormwater and recycled water.

The implementation plan to deliver these objectives was released in early 2012. This new policy will immediately impact asset management planning, but any major changes in proposed capital expenditure are likely to take place in the latter part of the 2013–2018 Water Plan period or the following Water Plan period. This would most likely be directed toward increasing recycling through decentralised systems or co-investing in stormwater harvesting schemes. The Office of Living Victoria will develop policies and guidance in this area.

South East Water, Melbourne Water and Southern Rural Water have independently prepared an Integrated Water Management Strategy for Melbourne's south east and released a draft document, Water Initiatives 2050 – an integrated water management strategy for Melbourne's south east[6] in 2011. This project was undertaken with 25 stakeholders over a period of 18 months with six key recommendations and 36 actions. The outcomes from this project align with the MAC implementation plan, supporting the recommendation for water cycle plans in growth areas.

The following sections outline South East Water's proposed capital expenditure programs under each key activity area.

5.3 Water forecasts

5.3.1 Water capacity

The objective of the program is to ensure South East Water's system has sufficient capacity to deliver water to customers to satisfy their needs, while extending the service for new customers. The performance of this program is measured through the minimum flow rates contained in South East Water's customer charter.

South East Water's system is currently performing above the performance targets with regard to pressures over the whole operating region. South East Water's operating region has experienced significant growth. Managing the planning, design, construction and maintenance of the assets required to service that growth in a dynamic regulatory environment is an ongoing challenge.

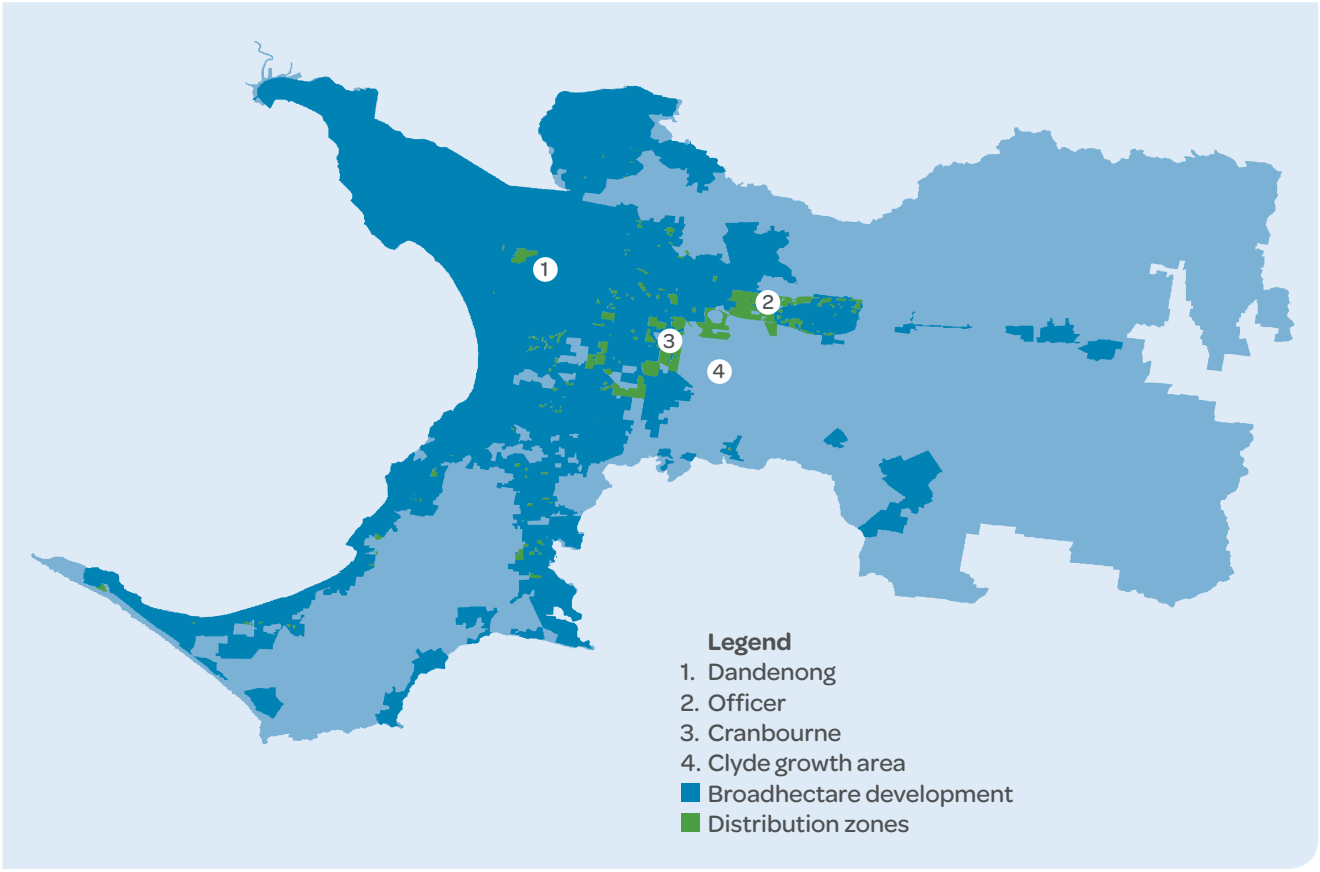
The forecast project works expenditure for managing the capacity of the water supply system over the 2013–18 period is approximately $98.5 million. The majority of the costs are associated with growth in the south east growth corridor and some minor expenditure for non-construction centred projects such as pressure management, zone monitoring, intelligent networks and auditing developer works.

Figure 5.4 shows the areas in which South East Water Plans to invest to meet the expected growth over the 2013–18 regulatory period. Officer, Clyde, Cranbourne and Dandenong will be major growth areas requiring additional capacity. These works will enable new customers to be connected to the water supply system while continuing to deliver high standards to our current customers. Customer growth is also expected in the inner Melbourne areas, but we are planning to meet this growth with existing capacity and therefore no major augmentations are planned within the period. The following outlines the major water capacity programs forecast over the 2013–18 regulatory period:

- Clyde growth area – approximately $6.8 million worth of augmentation works are forecast to cater for approximately 49,000 residential lots and approximately 500 hectares of commercial and industrial developments that are to be created in the Clyde growth precinct.
- Cranbourne – approximately $11.3 million worth of augmentation works are proposed to cater for forecast development in the Cranbourne growth area. The majority of those works include the construction of mains by developers as part of their subdivision works, the cost of which is financed by South East Water.
- Officer – approximately $19 million worth of augmentation works are proposed to cater for forecast development in Officer, which will consist of approximately 20,000 dwellings and 2,500 gross hectares of employment-zoned area, south of the Pakenham Freeway.
- Dandenong – the forecast industrial and commercial development in the Dandenong major activity centre and in Dandenong South will require the augmentation of the local distribution network.

6 Refer to web site: Water Initiatives for 2050: an Integrated Water Management Strategy for Melbourne's south east | Integrated Water Management

Figure 5.4 Major growth areas for the 2013–18 period



5.3.2 Water reliability

The objective of the water reliability program is to ensure that South East Water's systems provide supply with minimal service interruptions for customers. Reliability measures are usually represented by frequency, severity and duration of interruptions.

We ensure that high service levels are delivered through our renewals program. The level of reliability is a function of:

- current asset performance
- current age and material profiles
- customer preferences and willingness to pay for higher service levels.

South East Water can control these, to a degree, via rigorous assessment of the trade-offs between emergency maintenance, preventative maintenance and asset renewals. There is a high variability in the actual frequency of water interruptions (no more than five a year) each year, which can generally be attributed to isolated bursts in areas of high density housing. Opportunities for further improvement are limited without significantly increasing water main renewal rates.

South East Water is proposing to maintain its ESC core service standard target, consistent with historical levels. By renewing an average of 34 km of water reticulation mains each year, at a cost of approximately $60 million over the five years, South East Water will maintain service levels for the 2009–13 Water Plan period.

Capital expenditure on renewal of critical distribution mains is forecast to continue at a slightly lower level to that in the 2009–13 regulatory period. These mains have been selected taking into account their condition assessments and the consequences of a failure caused by potential bursts in areas that are generally congested. The unit cost of replacement remains 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.

5.3.3 Water quality

South East Water is committed to providing customers with a reliable source of high quality drinking water. Our water quality complaint numbers remain low and no significant new capital investment is required to maintain our high performance levels. Therefore, water quality works are focused on improved tools to manage quality and reduce the need for longer term capital investment, for example, remote monitoring to provide real-time water quality information, forecast to be approximately $200,000 per annum.

5.3.4 Water meters

Our water meter program is driven by growth in customer numbers and the replacement of aging meters to ensure flow measurement accuracy. This program involves the installation and replacement of approximately 40,000 meters per year, which will also assist in the identification of water leakage and other system losses with a proposed program cost of $6.4 million per annum.

5.4 Sewerage forecasts

5.4.1 Sewerage capacity

The program's primary objective is to ensure there is sufficient capacity in the sewerage system to safely collect and transfer sewage to treatment systems, without risking community health or environmental impact. The sewerage network is designed with extra capacity to cater for stormwater that enters the system and can accommodate a one-in-five year rainfall event[7].

As with the water program, the majority of the sewerage capacity program is driven by population growth in the Clyde, Officer, Cranbourne and Dandenong areas. Some of the necessary infrastructure will be constructed through South East Water's capital works program and the remainder will be provided by the development industry. Key growth works that are proposed to be undertaken over the 2013–18 pricing period to meet South East Water's sewerage capacity needs include:

- Clyde – this is a new catchment that has been recently included in the Urban Development Program as part of the urban growth boundary expansion. Multiple pumping stations, rising mains, storages and branch sewers are required to service some of the initial catchment development, all of which will be developer-driven.
- Officer – progressive construction of major infrastructure to service Officer North and Cardinia Road employment precinct – including pumping stations, rising mains and branch sewers – will be required to service expected growth in this region.
- Cranbourne – construction of major infrastructure to service Cranbourne West and Cranbourne South – including pumping stations, rising mains and branch sewers –will be required to service expected growth in this region.

5.4.2 Sewerage reliability

The objective of the sewer reliability program is to ensure that South East Water provides a reliable sewage collection system, without excessive disruption for customers, and to transfer the sewage to the treatment point without significant environmental or social impact. The reliability program concentrates on avoiding spills caused by blockages, pipe collapse or equipment breakdown (usually in dry weather).

The key sewerage system reliability performance measure is the frequency of sewage spills. If a spill occurs, South East Water needs to be prepared to respond. Since 1995–96, the response time (measured as the percentage of sewer spills contained within five hours) has been 100 per cent, with 2009–10 (99.9 per cent) the only exception. This rapid response rate reflects the importance that South East Water places on minimising the occurrence and impact of sewer spills.

The principal cause of spills is sewer blockages, usually by tree root intrusion. As outlined in the table below, while the long term trend for sewer blockages has generally increased, recent intervention practices through increasing the preventative sewer cleaning program has stabilised the growth in blockages and spills. This program will continue through the 2013–18 Water Plan period.

Table 5.2 Sewer blockages per 100 km

2001 –02	2002 –03	2004 –05	2005 –06	2006 –07	2007 –08	2008 –09	2009 –10	2010 –11	2011 –12	2012 –13
12	17	18	15	16	21	21	22	23	18	12

7 EPA, (2011), Water Plan 3 Guidance, Publication 1406.1

In general, the structural condition of the sewer system has improved as the number of collapses has declined due to an improved sewer renewal program. The reticulation network is generally not expected to require much change in the rate of replacement during the 2013–18 period, with programs still expected to remain focused on the older concrete mains. The investment profile is biased to the later years because of other capital priorities in the earlier years.

Based on this assessment, South East Water is forecasting to renew approximately 20 km of reticulation sewers over the 2013–18 regulatory period, with a small decline expected beyond this period. The decline in renewals occurs as the length of concrete sewers reduces, now only making up 4 per cent of the total sewer length.

An allowance has been made for proactive CCTV assessments that will improve the targeting of sewer mains requiring renewal. Table 5.3 outlines the estimated lengths of reticulation sewers to be replaced for each year of the 2013–18 regulatory period and the comparison with historical activity levels.

Branch sewers that are more critical than reticulation sewers will be renewed based on their condition assessment. For 2013–18, it is proposed to renew an average of 3.4 km per year.

A proactive risk assessment process and condition assessment program, between 2009 and 2011, determined pressure main replacement programs for 2013–2018. Table 5.3 shows the renewal program determined as a result of these condition assessments where specific assets have been identified for replacement.

Table 5.3 Length of sewer main renewals per annum

	2009 –10	2010 –11	2011 –12	2012 –13	2013 –14	2014 –15	2015 –16	2016 –17	2017 –18
Reticulation mains (km)	19.7	21.9	25	25	16.8	17.8	21.6	24.9	24.9
Branch sewers (km)	3.1	2.5	3.2	3.2	2.4	2.4	2.4	4.8	4.8
Pump station pressure mains (km)	1.75	3.7	4.7	2.5	2.1	2.2	2.1	6.3	5.0

The majority of sewer pressure main replacements are for mains constructed of asbestos cement and ductile iron that were built as part of the initial servicing of the Mornington Peninsula area 25 to 35 years ago. These assets are at or near the end of their useful life. The premature failure of these assets has caused the increased rate of renewal for sewer pressure mains. For the 2013–18 period, South East Water is proposing to renew an average of 3.5 km of sewer pressure mains each year.

5.4.3 Sewage treatment plant program

South East Water owns and operates nine treatment facilities, all of which treat sewage with the exception of a pilot stormwater treatment facility at Troups Creek, Narre Warren. The sewage treatment plants have a principal key performance measure of maintaining 100 per cent compliance with their EPA Waste Discharge licences. Five of the plants are operating at capacity and any growth in flows or loads on these plants, or changes in licence conditions, could cause a licence breach. The proposed upgrades to the plants are driven by:

- population growth – we need to upgrade our Boneo, Mt Martha, Koo Wee Rup and Lang Lang treatment plants so they have sufficient capacity to cater for population growth
- reliability – we need to ensure structural integrity, planned equipment replacement and maintenance to avoid failures
- the environment – completion of upgrades at our plants will help meet the State Government objective to provide Class A water in Melbourne Water's South Eastern Outfall to enable future recycling opportunities. It will also help ensure Melbourne Water can meet its commitments to the EPA for discharge from the South Eastern Outfall to the ocean. It has been assumed that no other new environmental or regulatory obligations will be introduced during the 2013–18 regulatory period.

5.4.4 Sewer backlog program

South East Water has a sewer backlog program to connect unsewered properties to the sewerage network. The scheme replaces aging and failing septic tanks, which has significant public health and environmental benefits.

Our program was developed to deliver sewerage connection to identified areas over a 20 year period. This program was developed in conjunction with local councils to ensure that priority was given to areas where the greatest environmental benefit could be gained. South East Water is forecasting to connect approximately 3,500 customers to the sewerage system through the standard backlog program over the 2013–18 regulatory period.

Two unique factors exist on the Mornington Peninsula, which created an opportunity for alternative delivery strategies. These strategies will enable some residents to connect to the sewerage network earlier, delivering savings to our broader customer base.

The first is the demand from residents in the Mornington Peninsula areas for the provision of reticulated sewerage services. Since the announcement of a backlog sewerage scheme, residents have been contacting South East Water asking when the sewerage system will be available for their property. To measure this demand a residential survey was conducted, which indicated a substantial number of customers would be willing to pay a fee to connect to the sewerage system earlier than programmed.

The second factor is the availability of spare capacity in the existing sewer network which currently services the commercial areas of Portsea and Sorrento. To capitalise on these factors, a Customer Led Sewerage Program has been developed, which involves:

- constructing the pressure sewer reticulation network throughout the southern Mornington Peninsula area over a three year period by 2015, rather than over 13 years, as per the conventional approach. Reticulation sewers would be installed ahead of upgrades to transfer systems
- constructing the reticulation network in a short period of time, which is expected to achieve efficiencies through productivity, management and administration cost savings that result in a lower overall cost to customers
- offering early voluntary connections to customers who would not otherwise be connected to the sewer for several years. Customers can choose to connect up to the maximum enhanced capacity of the existing transfer system. Connection to a pressure sewer system requires the installation of a pump at each house and the diversion of the property's waste pipes from their existing septic tank to the pump station

- charging voluntary early connections on a brought-forward cost basis, providing lower overall costs to customers due to early receipt of revenue and cost efficiencies. South East Water is forecasting approximately 1,150 early connections over the 2013–18 period, in addition to the 3,500 standard backlog connections. This will generate additional customer contributions that will offset some of the additional capital expenditure. The project's price impact will therefore be minimal
- the use of spare capacity from the current transfer system through new technologies that allow storage at times of peak flow to be pumped during off peak times over 24 hours
- Any Mornington Peninsula customer can connect, but it is anticipated that most demand for early connections will be in the Sorrento and Portsea areas. This is because it could be up to 13 years before they can connect via the conventional rollout program
- South East Water's Sewerage Service and Sewage Disposal charges, which are applied once a property is connected to the network (property owners pay for the onsite costs of diverting plumbing from the septic tank to the sewerage network and for the power required to operate the property pumps).

5.5 Alternative water

To minimise the cost of delivering recycled water and to maximise economies of scale in the current regulatory period, South East Water has installed recycled water networks in land development areas where a source of recycled water is readily available.

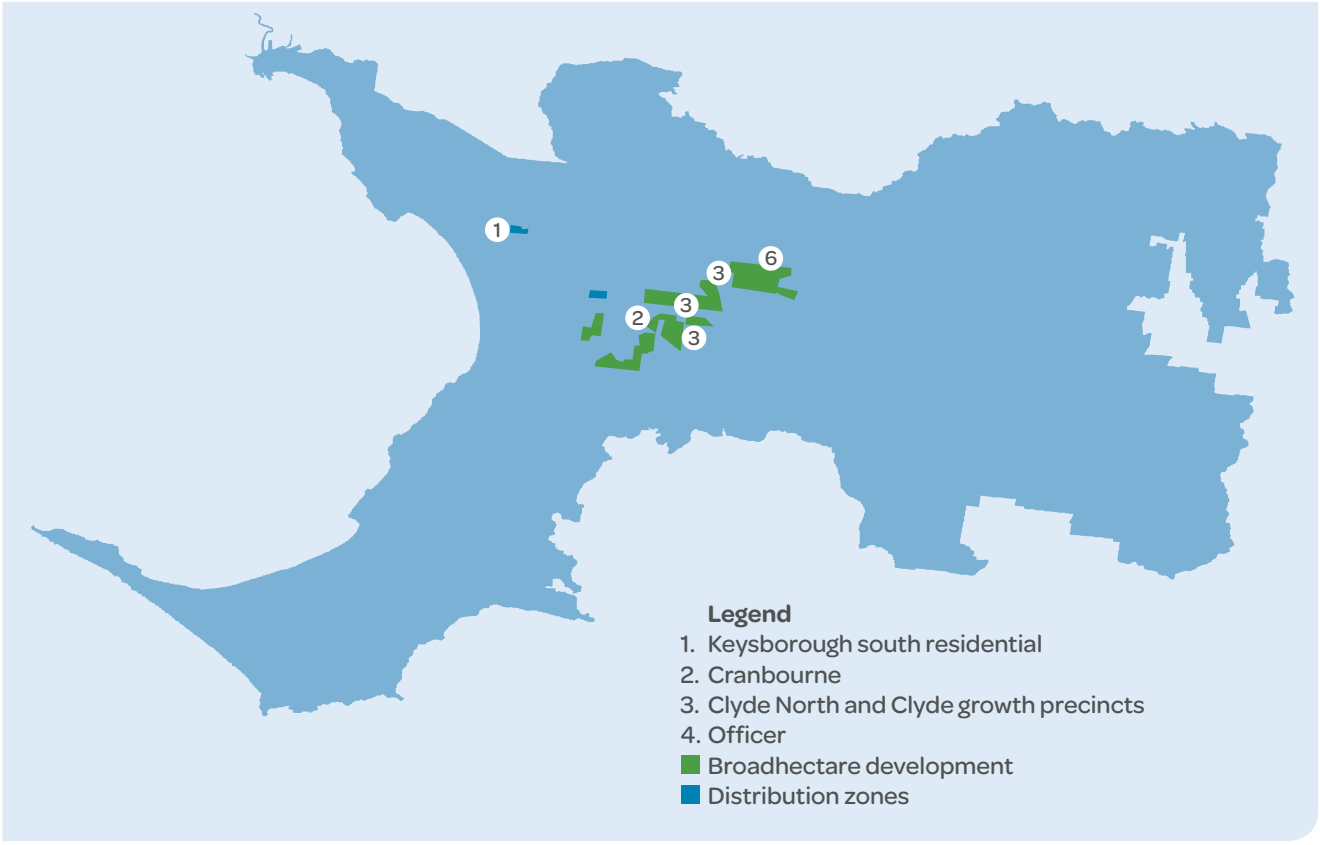
South East Water plans to continue to develop alternative water sources, taking into account efficiency and customer needs. Affordability and water storage security has led to a review of our approach to ensure optimal delivery and avoidance of large infrastructure investment in the short-term. In assessing the alternative water program for the 2013–18 period, the following factors have been considered:

- Government policy on alternative water.
- South East Water's reputation with customers, including developers, by meeting commitments and expectations.
- Minimising price impacts for all customers.

South East Water's proposed alternative water program continues the program identified in the current regulatory period and is also aligned with the government's commitment to ensure Victoria makes better use of its water resources and increases liveability. This reflects the MAC recommendation to government in Living Melbourne, Living Victoria 2012.

Several key infrastructure works to service mandated areas have been identified for the 2013–18 period, as shown in the map below.

Figure 5.5 Key alternative water works for the 2013–18 period



Cranbourne – to cater for forecast growth in Cranbourne, $35.2 million of augmentation works are proposed to create a new distribution zone in Cranbourne East and Cranbourne West.

Officer – approximately $12.9 million of augmentation works are proposed for the newly created Officer East distribution zones. Class A recycled water is to be pumped from the Pakenham treatment plant to a 6 ML balancing storage tank currently under construction in Officer East.

Supply from the Eastern Irrigation Scheme (EIS) – Class A recycled water to supply the new Cranbourne distribution system is to be sourced from the EIS. An upgrade to the existing pumping station at the Eastern treatment plant is required, along with construction of a new 50 ML/d pumping station in Cranbourne West. The total cost is estimated at $6.0M, to enable 25 ML/d of recycled water to be provided to Cranbourne from the EIS.

Keysborough South residential estate – a recycled water distribution system has been created to supply Class A recycled water to the Keysborough South residential estate that will include 3,000 residential dwellings. Proposed augmentation works comprise a three ML tank, a pumping station and two km of inlet distribution main for a total estimated cost of $5.3 million.

During the 2013–18 regulatory period, South East Water will further investigate the inclusion of treated stormwater into the recycled water network following our innovative stormwater harvesting trial in Troups Creek, Narre Warren. We will pursue recycled water opportunities for agricultural and commercial uses in proximity to the South Eastern Outfall, provided that the projects are economically viable.

5.6 Corporate

Corporate capital expenditure relates primarily to information technology, land and buildings and vehicle purchases. South East Water is forecasting ongoing capital expenditure in information technology, consistent with historical expenditure, including replacing and upgrading equipment, customer system initiatives and asset management initiatives at approximately $9.6 million per annum.

South East Water has also introduced a policy to purchase company vehicles in the current period because it is more cost-effective than leasing. Approximately $4 million per annum for vehicle purchases has therefore been included in the capital expenditure forecast, which will be partly offset by asset disposals.

5.6.1 Office accommodation

South East Water currently operates from three separate office locations. This physical separation adds to South East Water's current costs and reduces the benefits associated with a more collaborative work environment. The lease on the Heatherton head office building will cease in May 2015, 17 years after we first moved in. Establishing a new location to house all of South East Water's staff is more cost-effective than continuing to lease three offices. The best long-term solution is for South East Water to purchase land from the Frankston City Council and build a central office in Frankston, starting in 2012–13. This approach has been supported by government.

While the proposed approach to new office accommodation will have no impact on customer bills in the 2013–18 period, as the return on the building's construction costs will be offset by the elimination of existing buildings' lease costs and other operating expenditure efficiency savings over the longer term.

5.7 Major projects and programs

South East Water's forecast capital expenditure programs are being driven by network growth, the need to maintain reliable water and sewerage services, and providing sewerage connection to unsewered properties.

The following table provides a summary of South East Water's 10 major capital projects and programs for the 2013–18 regulatory period.

Table 5.4 –Major capital projects 2013-18

Project	Expenditure profile ($million, 1 January 2013 dollars)					2013–18 Water Plan value ($ million)
	2013–14	2014–15	2015–16	2016–17	2017–18	
Dromana - Portsea backlog scheme	49.0	50.4	41.1	20.6	24.5	185.6
Description This agreed program with the government and EPA will continue to replace septic tanks with sewerage connections to achieve environmental benefits. The scheme replaces aging and failing septic tanks, resulting in significant improvements to public health and the environment. This also includes the proposed customer led backlog scheme.						
Boneo treatment plant capacity upgrade	0.3	3.8	24.1	19.3		47.5
Description An expansion of the sludge drying capacity is required by 2014–15 with duplication of the activated sludge plant and tertiary treatment plant required by 2016–17 to meet growth in the region.						
Mt Martha treatment plant - long term sludge upgrade	10.5	11.5	0.0	0.0	0.0	22.0
Description Capacity upgrade works required for the sludge drying system to improve plant efficiency and to meet expected growth.						
Lang Lang treatment plant upgrade	1.5	6.6	4.5	0.2	0.0	12.8
Description The existing plant, which comprises two lagoons, will no longer be able to produce treated wastewater suitable for recycling because of the expected customer growth in the region.						
Sewer mains renewal program	5.6	5.6	6.8	7.8	7.8	33.6
Description Reduce the risk of sewage spills to the environment and reduce the risk of adversely impacting customer service levels.						
Water mains renewal program	9.1	9.1	12.2	14.8	15.8	61.0
Description Reduce the risk of unplanned water interruptions adversely affecting customers.						

Project	Expenditure profile ($million, 1 January 2013 dollars)					2013–18 Water Plan
	2013–14	2014–15	2015–16	2016–17	2017–18	
Construction and fit out of new office	36.1	39.1	3.0	0.0	0.0	78.3
Description Gain efficiencies through centralising operations, as South East Water currently operates out of three locations.						
Sewer rising mains renewal program	3.8	3.8	4.8	7.0	7.0	26.4
Description Reduce the risk of sewage spills to the environment.						
Pound Rd sewerage pump station	7.1	0.0	0.0	0.0	0.0	7.1
Description To cater for residential growth in this catchment, provision of sewerage services is required. The works need to have flexibility to accommodate the expected growth while maintaining environmental compliance with the one-in-five year containment standard. It is forecast that $6.8 million of this project will occur in 2012–13.						
Cranbourne recycled water tank	12.0	0.0	0.0	0.0	0.0	12.0
Description To provide the Cranbourne recycled water customers with water security in periods of high demand generated from customer growth.						

5.8 Total capital expenditure

The following table outlines South East Water's total proposed capital expenditure for the 2013–18 period. There is a higher level of capital expenditure forecast in the first two years of the period primarily due to the proposed expenditure on sewerage works (approximately 60 per cent), including accelerating the sewer backlog program. Corporate expenditure in the first two years also includes the proposed construction of a new office building. Other expenditure, as outlined above, is required for the ongoing water and sewerage mains renewal programs and to cater for the growth in the network.

Table 5.5 Total capital expenditure forecast for 2013–18 ($millions, 1 January 2013)

	2013–14	2014–15	2015–16	2016–17	2017–18
Water	40.0	36.9	45.5	51.1	52.3
Sewerage	147.5	148.4	140.4	119.1	115.7
Recycling	28.5	9.6	11.9	11.9	6.6
Corporate	53.8	57.0	21.0	18.5	19.0
Total	269.8	251.8	218.8	200.7	193.6

6. Demand

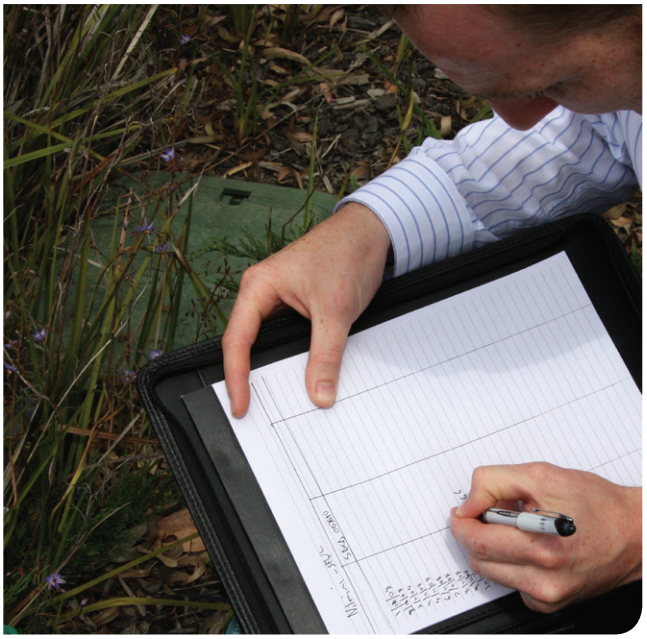
6.1 Background

Forecasting water, sewage, trade waste and recycled water volumes allows South East Water to set prices and design tariffs to ensure we collect sufficient revenue to efficiently operate our business. Prices are calculated by spreading our required revenue across expected water and sewage volumes.

This forecasting is also necessary to allow Melbourne Water to develop estimates of bulk water and sewer prices for its services.

The demand and customer numbers forecast for the 2013–18 Water Plan have been developed taking into account the following:

- Indoor and outdoor water usage patterns.
- Non-residential water use including industry, and parks and gardens.
- Price elasticity and restrictions.
- Population growth and housing density.
- Alternative water supplies.



6.2 Current period outcomes

South East Water's water and sewage sales volumes have been significantly below forecast for the current regulatory period. This is as a result of:

- weather conditions (La Nina weather events in 2010–11 and 2011–12)
- sustained uptake of high efficiency water products and continued development of new and efficient water-using appliances
- a less than expected bounce back in demand, through embedded behaviour responses and structural changes in outdoor water use.

The following table compares billed water and sewage volumes for the current regulatory period with the Essential Services Commission (ESC) 2009 Final Decision. It shows that billed volumes are significantly below (between 5 and 15 per cent for water sales) the level provided for in South East Water's 2009 price determination. South East Water's 2012–13 demand forecasts are between 6 and 18 per cent below those set by the ESC in the 2009 price determination.

Table 6.1 Current period volumes compared with the 2009 ESC Final Decision

Billed consumption	2009-10	2010-11	2011-12	2012-13	Total	Variation
Residential water volume (ML) – ESC final decision	83,355	89,765	91,880	96,742	361,742	
Actual (ML)	83,881	81,650	85,463	89,178*	340,172	-21,570
Residential sewer volume (ML) – ESC final decision	58,024	60,498	61,923	64,526	244,971	
Actual (ML)	58,907	57,845	60,128	60,060*	236,940	-8,031
Non-residential water volume (ML) – ESC final decision	29,947	33,486	33,787	36,240	133,460	
Actual (ML)	28,741	27,195	27,692	28,949*	112,577	-20,883
Non-residential sewer volume (ML) – ESC final decision	13,945	15,925	16,068	17,031	62,969	
Actual (ML)	14,118	13,882	13,940	14,950*	56,890	-6,079

* Figures are forecasts

The ability to accurately forecast customer demand for the 2013–18 Water Plan period is one of the most significant risk factors for customers and South East Water.

6.3 End use demand methodology

The demand forecasting model South East Water uses to forecast water, sewer and customer growth is an industry based End Use Model (EUM) that was developed in 2005 on behalf of the Commonwealth Scientific and Industrial Research Organisation (CSIRO), South East Water, Melbourne Water, City West Water and Yarra Valley Water by the Institute for Sustainable Futures (ISF). The model uses a bottom up approach to calculate total demand for water and sewerage.

The EUM allows Melbourne's metropolitan water authorities to devise accurate projections of water demand into the future, based on recorded information from various studies of residential consumption habits and appliance stock surveys.

The EUM cumulates the components of the model subsections (for example toilet, shower, washing machine, outdoor use) to provide baseline demand for the 2013–18 regulatory period. This baseline data is then modified to take into account the impact of alternative water products, water efficiency initiatives, price elasticity and water restrictions. For the 2013–18 regulatory period, South East Water is expecting permanent water saving rules to be in place, availability of supply from recent augmentation and continued investment in alternative water projects, for example, South East Water's Class A recycled water network.

The demand baseline forecast has been reviewed to align with the current observed consumption pattern. The starting point for the bulk forecast (purchase of water from Melbourne Water) for South East Water is 131.6 GL in 2012–13, which takes into account an expected move to permanent water savings rules, the ongoing impact of the enhanced water conservation program undertaken between 2005 and 2012, and the uptake of rainwater tanks and alternative water networks. This forecast also takes into account the stocks of water-efficient appliances in households and fundamental changes in customers' attitudes and behaviours towards water use.

6.4 Assumptions about indoor end use

While water efficiency programs in the Water Plan period will be scaled back to primarily focus on customer education and information, there will be an ongoing impact on water demand from previous water efficiency initiatives, behaviour change programs and the expected ongoing customer replacement of older, inefficient household water-using appliances. This results in a natural reduction in base demand, prior to population growth.

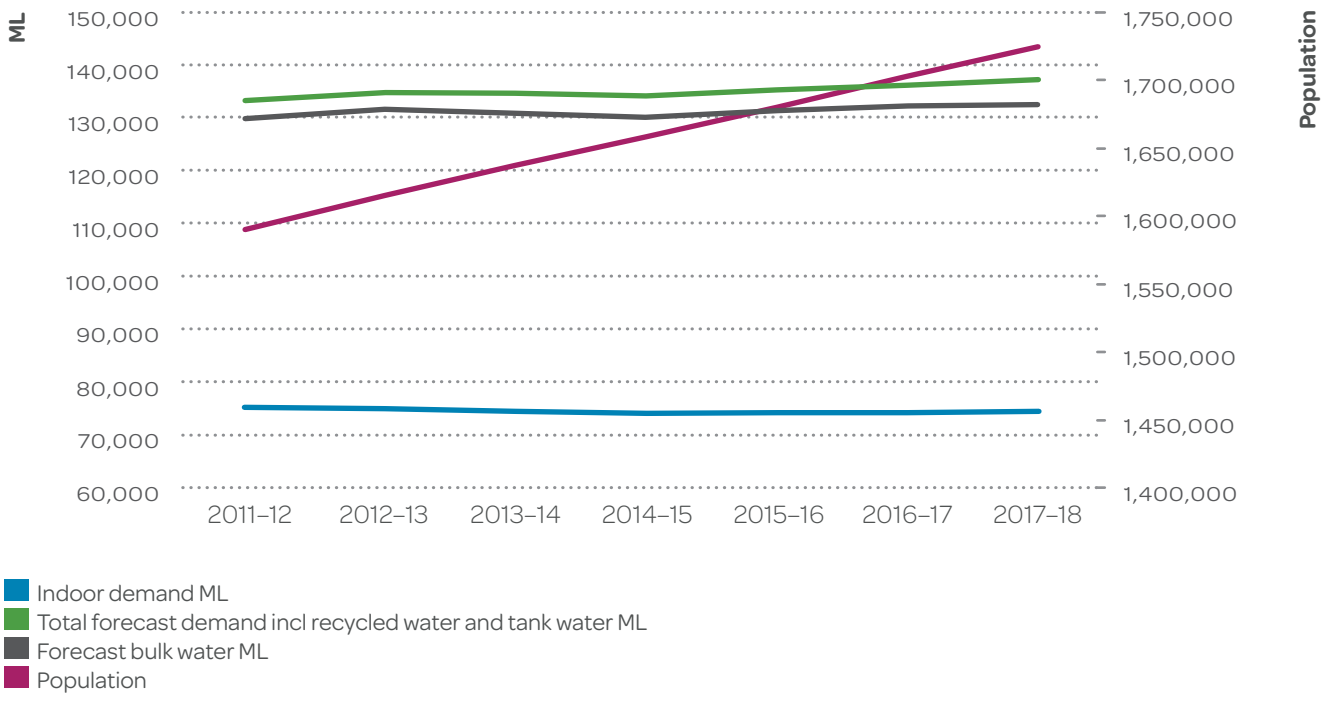
To update indoor use assumptions in the EUM, South East Water undertook end use and appliance stock studies between 2010 and 2012. The 2012 study shows that households surveyed are at the frontier of water efficiency, which if included in EUM assumptions, would lead to continued net reductions in South East Water's total water demand. South East Water has chosen to use the average of its recent studies to ensure strong and reasonable demand forecasting assumptions.

Recent changes to the assumptions in the end use model, based on the survey results, include:

- an additional 300 ML in toilet demand from an increase in toilet use per household
- a 2 GL reduction in shower demand resulting from changes in average duration and flow rates
- a 4.7 GL reduction in miscellaneous indoor demand (for example, sinks), resulting from reductions in average duration and flow rates.

Based on the surveys, and estimated impacts of future efficiency programs, a 0.4 – 0.8 per cent per annum increase in efficiency has been forecast. Once adjusted for customer and population growth, this shows low net demand growth over the regulatory period as illustrated below.

Figure 6.1 Water demand and population growth



6.5 Review of outdoor usage and bounce back in demand

Outdoor residential demand is a key component of the baseline EUM demand forecast. The outdoor estimate of demand consists of two components: miscellaneous outdoor demand (including car washing, hosing down hard surfaces and pool water use) and lawn and garden demand. The miscellaneous component is modelled by end use, while the lawn and garden component is calculated from an analysis of outdoor water use and changes in housing land structures.

During the period of severe and sustained water restrictions (reaching Stage 3A) that Melbourne faced between 2005 and 2012, outdoor land and garden use underwent fundamental structural change. The restrictions changed both the community's behaviour and efficiency of outdoor water use on lawns and gardens (for example, replacement of spray garden watering systems with drip garden water systems). This has resulted in a low bounce back in demand as water restrictions have eased and we move into the post water restrictions period.

To further understand how customers' behaviour had changed, the four metropolitan water businesses engaged Deloitte to assess the change in consumption following easing of the water restrictions across other comparable Australian cities, including Sydney, Canberra and Adelaide.

This study found a reduction from Stage 3 water restrictions to permanent water savings rules resulted in an increase in residential water use of approximately three per cent.

South East Water considers these findings to be a solid assessment of bounce back in comparable Australian cities, so we have factored the findings into our outdoor demand forecasts. A 3 per cent increase in residential usage is expected to occur from Stage 3 in 2008–09 to permanent water savings in 2012–13.

The forecast for 2013–14 onwards has assumed a long-term downward decline in average outdoor usage per property, based on the estimated average annual reduction in block sizes for detached dwellings.

6.6 Climate scenarios

In preparing our 2013–18 Water Plan, demands have been forecast on the basis of average climatic conditions. This allows the sharing of climate risk between water businesses, customers and shareholders.

It may be possible to adopt a more refined forecast for the first year based on climate data from a range of sources, including the Bureau of Meteorology. However, at this stage forecast seasonal conditions for the next three to six months suggest average outcomes, so it is proposed we continue to retain the average climate conditions for this Water Plan.

6.7 Non-residential growth

Non-residential demand is forecast on the basis of historical demand per property per annum. Average non-residential demand per property for the past four years was used as the starting point and projected with a 0.05 per cent annual efficiency gain. South East Water believes the use of 0.05 per cent is a reasonable long-term assumption, compared with recent reductions in average non-residential demand averaging 7.5 per cent per annum over the past four years.

South East Water believes there will be a very limited increase (or bounce back) in demand as many parks, gardens and sporting facilities have been granted exemptions from full water restrictions over the 2010–2012 period. South East Water believes the use of the last four year average for non-residential property consumption adequately captures any post water restrictions bounce back for non-residential customers.

Based on these assumptions of long-term trends in non-residential demand, combined with customer growth, South East Water is forecasting that non-residential demand will lead to an increase of approximately 250 ML per annum in bulk water supplies over the 2013–18 regulatory period.

6.8 Price elasticity

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

Table 6.2 Price elasticity assumptions

	Elasticity effect (per cent)
Residential – Tier 1	-0.05
Residential – Tier 2	-0.1
Residential – Tier 3	-0.1
Non-Residential	-0.092

The residential elasticity assumptions were drawn from work commissioned by the Water Services Association of Australia and conducted by KPMG in 2004. This research was based on a sample of customers across Melbourne and it concluded that while the demand for water is relatively inelastic, the demand for indoor water use is less elastic than outdoor water use. A conclusion was drawn that Block 1 water is for essential purposes and generally has very limited response to price change, while Block 2 and 3 consumption has a slightly higher price elasticity effect of -0.1.

South East Water acknowledges that this study was undertaken a number of years ago, however the results

are consistent with a more recent price elasticity study undertaken by Sydney Water, which found price elasticity for average households to be -0.11. Therefore, South East Water considers that it is reasonable to continue to apply the findings from the earlier study.

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 customers outside the top 100 users who would change their consumption in response to price have a price elasticity of -0.6. But, 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 a lower -0.0925 estimate as not all customers will be able to change their behaviour in response to price rises due to much of the "easy-to-achieve" efficiency changes being achieved during the 2009–13 regulatory period. This has been supported through programs such as WaterMaps for large water users.

6.9 Non revenue water

Non revenue water (NRW) is defined as the difference between the volume of water we purchase from Melbourne Water and the metered volume of water we sell to customers. South East Water's water network, as with all water networks, suffers from the impact of leakage, metering inaccuracies, theft and credits provided to customers associated with a number of factors such as leakage on the customer's property.

For 2012–13, South East Water is forecasting NRW of 13,230 ML and is expecting a small growth of approximately 100 ML per annum in NRW over the 2013–18 regulatory period as our network and customer bases expand.

6.10 Customer and population growth

South East Water's population and customer growth forecasts for the 2013–18 regulatory period are based on the 2012 Victoria in Future document published by the Department of Planning and Community Development. South East Water believes this document provides a sound basis for forecasting. This approach is consistent with the ESC's final decision for the current regulatory period.

South East Water also uses the growth in customer number forecasts from the 2012 Victoria in the Future to forecast New Customer Contribution revenue. Refer to section 7 for more details on new customer contributions.

South East Water is proposing, as part of its tariff structure changes for the 2013–18 regulatory period, to remove historical inconsistencies in its billing practises by shifting to billing service charges on the basis of dwellings, not land titles. The impact of this charge increases the number of South East Water customers who are billed for service charges. Our billing system data indicates approximately 6,000 titled properties which will translate to 26,700 dwellings.

The introduction of dwelling-based service charges will transition over two years, beginning in 2014–15.

6.11 Alternative water supplies

As outlined in the capital expenditure section, South East Water's proposed alternative water program is aligned with the government's commitment to ensure our state makes better use of all our water resources, including stormwater, rainwater and recycled water, and to increase the liveability of Melbourne and Victoria's regional cities. To minimise the cost of delivering recycled water and to maximise economies of scale, South East Water has mandated the installation of recycled water networks in land development areas where a source of recycled water is readily available. Therefore, alternative water customer numbers have been forecast based on this program.

South East Water forecasts average alternative water for each dual pipe residential customer at 60 kL per annum (this will vary according to individual customer's consumption patterns). This water offsets drinking water use for flushing toilets and watering gardens and lawns. As with residential outdoor demand, long-term reduction in lot sizes and reduction in total outdoor land area for irrigation have a small impact on medium-term property consumption, with a reduction of 0.05 kL per annum from the 2012–13 per property baseline of 60 kL.

Rainwater tanks also impact South East Water's demand forecasts, as they create offsets to customers demand for drinking water. Since 2005, South East Water has found increasing penetration of rainwater tanks across its customer base as a result of five star building regulations. It is estimated that more than 50 per cent of all new houses install a rain water tank. This means that in 2011–12, 19 per cent of South East Water's residential customers have rainwater tanks, with that proportion continuing to increase due to the expectation that in excess of 50 per cent of new houses will install them.

South East Water has estimated that customers with rainwater tanks have an average reduction in drinking water demand of 20 kL per annum. This results in a reduction in drinking water demand over the 2013–18 regulatory period, as shown below and some increases in bulk sewer flows.

Table 6. 3 Alternative water supplies

Alternative water supplies	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Alternative water supplies ML	1,210	1,418	1,714	1,925	2,136	2,516
Rain water tanks ML	2,430	2,509	2,589	2,669	2,751	2,834

6.12 Sewage disposal charge volumes

South East Water bills residential and non-residential customers volumetric sewage disposal charges (SDC) based on an assumed volume of metered water into a property returning to South East Water's sewerage network as sewage.

For the 2013–18 Water Plan, South East Water proposes to estimate billable sewer volumes based on a single proportion of metered water volume (houses 75 per cent and units and flats 85 per cent). South East Water also makes adjustments for about 26,000 of its water only customers who do not discharge to the sewer. Refer to section 10.3 for further information on this proposed change.

Non-residential billable sewer volumes are difficult to estimate as there is little consistency between non-residential customers. For example, parks and gardens, commercial customers and trade waste customers all have different disposal patterns. As a result, a relationship between water consumption and sewer volumes has been derived for non-residential customers based on either the customer's industry profile or a specific understanding of the customer's business practices.

6.13 Trade waste

Trade waste customer's sewer discharge requires greater management and can have significant treatment impacts on the sewage system.

South East Water is proposing to change its fixed trade waste tariffs from a volume-based annual charge to a risk rank based annual charge to better reflect the risks, service levels and history of compliance that individual trade waste customers place on the system. Refer to section 10 for more information on this change. Initial forecasts of the numbers of trade waste customers in each risk rank category have been based on an assessment of existing customers according to the risk rank criteria.

South East Water forecasts the growth in trade waste customers based on an eight year average growth in customers – this equates to an approximate growth of 190 trade waste customers per annum, with the majority within the low risk rank 5 category.

South East Water also charges trade waste customers who meet specific criteria on the basis of the volume of pollutants contained within their waste – biological oxygen demand (BOD), total nitrogen (TKN) and suspended solids (SS). South East Water is forecasting trade waste volumes and pollutant loads to grow annually by 0.5 per cent, consistent with non-residential demand.

6.14 Non revenue sewer

South East Water's sewage network experiences a range of flows in addition to volumes from our residential and non-residential customers. This includes inflow and infiltration (I/I), unbilled water meter flows and illegal connections to South East Water's sewage network. All of these impact on the bulk flows to Melbourne Water's sewage treatment plants and our sewage treatment plants. South East Water does not collect revenue as a result of these flows but does incur charges from Melbourne Water.

The most significant component of non-revenue sewer is I/I, which increases the bulk sewer volumes that are charged by Melbourne Water (forecast to be 24,775 ML in 2012–13). South East Water forecasts growth in I/I over the 2013–18 regulatory period of 375 ML per annum as a result of continued expansion of South East Water's sewage network and increasing inner Melbourne densification, which is leading to greater I/I flows.

6.15 Bulk sewage forecasts

It is assumed from South East Water's EUM that over 98 per cent of all indoor usage flows directly to the sewer. However, South East Water had approximately 26,000 water only customers in 2010–11 who do not have a sewer connection. These customers have their own on-site sewage treatment process or septic tanks and use approximately 6 GL of water every year. This water use has been removed from the flows that are attributed to sewer so that sewer flows are not overestimated.

It is assumed from the EUM that no outdoor usage flows directly to sewer.

As described above, South East Water has assumed that 19 per cent of residential customers currently have rainwater tanks and that this will grow over the 2013–18 regulatory period, with more than 50 per cent of new houses expected to install them. A significant proportion of this volume will flow through to the sewer as a result of many tanks being plumbed to toilets. It has been assumed that 10 per cent of all existing houses use rainwater tanks for indoor usage, (for example, toilets, hand basin washing and clothes washing machines) and that 100 per cent of this volume flows through to the sewer. This also includes adjustments for recycled water that is used internally and flows to the sewer, as well as bulk sewer flows.

South East Water also adjusts bulk sewer flows to include non-revenue sewer flows.

6.16 Total demand forecasts

The following tables outline South East Water's proposed water, sewage and trade waste demands, customer forecasts and bulk demand for the 2013–18 regulatory period. These are based on the end use demand assumptions, customer behaviour, bounce back from restrictions, and Victoria in the Future 2012 forecasts.

Table 6.4 Forecast customer numbers by tariff category

Customer numbers	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Number of water customers – residential	607,195	616,924	639,401	661,880	670,882	680,830
Number of water customers – non-residential	51,255	52,152	53,042	53,928	54,828	55,743
Number of sewer customers – residential	580,798	590,527	614,063	637,584	648,433	659,265
Number of sewer customers – non-residential	46,550	47,447	48,338	49,224	50,123	51,039
Trade waste risk rank 5		9,616	9,808	10,005	10,206	10,410
Trade waste risk rank 4		179	177	176	174	172
Trade waste risk rank 3		101	101	100	100	99
Trade waste risk rank 2		32	33	34	34	35
Trade waste risk rank 1		32	32	33	33	33
Recycled customers - residential total	5,833	8,713	11,417	14,092	16,602	19,112
Bunyip customers – residential	177	178	179	180	181	182
Bunyip customers – non-residential	148	150	152	154	156	158
Fire service customers	17,793	18,093	18,392	18,692	18,991	19,291

Table 6.5 Forecast volumes by tariff category

Demand	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Residential block 1 (kL)	68,480,500	67,590,256	67,332,450	67,766,821	68,140,463	68,343,297
Residential block 2 (kL)	15,432,332	15,527,774	15,429,022	15,598,969	15,727,895	15,764,469
Residential block 3 (kL)	5,264,689	5,479,331	5,443,014	5,454,558	5,463,213	5,462,573
Non-residential sales (kL)	28,948,579	28,614,304	27,913,966	28,155,509	28,405,708	28,483,576
Residential sdc (kL)	60,060,455	64,587,519	64,520,722	65,216,358	65,764,400	66,106,654
Non-residential sdc (kL)	14,950,385	14,756,523	14,440,431	14,568,289	14,700,530	14,831,590
Trade waste (kL)	5,390,855	5,465,512	5,465,795	5,492,674	5,517,646	5,543,275
Billable bods (kg)	7,848,261	7,952,503	7,952,915	7,992,025	8,028,361	8,065,652
Billable ss (kg)	3,530,946	3,577,174	3,577,359	3,594,951	3,611,296	3,628,070
Billable tkn (kg)	417,601	422,132	422,154	424,230	426,159	428,138
Volume of recycled water – residential consumer (kL)	407,248	582,636	752,799	902,869	1,052,701	1,202,271
Volume Bunyip Main Race – non-residential (kL)	75,649	75,649	75,649	75,649	75,649	75,649
Non-revenue water (kL)	13,230,515	13,330,844	13,427,720	13,531,829	13,640,213	13,748,209

Table 6.6 Forecast bulk volumes

Bulk demand	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Bulk water demand (ML)	131,357	130,543	129,546	130,508	131,377	131,802
WTP bulk sewer (ML)	27,418	26,714	26,433	26,350	26,608	26,820
ETP bulk sewer (ML)	75,927	76,683	77,491	78,200	78,696	79,206
Total bulk sewer (ML)	103,346	103,397	103,924	104,550	105,304	106,026

7. New customer contributions

Currently, new customer contributions (NCC) are charged to ensure that new customers contribute to the costs of the major infrastructure that is required to connect them to water, sewerage and recycled water networks. Major assets are currently funded by South East Water, while smaller assets installed to connect new customers to the network are funded by developers.

South East Water is currently participating in a working group with the Essential Services Commission (ESC) to review the NCC framework for the 2013–18 Water Plan and the approach used to calculate NCCs. This methodology will be included in the ESC's Final Decision expected in June 2013.

7.1 Current situation

At present, new customers are charged a nominal contribution fee, which is based on their potential impact on the water, sewerage or recycled water network. Smaller than average blocks pay a smaller fee and larger than average blocks pay a higher fee. Customers who have recycled water connected pay a contribution for recycled water and pay a reduced drinking water contribution. While this approach is simple to administer and, to some degree, reflects the impact customers have on the system, the charges often do not reflect the actual costs. Therefore, the remainder of South East Water's customers contribute to a proportion of connection costs for new developments.

For the purpose of this Water Plan, South East Water has forecast the collection of NCCs based on the current framework. This approach will be revised and an alternative proposal provided once the ESC review has reached a conclusion (expected to be in late 2012). South East Water's expectation is that the final NCC model will take into account the following core objectives:

- Efficiency
- Equity
- Consistency
- Transparency
- Accountability

7.2 Asset definition

As noted, there is currently a distinction between the assets provided by South East Water and the assets provided by developers. We propose to retain the long-term industry practice of developers paying for water (drinking and recycled) and associated assets less than 150 mm in diameter, and sewer and associated assets less than 225 mm in diameter (reticulation size). South East Water will fund the larger water, sewer and associated reticulation assets. South East Water believes that this approach is clear, reasonable and easy to administrate.

7.3 Brought forward charges

A brought forward charge is applied when a customer seeks to bring forward the construction of assets earlier than when South East Water had planned to construct them, as identified in our published Development Servicing Plans (DSP). The customer is charged the financing cost associated with building the asset earlier to ensure the remainder of the customer base is not disadvantaged.

At present, these charges are calculated based on the number of years the asset construction is ahead of schedule. There are three categories:

- Less than five years
- Six to 15 years
- Greater than 16 years.

This approach was introduced at the last price review and our experience is that rather than simplifying the negotiation process with developers, it actually complicates it. This is particularly the case when a development is close to the cut-off between ranges. For example, the financial outcomes for a development being assessed as six rather than five years away are significant and there is no middle ground.

South East Water is proposing that the charge be based on the exact number of years that the development is ahead of schedule, based on the published DSP timing. This is consistent with South East Water's existing practice for brought forward charges for the sewer backlog program and the methodology used in the 2005–08 price determination. This ensures that customers whose developments are near the transition points

in the above ranges do not pay more than necessary. This approach provides both water businesses and the development industry with transparency as the DSPs are developed in consultation with the land development industry, other government authorities and local government. It will facilitate development at a minimum community cost, while providing appropriate price signals.

7.4 Sewer backlog program

As outlined in section 5.4, South East Water has a sewer backlog program to connect unsewered properties to the sewerage network. The scheme replaces aging and failing septic tanks, resulting in significant improvements to public health and the environment. This section outlines the proposed changes to the charges for customers connecting to the sewerage network.

7.4.1 Standard backlog charge

At present, customers who have the ability to connect to the sewerage system for the first time as part of the sewer backlog scheme are charged a standard $500 contribution, which they pay over five years ($25 per quarterly bill). This charge has not changed since the 1990s.

South East Water is proposing to increase the standard contribution to $1,500, which will continue to be payable over five years ($75 per quarterly bill). The new charge would better balance the financial impact on sewer backlog customers and the financial impact on the rest of the customer base, which is currently funding the shortfall based on the environmental benefits the program provides. In recognising the environmental benefits and economies of scale associated with early connection, South East Water is also proposing to provide an incentive for sewer backlog scheme customers to connect as soon as possible. South East Water is proposing that where a sewer backlog customer connects within 18 months of completion of the scheme, the customer backlog charge will be capped at $525, charged at $75 per quarter. Customers connecting to the backlog scheme more than 18 months after the network has been made available will continue to pay the $75 per quarter charge until the maximum contribution of $1,500 has been reached.

While it remains at less than cost, the new charge would:

- better balance the financial impact of sewer backlog connections between sewer backlog customers and the rest of the customer base
- provide customers with an incentive for early connection which brings forward associated environmental benefits
- reflect the increased costs of connection once South East Water field crews have left the area and have to be re-established to perform one or a small number of connections.

7.4.2 Brought forward backlog charge – standard backlog

Currently, it is possible for customers to get connected to the sewerage system ahead of the scheduled sewer backlog program by paying a brought forward charge associated with delivering the assets ahead of schedule, as described in Section 7.3.

This charge means that the individual customer funds the financing costs associated with constructing planned infrastructure ahead of schedule.

South East Water is proposing to retain its existing methodology. The charge should be based on the exact number of years that the development is ahead of schedule. South East Water has a servicing schedule in place for backlog customers that has been developed in conjunction with community stakeholders, local government and the Environment Protection Authority (EPA). This ensures that the remainder of South East Water's customer base is not disadvantaged as a result of the assets coming onto South East Water's regulatory asset base earlier than planned.

7.4.3 Brought forward backlog charge – customer led

As outlined in Section 5.4, South East Water now has an increased demand for sewerage connection, ahead of schedule, primarily from customers in Portsea and Sorrento. Consequently, we are proposing to rollout a significant program, offering early connections to customers in these areas on the basis that they will pay for the additional costs associated with accelerating the sewer backlog program.

This approach provides a better outcome for all customers as there are cost efficiencies that will be gained from delivering the required infrastructure in a shortened timeframe.

Connecting to backlog sewerage is optional for customers and there would be no obligation for customers who are offered early connection to take it up. Customers who wish to take up the offer would be charged a customised fee based on the number of years away their connection would be under the standard program, ranging from approximately $6,000 to $15,000, depending on when customers are scheduled for connection under the standard sewer backlog program. This approach is based on the existing model for brought forward backlog charges and is consistent with South East Water's proposed approach for other areas.

8. Form of price control

South East Water's prices for the current regulatory period were set in real terms for each tariff in its 2009 price determination. Under section 3 of its current price determination, South East Water is required to apply to the ESC, with a supporting tariff strategy, for any change in individual prices from those included in the price determination. For the 2013–18 regulatory period, South East Water is proposing that its prices be set via a weighted average price cap (or tariff basket), which provides flexibility in making individual price changes during the regulatory period. This may account for a number of changes in circumstances, including:

- tariff restructures
- customers not responding to price signals
- demand
- the introduction of new choice tariffs.

While South East Water recognises the certainty a revenue cap form of price control would offer, it is not our preferred option because:

- businesses have less incentive to reduce costs
- customer growth does not provide additional revenue therefore it is difficult for businesses to fund growth
- demand variations over the period will require price adjustments on an annual basis to ensure the full revenue cap is collected. This could lead to significant price variability for customers.

Under a tariff basket approach, South East Water would have more flexibility to adjust its tariffs during the regulatory period, subject to the overall revenue constraint in that year, and an upper real price increase limit of three percent to ensure customers are not adversely affected. South East Water proposes that compliance with the requirements of the tariff basket be confirmed as part of the ESC's annual tariff approval process.

If South East Water seeks to increase individual prices above the upper 3 per cent constraint, it is proposed that the current determination requirements apply, including ESC approval and further justification of the proposal, supported by a new tariff strategy.

During the 2005–06 to 2007–08 regulatory period, South East Water implemented this approach and was deemed by the ESC to be compliant with the Water Industry Regulatory Order.

8.1 Ordering water from the desalination plant – annual price adjustment

Our bulk water charges from Melbourne Water include the variable costs of ordering water from all of our different water sources. In future this may include the costs associated with ordering water from the Victorian Desalination Plant (VDP).

Melbourne Water has developed its Water Plan on the basis of a default zero GL order of water from the desalination plant. This ensures that customers only pay for water that is actually ordered. A process to determine whether water from the desalination plant is required will be undertaken on an annual basis, and will be based on water storage levels and supply risks.

As outlined in table 8.1, the water order could vary each year from between 0 GL to 150 GL, which may result in an increase of up to 5.8 per cent in customer bills. For example, an order of 50 GL of water from the plant will result in a price increase of approximately 1.4 per cent and an average customer's bill would increase by an additional $12 in that year. If the water order is reduced by 50 GL in the following year, then prices will decrease by 1.4 per cent.

Table 8.1 Incremental price and bill impact if water from the desalination plant is ordered

Order of water	Percentage price increase (per cent)	Indicative annual bill increase for average customer ($)
50 GL	1.4	12
75 GL	2.1	18
100 GL	3.2	26
125 GL	4.4	37
150 GL	5.8	48

If Melbourne Water purchases water from the desalination plant, we are proposing that it passes these costs on to South East Water (and the other water retailers) through an annual price adjustment. This mechanism must also enable South East Water to pass these increases on to customers on an annual basis.

8.2 Melbourne Water – other changes to costs associated with the VDP

Beyond variability in water orders, there may be other material changes in costs associated with the desalination contract. We aim to avoid another occurrence of over-recovery.

Melbourne Water will work closely with its customers and the ESC to ensure there is adequate pricing flexibility during the 2013–18 regulatory period to respond to future changes. South East Water agrees with the following principles proposed by Melbourne Water:

- Cost changes should be known with certainty and be auditable.
- Cost changes should be material.
- Cost increases and decreases should be considered to ensure future under or over-recovery situations do not arise.
- Prices should only be adjusted following a transparent process in relation to cost changes, overseen by the ESC.

In addition to these principles, South East Water believes that any consideration of potential amendments to pricing takes into account the following:

- When making a decision about whether cost changes can be passed on, the potential customer impact must be taken into account.
- Retailers must be able to pass increases or decreases on to customers.

8.3 Other unforeseen events

South East Water also supports the inclusion of an uncertain or unforeseen events mechanism in the price determination to ensure that events outside of our current understanding can be adequately dealt with. South East Water also recommends that the nature of potential unforeseen events not be constrained (as is the case in the current price determination).

South East Water would prefer to commence the regulatory period with a degree of certainty around what would constitute grounds for varying a price determination. For instance, a clear understanding of how much original estimates can vary before being considered material and the process that the ESC will use to decide how to deal with the variance.

9. Revenue requirement

South East Water's revenue requirement reflects the costs we need to recover through prices. It includes:

- the return on South East Water's assets, which is the expected value of our regulatory asset base (RAB) estimated for each year of the regulatory period, multiplied by the weighted average cost of capital
- expected regulatory depreciation of new and existing assets
- expected total operating expenditure, such as:

> water and sewage bulk charges from Melbourne Water

> South East Water's controllable operating expenditure

> environmental contribution and other licence fees

- expected tax.

The following sections outline the assumptions used to calculate South East Water's revenue requirement for the 2013–18 regulatory period.

9.1 Regulated asset base

As outlined in table 9.1, the opening regulatory asset base (RAB) for 2013–14 has been calculated by:

- adding actual capital expenditure from each year of the current period to the opening RAB in 2009–10
- subtracting actual customer contributions, any government contributions, asset disposals and regulatory depreciation.

South East Water has included forecast capital expenditure for 2012–13 rather than the determination value, as per the approach the Essential Services Commission (ESC) recommended in its guidance paper. This is due to South East Water projecting a change from the determination's allowance. Therefore, we considered it appropriate to use an updated expenditure forecast for 2012–13 to determine the 2013–14 opening asset base. South East Water will provide updates to the ESC on the 2012–13 capital expenditure forecast during the review process to ensure the expenditure included in the opening RAB is as close to actual as possible .

Table 9.1 Regulatory asset base 2009–13 ($ million, 1 January 2013 dollars)

Regulatory asset base	2009-10	2010-11	2011-12	2012-13
Opening RAB	2,164.8	2,297.6	2,423.1	2,524.46
Gross capital expenditure	197.4	202.2	175.7	208.9
Customer contributions	20.7	23.8	22.3	25.8
Government contributions	1.6	0.0	0.0	0.0
Disposals	0.0	5.0	1.2	1.2
Regulatory depreciation	42.4	47.8	50.7	52.4
Closing RAB	2,297.6	2,423.1	2,524.6	2,654.0

To calculate the closing RAB for each year of the 2013–18 regulatory period, forecast capital expenditure has been added to the opening RAB, then customer and any government contributions are added, and regulatory depreciation is subtracted. South East Water continues to calculate regulatory depreciation as per the approach used in the current regulatory period. Existing assets are depreciated on the basis of an average asset life and new assets are depreciated using a straight line approach, based on the estimated asset lives for the individual asset types. South East Water 's Northern Victoria Irrigation Renewal Project bulk entitlement has been excluded from the calculation of regulatory depreciation on existing assets.

The following table outlines South East Water's proposed opening and closing RAB for each year of the 2013–18 regulatory period. The average of the opening and closing RAB of each year is then used to determine the return on assets that is included in the revenue requirement.

Table 9.2 Regulatory asset base 2013–18 ($ million, 1 January 2013 dollars)

Regulatory asset base	2013–14	2014–15	2015–16	2016–17	2017–18
Opening RAB	2,654.0	2,851.2	3,019.7	3,148.0	3,257.6
Gross capital expenditure	269.8	251.8	218.8	200.7	193.6
Customer contributions – cash	24.9	30.5	30.2	25.0	24.9
Government contributions	0.0	0.0	0.0	0.0	0.0
Disposals	4.3	1.2	1.2	1.2	1.2
Regulatory depreciation	43.4	51.5	59.2	64.9	68.3
Closing RAB	2,851.2	3,019.7	3,148.0	3,257.6	3,356.7
Average RAB	2,752.6	2,935.5	3,083.8	3,202.8	3,307.1

9.2 Weighted average cost of capital

To determine return on assets for the 2013–18 regulatory period, South East Water has applied a weighted average cost of capital (WACC) of 5.1 per cent, which is consistent with the WACC that was used to set prices in the current regulatory period. South East Water understands that the ESC will update the WACC estimate, accounting for a recalculation of the risk-free rate and the debt margin, prior to making its final decision. South East Water believes that the ESC needs to consider long-term trends when setting the WACC for the five year regulatory period. Given current market conditions and volatility, the proposed 40 day trading period to calculate the risk-free rate may be inappropriate.

9.3 Revenue requirement

Based on the assumptions used to calculate the return on assets and regulatory depreciation, the estimated tax and the operating expenditure forecasts, the following table provides South East Water's proposed annual revenue requirement for the 2013–18 regulatory period.

Table 9.3 Proposed annual revenue requirement, 2013–18 ($ million, 1 January 2013 dollars)

Revenue requirement	2013–14	2014–15	2015–16	2016–17	2017–18	Total
Return on assets	140.4	149.7	157.3	163.3	168.7	779.4
Regulatory depreciation	43.4	51.5	59.2	64.9	68.3	287.3
Bulk charges	542.4	538.6	538.1	537.5	536.1	2,692.7
Controllable operating expenditure	123.9	123.9	119.7	119.7	120.2	607.3
Environmental contribution and other licence fees	29.0	29.0	29.0	29.0	29.0	144.8
Tax	5.9	8.3	9.6	9.7	10.2	43.7
Benchmark revenue requirement	884.8	901.0	912.8	924.1	932.5	4,555.1

10. Tariff Structures

South East Water has used customer insights to review its standard tariff structures and proposes the following changes for the 2013–18 period:

- Making our charges easier for customers to understand
- Improving the balance of customer impacts, for example customers who receive a similar service should receive similar charges
- Removing any inconsistencies in current tariffs
- Ensuring charges are more reflective of the actual cost to provide the services.

This review has also taken into account government policy, the Essential Services Commission's (ESC) tariff assessment principles and other stakeholder feedback.

It has specifically focused on South East Water's core charges, such as the water service, water usage, sewerage service and sewage disposal charges. We have worked closely with customer groups and individual customers, particularly those who might be affected by the proposed changes, to understand their needs and inform them of our plans.

We were committed to open and transparent discussion regarding the proposals in our draft water plan and encouraged customers and community groups to provide feedback.

As part of the consultation process for the draft Water Plan, South East Water interviewed customers and customer groups, consulted with the customer advisory committee and tested the proposed tariff structure changes by surveying approximately 400 South East Water customers. The following outlines the current situation in relation to tariff structures, the identified issues, what we proposed in the draft Water Plan and customer feedback, and our proposed tariff structures for the 2013–18 regulatory period.

10.1 Water usage charges

The current situation	Drinking water is currently charged using a three tier pricing model, as shown below. The tiered system is designed to encourage sustainable water use as customers pay a progressively higher unit price in the second and third tiers. This was considered particularly important when Melbourne was experiencing lower than average rainfall. **Water usage charges 2012–13** Tier one (for the first 440 litres of water used per day) $1.75 per kilolitre Tier two (for water usage above 440 and up to 880 litres per day) $2.13 per kilolitre Tier three (for water usage above 880 litres per day) $3.44 per kilolitre
What is working?	• Customers have told us that they believe a three tier model encourages them to save water. • Customers also believe that a three tier model is preferred for those who use small amounts of water.
What's not working?	• Higher volume users, such as large families, can be disadvantaged by being charged at the third tier as this applies on a per household basis, regardless of the number of people living there. Large, financially challenged households can have limited ability to invest in water efficient appliances to reduce water use. • The three tier model is not reflective of actual costs incurred to supply the water and therefore some customers pay less and some pay more than the actual cost.

What we suggested in the draft Water Plan	• To simplify our drinking water pricing model (the water usage charge) from three tiers to two. • However, we recognised that moving to a single tiered model (for simplicity) or retaining the existing three tiered model (to potentially provide stronger water efficiency incentives) were both realistic alternatives. We believed our proposal would: • be easier for customers to understand • better demonstrate to customers the actual cost of water • balance the impact of variable charges and was more equitable to large families Non-residential customers would be charged a flat water usage charge, equivalent to the second residential price tier, as is the current approach.
Customer feedback	**Interview feedback** • Interviewees representing residential customers supported the move to a two tier pricing structure, with a transition over the period. **Survey feedback** • 45 per cent of residential customers supported the retention of the three tier pricing model. • 35 per cent of customers supported moving to a one or two tier model.

Our proposals

Residential customers	Although we received some support for moving to two tiers, given the outcome of the customer survey we are proposing to retain the current three tiered approach. However, we are proposing to adjust the price differential between the second and third tiers to: • ease the impact on large families • ensure that the third tier does not rise significantly out of step with costs • better reflect industry cost structures given the recovering water storages and recent supply augmentations, like the Victorian Desalination Plant.
Non-residential customers	Retain the current approach for setting the non-residential variable water charge. We plan to set it at the same price as the second residential tier for non-residential customers.

10.2 Water and sewerage service charges

The current situation	• South East Water collects water and sewerage service charges from residential and non-residential customers on the basis of the title of their property. This means that customers who are on an individual title or strata title pay a service charge for each dwelling. • There are a small number of dwellings (approximately three per cent of South East Water's customer base) whose dwellings are on shared titles, including some apartments units and other multi-dwelling properties. They only pay one service charge for all dwellings on that title.
What's not working?	• All residential customers receive the same benefits from the availability of a water supply service to their property, however not all pay for it. • Most customers who own properties in multi-dwelling blocks pay a service charge, but some customers who own units or flats on a single title do not. • Therefore customers on individual titles are effectively subsidising people whose properties are not individually titled.
What we suggested in the draft Water Plan	• We proposed a common water service charge for all residential properties, billed to the property owner. • We recognise that there are customers who will receive water and sewerage service charges for the first time and will be affected by this change. Therefore, South East Water proposed to phase this service charge in over the period, from 2014–15 onwards. • This does not actually increase South East Water's revenue. It simply spreads the charges evenly across all customers, minimising price increases.
Customer feedback	**Interview feedback** • All interviewees thought the suggested change was fair and were happy to see it brought in over the coming pricing period. **Survey feedback** • Comments were mostly around equity, for example: "It seems fair that everyone using these services pays a share." • Customers strong support was given for the suggested change with 50 per cent supporting and 21 per cent opposing the change. • Customer agreed that these charges should be phased in, with 69 per cent preferring the charges to be phased in over at least two years.
Our proposals	• A common water service charge for all residential properties, billed to the property owner. • We recognise that this change will significantly impact on some customers. Therefore, we are proposing to introduce this service charge over two years from 2014–15 onwards.

10.3 Sewage disposal charge

The current situation	• The sewage disposal charge (SDC) covers the safe collection, treatment and disposal of sewage. • It is not possible to meter the amount of sewage disposed. Instead, the charge is based on the amount of water supplied to a customer's property, less an allowance for water that is not likely to find its way into the sewerage system, for example, garden usage. • The SDC charge is also currently adjusted to reflect higher outdoor usage in warmer months (when a lower proportion of water consumed flows into the sewerage system) and lower outdoor use in cooler months. It is also adjusted for customers with high water consumption and customers who can demonstrate that their discharge is actually different.
What's not working?	• The current formula is difficult for customers to understand and no longer reflects the consumption patterns of Melburnians who, overall, are using less water in their gardens.
What we suggested in the draft Water Plan	• For residential customers, we proposed a flat discharge factor across the whole year and for all levels of consumption. The discharge factors proposed are 75 per cent for houses, which can discharge more water into their gardens and 85 per cent for units and flats, which have limited or no ability to discharge water outside. • This approach will make bills easier to understand and will not change the bill amount for most customers.
Recycled water customers	• We also suggested that the SDC for recycled water customers would be the same as for all other residential properties. While recycled water customers generally discharge less drinking water to the sewer, they do discharge recycled water to the sewer, through internally plumbed appliances such as toilets.
Customer feedback	**Interview feedback** • A simple methodology is a better idea and makes the cost of water and sewerage services easier to understand and more transparent. **Survey feedback** • There was no clear preference for any particular change to the existing tariff > Market research indicated customers see it as a technical matter for the utility to decide. • Customers have a strong preference for simplicity. • Customers are comfortable with a variable charge for sewage disposal and treatment. This charge helps maintain the current proportion of variable charges on the bill.
Our proposals	
Residential customers	To retain the variable SDC charge and simplify it by: • removing seasonal factors • introducing a single flat discharge factor > consistent with flatter annual usage patterns > houses – 75 per cent of water volumes > apartments – 85 per cent of water volumes • removing the incremental decrease (0.9 0.45) in discharge factor with increased water usage • continuing to make individual adjustments for customers who are systematically and substantially overcharged.
Non-residential customers	• No change – we will continue to apply the SDC to reflect each customer's proportion of water discharged to the sewer or that of the industry average.

10.4 Recycled water usage charge

The current situation	• The use of recycled water is not subject to water restrictions and, unlike drinking water, is charged at a rate that does not vary with volume used. • At present, recycled water is charged at the same price as the lowest tier for drinking water.
What's not working?	• Feedback from recycled water customers tells us that the recent easing of water restrictions has reduced the value they place on recycled water, as previous benefits (such as watering the garden and lawn) are now available to all customers. • We need to provide our recycled water customers with an appropriate incentive to use recycled water so that we can reduce our reliance on drinking water for non-drinking water purposes, which benefits everyone. • There is a relatively high cost for delivering recycled water to homes through a network of purple pipes and the charges to individual recycled water customers do not reflect the full cost of supply. Reducing the price of recycled water increases the cross-subsidy from all other customers.
What we suggested in the draft Water Plan for 2013–14	To set the recycled water usage charge at 85 per cent of the first step of the water usage charge.
For 2014–15 onwards	From 2014–15, we stated that we would consider breaking the link between the recycled water and drinking water charges and develop a new price for recycled water that is independent of the drinking water price.
Customer feedback	**Interview feedback** • There were mixed feelings about recycled water subsidies paid by non-recycled water customers, particularly if those customers do not have access to the resource and/or can't afford the subsidy **Survey outcomes** • The most common response was that the price should be kept at its current level – 40 per cent selected this option. However, a significant proportion of respondents (35 per cent) favoured a reduced price. • 15 per cent supported a 15 per cent reduction and 20 per cent supported a 30 per cent reduction in the first year.
Our proposals	
Residential customers	• To set the recycled water usage charge at 85 per cent of the first tier of the water usage charge for 2013–14. This will give recycled water customers an incentive to use recycled water while reducing the subsidy paid by the remaining customer base. • To break the link between residential recycled water pricing and drinking water pricing from 2014–15 onwards.
Non-residential customers	• We are proposing to retain the current approach to setting recycled water prices for non-residential customers, consistent with the recycled water pricing principles set out in our current price determination.

10.5 Annual trade waste charges

The current situation

Annual trade waste charges for non-residential customers are based on the volume of waste that is discharged by a trade waste customer.

What's not working?

This method is not reflective of the costs that South East Water incurs to ensure effective management of trade waste. Actual costs are directly related to the level of risk associated with a customer's waste, rather than the volume of waste.

What we proposed in the draft Water Plan

- We proposed that the annual trade waste fixed charges be based on a risk ranking for each trade waste customer rather than the volume of trade waste.
- This change will provide a better incentive for customers to manage the quality of their trade waste and to ensure that low risk customers are not subsidising high risk customers.
- All trade waste customers will be assigned a risk rank based on their:
  - > location in relation to the treatment plant
  - > volume and quality of discharge
  - > business activities
  - > compliance history.
- The table below shows typical customer types, contaminants and the risk ranking that is likely to apply where one is the highest risk and five is the lowest risk. These are only indicative as a large food manufacturer, manufacturer, for example, may fall under any risk ranking depending on site specific assessment.

Risk ranking	Typical industry type	Typical contaminants discharged
1	Abattoir	Ammonia, salts, sulphide, suspended solids
	Poultry processing	Ammonia, salts, proteins, temperature
2	Food manufacturer	Ammonia, salts, organics, suspended solids
	Textile manufacturer	Ammonia, salts, colour, sulphides
3	Metal finisher	Heavy metals, suspended solids, acids
	Small cheese manufacturer	Salts, suspended solids, ammonia
4	Radiator repairer	Salts, suspended solids, ammonia
	X-ray centre	pH, silver
5	Cafes and restaurants	Grease, oils, fats
	Service stations	Petrol, oil

- We also proposed to remove our current food waste annual charges and to move those customers onto the standard annual trade waste charges.

Customer feedback

Interview feedback

- Non-residential stakeholders understood South East Water's drivers for change to risk-based charges, and considered it to be a logical approach.
- Interviewees also suggested the ranking should be based on risk and performance, with incentives offered to reduce a risk ranking through careful waste management.

Our proposals

- Consistent with our draft Water Plan, we are proposing that the annual trade waste fixed charges are based on a risk ranking for each trade waste customer rather than the volume of trade waste.
- We are also proposing to remove our current food waste annual charges and move those customers onto the standard annual trade waste charges.

10.6 Inorganic total dissolved solids charge

The current situation	• The Melbourne water businesses have assessed the potential impact of inorganic total dissolved solids (ITDS), or salt, in trade waste on recycled water. Due to the efforts of trade waste customers in the Eastern Treatment Plant catchment, current ITDS levels in recycled water are acceptable, although work will need to continue with these customers to maintain the required levels. Further work is also required to address salt levels in the Western Treatment Plant catchment. • Excess salt can impact the ability to recycle waste for use as recycled water. • As a result, Melbourne Water currently charges South East Water for each tonne of ITDS that is discharged by our customers. • South East Water does not pass this charge on to customers directly as the potential price (less than five cents per kg) is unlikely to change customer behaviour. We also believe that salt levels can be better managed through direct customer engagement.
What's not working?	South East Water has previously committed to giving further consideration to the introduction of an ITDS charge for trade waste customers.
What we suggested in the draft Water Plan	Before determining any specific direction in relation to ITDS, South East Water sought feedback from customers on potentially introducing an ITDS charge.
Customer feedback	**Interview feedback** Interviewees considered that the suggested changes to the ITDS charge wouldn't be sufficient incentive to reduce this type of waste, as the charge would be relatively small.
Our proposals	Given that current ITDS levels in recycled water are acceptable at the Eastern Treatment Plant, we are not proposing to introduce an ITDS charge.

10.7 Sulphur charge

The current situation	South East Water currently charges trade waste customers per kilogram of sulphur they discharge into the sewage network. This charge was introduced to ensure that South East Water's sewer network was not corroded by excess sulphur in customers' waste.
What's not working?	Recent research has shown that South East Water has relatively low rates of corrosion and other pollutants are potentially having a greater impact.
What we suggested in the draft Water Plan	We suggested removing the sulphur charge, as it is no longer considered necessary to send a price signal to reduce sulphur.
Customers feedback	**Interview feedback** Customers agreed that the suggested approach was logical and that the charge didn't provide incentive to alter discharge behaviour.
Our proposals	Consistent with the draft Water Plan, we are proposing to remove the sulphur charge.

10.8 Fire service charges

The current situation	• Customers who have a fire sprinkler system or a fire service receive a benefit in addition to their standard water service. Currently the fee charged for this service is less than the fee for a standard water service. • Customers are also not paying for water used through their fire service.
What's not working?	• Customers who receive the benefit of a fire service should pay a fee that recognises the cost of providing the service. • Customers need to be encouraged to use fire service water efficiently, where it can be metered.
What we suggested in the draft Water Plan	• We proposed that customers with a fire service pay the same charge for their fire service as for their water service. • We also proposed to charge customers for metered water from fire services that is used for non-fire fighting purposes at the same rate as their volumetric water.
Customer feedback	**Interview feedback** Interviewees supported the suggested changes to fire service charges.
Our proposals	• We are proposing that customers with a fire service pay the same charge for their fire service as for their water service. • We also propose to charge customers for metered water from fire services that are used for non-fire fighting purposes at the same rate as their volumetric water.

10.9 Transition of tariff structure changes

By correcting some inequities within South East Water's current tariff structures, and reducing cross-subsidies between customers, there is potential for the changes to impact on particular groups of customers. Given this, we propose to phase in some of the charges over a number of years. The following tables outline the proposed schedule for introducing residential and non-residential customer charges over the 2013–18 pricing period.

Table 10.1 Transition of residential tariff structure changes

Changes to...	2013–14	2014–15	2015–16	2016–17	2017–18
Water usage charge	Three tiers	Three tiers	Three tiers	Three tiers	Three tiers
Water and sewerage service charges based on connection	No change	50 per cent of total service charges for customers incurring it for the first time	100 per cent total service charges for customers incurring it for the first time	100 per cent total service charges for customers incurring it for the first time	100 per cent total service charges for customers incurring it for the first time
Sewage disposal charge	Simplify charge	Simplify charge	Simplify charge	Simplify charge	Simplify charge
Recycled water variable charge	85 per cent of tier one drinking water charge	As per tariff schedule	As per tariff schedule	As per tariff schedule	As per tariff schedule

Table 10.2 Transition of non-residential tariff structure changes

Changes to...	2013–14	2014–15	2015–16	2016–17	2017–18
Water and sewerage service charges based on connection	No change	50 per cent of total service charge for customers incurring it for the first time	100 per cent total service charge for customers incurring it for the first time	100 per cent total service charge for customers incurring it for the first time	100 per cent total service charge for customers incurring it for the first time
Water usage charge	Usage charge aligned with residential tier two	Usage charge aligned with residential tier two	Usage charge aligned with residential tier two	Usage charge aligned with residential tier two	Usage charge aligned with residential tier two
Trade waste charges	Risk rank trade waste annual fixed charges	Risk rank trade waste annual fixed charges	Risk rank trade waste annual fixed charges	Risk rank trade waste annual fixed charges	Risk rank trade waste annual fixed charges
Trade waste charges	Remove sulphur charge	Remove sulphur charge	Remove sulphur charge	Remove sulphur charge	Remove sulphur charge
Fire service charges	Introduce volumetric charge for fire service usage (metered customers)	Introduce volumetric charge for fire service usage (metered customers)	Introduce volumetric charge for fire service usage (metered customers)	Introduce volumetric charge for fire service usage (metered customers)	Introduce volumetric charge for fire service usage (metered customers)

11. Prices and customer impacts

This section outlines South East Water's proposed prices, average bill increases and customer impacts for the 2013–18 regulatory period.

11.1 Price path and average bill change

In August 2012, following a freeze on wholesale and retail prices in 2012–13 due to the return of funds collected for the Victorian Desalination Plant (DDP), South East Water released an addendum to its draft Water Plan. This proposed an average bill increase of 34.7 per cent in 2013–14. It also outlined that any increases in subsequent years would only reflect inflation and the cost of any water ordered from the Victorian Desalination Plant VDP. In the draft Water Plan addendum, two options were proposed for setting price paths:

- Matched – where revenue is matched to costs in the first year, consistent with the draft Water Plan. This resulted in an average bill increase of 34.7 per cent in 2013–14, before inflation, followed by only CPI increases.
- Smoothed – where price increases are smoothed over the five year period. This resulted in an average price increase of approximately 11 per cent per annum plus CPI.

A series of focus groups were held to gauge customer preference for their preferred price path. There was a slightly stronger overall preference for the smoothed option, however, the results were fairly even. The preference was driven by the individual's life stage, future plans and general behaviour. The biggest concern was the impact of the matched price path on hardship customers.

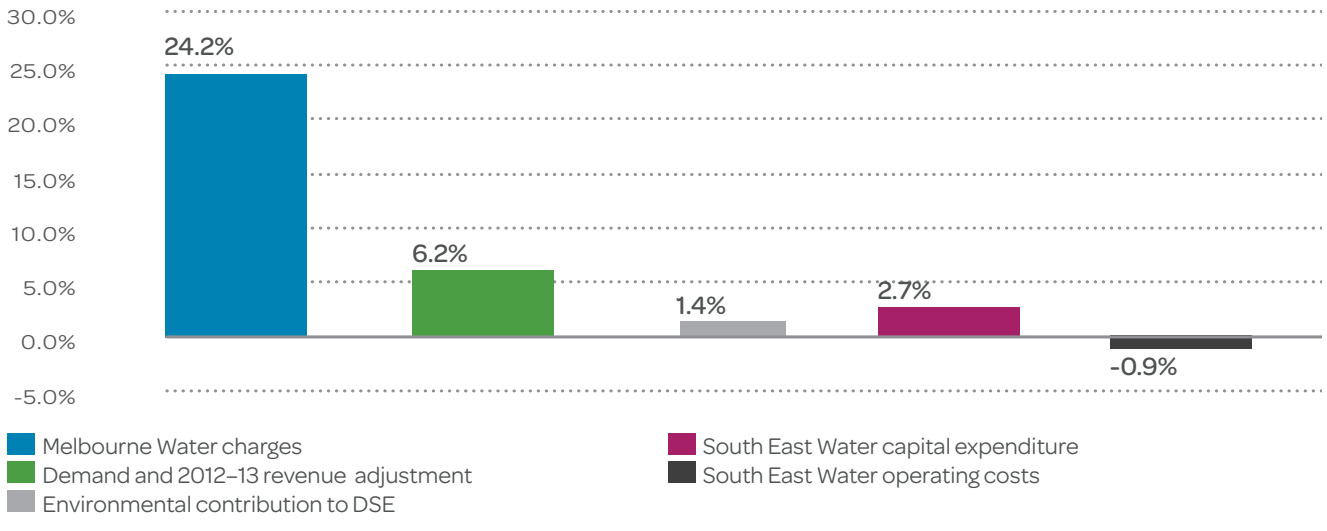
Given customer feedback was not strongly in favour of one approach and our preference was for a matched price path because it best reflects the actual costs and revenue, we propose a matched price path for 2013–18. This approach matches cost and revenues in each year of 2013-18 regulatory period and minimises potential price changes in 2018-19 resulting from a mismatch in revenue and costs in 2017-18.

In this final Water Plan, South East Water is proposing a one-off average bill increase in 2013–14 of 33.6 per cent, before inflation. This is based on forecasts for operating expenditure, capital expenditure, bulk charges and demand. It is anticipated any increases in subsequent years will only reflect inflation and the cost of any water ordered from the Victorian Desalination Plant (VDP).

We are doing what we can to minimise the impact of price increases on customers while continuing to deliver first class water and sewerage services and controlling our costs. Our original proposed average bill increase has been offset by a 0.9 per cent reduction, due to South East Water's controllable operating expenditure estimates being reduced significantly.

Figure 11.1 provides a breakdown of the drivers for the proposed 2013–14 price increase.

Figure 11–1 Breakdown of the proposed average bill increase in 2013–14



Melbourne Water's bulk charges are the major contributor to the 2013–14 bill increase, largely due to costs associated with the VDP. It has been assumed for the purpose of setting prices in this Water Plan that no water will be ordered from the desalination plant. However, as outlined in section 8.1, it is proposed that prices be annually adjusted to reflect the costs associated with the actual order for that year, if any. Other contributors to the average bill increase include:

- a one-off adjustment to address the difference between our costs and required revenue in 2012–13, and an adjustment for lower forecast demand used to set prices for 2013–18, compared with demand assumptions used to set prices for the current period
- a 70 per cent increase in the environmental contribution paid to the Department of Sustainability and Environment (DSE) – see section 4.6 for more information
- South East Water's proposed new capital expenditure (2.7 per cent).

11.2 Cost reflective tariffs

In the current pricing period, South East Water's prices do not accurately reflect the costs associated with providing water, sewerage and other services to customers, on a product basis. In our draft Water Plan, we proposed that during the 2013–18 pricing period, prices would be adjusted to reflect the different costs of supplying our water and sewerage services. Customers told us during the consultation phase they were satisfied with the suggested approach but thought that it was important to make sure people understand the reasons for the price increase.

Consistent with our draft Water Plan, we are proposing to adjust prices to reflect the different costs of supplying water and sewerage services. This will provide our customers with a better understanding of our actual costs and allow them to change their behaviour accordingly, including potentially changing to more efficient appliances or altering production processes. We acknowledge that increasing water prices will impact on water-only customers, although their bills will increase by less than an average water and sewerage customer (in dollar terms).

As outlined above, the proposed average bill increase will be 33.6 per cent in 2013–14. To better reflect the actual costs of water and sewerage services over the 2013–18 period, we are proposing that, for an average customer, the water component of their bill will increase by approximately 48 per cent, while the sewerage component will increase by approximately 24 per cent.

For sewerage prices we are also proposing to increase the fixed charge by a higher percentage, relative to the variable charge, to reflect that a higher proportion of costs associated with transfer and treatment of sewage are fixed.

Table 11.1 Proposed approach to allocating the 2013–14 price change across water and sewerage

2013–14 price change	Water (per cent)	Sewerage (per cent)	Average bill (145 kL)
Proposed approach price increases across water and sewerage to reflect costs	48	24	$1,136
Alternative approach same price increase across water and sewerage	33.6	33.6	$1,145

11.3 Fixed vs variable charges

We currently charge customers through a combination of fixed and variable charges for our water and sewerage services. This combination allows us to recover our costs, a large proportion of which are fixed, reflecting the significant amount of infrastructure required to deliver water and sewerage services (including 8,951 kilometres of pipes and pumps).

The variable (or usage) charges aim to provide signals to customers about the future costs of water demand and these make up about 50 per cent of the average water and sewerage bill. Variable costs, outlined in the bill, also reflect customers' water efficiency activities. In setting prices for the 2013–18 period, we are proposing to maintain a ratio of approximately 50 per cent fixed and 50 per cent variable charges in the average water and sewerage bill.

11.4 Proposed water and sewerage tariffs

The following tables outline our proposed tariffs for the 2013–18 pricing period. Specifically, the proposed tariffs reflect:

- a one-off price increase in 2013–14 before inflation followed by no real price changes from 2014–15 onwards (excluding CPI)
- a small price increase in residential and non-residential sewerage charges to reflect a small increase in sewerage costs
- a large price increase on water tariffs to reflect the increase in water costs, largely associated with the VDP
- a three tiered approach to the variable water charge for residential customers, though the proposed price differential between the second and third tiers has been adjusted to ease the impact on large families, and ensure that the third tier does not rise significantly out of step with costs
- the transition of the water and sewerage service charges for those properties on shared titles
- the residential recycled water variable charge set to 85 per cent of the first tier of residential water in 2013–14
- alignment of the fire service charge with the non residential water service charge
- the introduction of risk-ranked trade waste charges in 2013–14
- a zero per cent real price increase on other trade waste charges
- the removal of the sulphur and food waste charges.

Table 11.2 Proposed residential water and sewerage tariffs 2012–13 to 2017–18 (1 January 2013 dollars)

Residential tariffs ($)	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Water service charge	82.44	122.03	122.03	122.03	122.03	122.03
Water service charge (transition for properties on shared titles incurring this charge for the first time)		0.00	60.02	122.03	122.03	122.03
Sewage service charge	335.68	419.60	419.60	419.60	419.60	419.60
Sewage service charge (transition for properties on shared titles incurring this charge for the first time)		0.00	209.80	419.60	419.60	419.60
Variable water charge (water – kL)						
Tier one (0-440 litres/day)	1.75	2.59	2.59	2.59	2.59	2.59
Tier two (440-880 litres/day)	2.13	3.37	3.37	3.37	3.37	3.37
Tier three (>880 litres/day)	3.44	3.72	3.72	3.72	3.72	3.72
Sewage disposal charge	1.71	1.97	1.97	1.97	1.97	1.97
Recycled water charge	1.66	2.20	2.20	2.20	2.20	2.20

Table 11.3 Proposed non-residential water and sewerage tariffs 2012–13 to 2017–18 (1 January 2013 dollars)

Non-residential tariffs ($)	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Water service charge	82.44	122.03	122.03	122.03	122.03	122.03
Sewage service charge	398.64	498.30	498.30	498.30	498.30	498.30
Fire service charge	58.04	122.03	122.03	122.03	122.03	122.03
Water usage charge (water – kL)	2.13	3.37	3.37	3.37	3.37	3.37
Sewage disposal charge	1.71	1.97	1.97	1.97	1.97	1.97

Table 11.4 Proposed non-residential trade waste tariffs 2012–13 to 2017–18 (1 January 2013 dollars)

Non-residential trade waste tariffs tariffs ($)	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Annual agreement fees						
Risk-rank category 5	NA	375.0	375.0	375.0	375.0	375.0
Risk-rank category 4	NA	2,150.0	2,150.0	2,150.0	2,150.0	2,150.0
Risk-rank category 3	NA	4,300.0	4,300.0	4,300.0	4,300.0	4,300.0
Risk-rank category 2	NA	6,450.0	6,450.0	6,450.0	6,450.0	6,450.0
Risk-rank category 1	NA	12,900.0	12,900.0	12,900.0	12,900.0	12,900.0
Volume of trade waste (kL)	0.88	0.88	0.88	0.88	0.88	0.88
BOD (kg)	0.83	0.83	0.83	0.83	0.83	0.83
SS (kg)	0.47	0.47	0.47	0.47	0.47	0.47
TKN (kg)	1.83	1.83	1.83	1.83	1.83	1.83

11.5 Miscellaneous fees and charges

In addition to our water and sewerage charges, South East Water has a number of other fees and charges that are regulated by the Essential Services Commission (ESC). For the 2013-18 regulatory period, we have undertaken a review of these charges to ensure they reflect the actual cost of providing these services. The following table outlines the proposed prices for the key set of major miscellaneous charges for 2013-18. A number of other miscellaneous fees and charges have also been reviewed for the 2013-18 regulatory period, consistent with the ESC's pricing princicples, and will be updated in our pricing list published on our website.

Table 11.5 Miscellaneous fees and charges 2012–13 to 2013–18 (1 January 2013 dollars)

Miscellaneous fees ($)	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
20 mm meter plus delivery and installation	93.00	92.00	92.00	92.00	92.00	92.00
20 mm service connection to mains up to 300mm	320.00	325.00	325.00	325.00	325.00	325.00
Removal and testing of water meters	118.00	115.00	115.00	115.00	115.00	115.00
Application fee for connection of single residential property to water and/or sewer	45.00	50.00	50.00	50.00	50.00	50.00
Plan showing sewer location within a property	20.00	25.00	25.00	25.00	25.00	25.00
Backlog connection charge	500.00	See section 7.3				
Information statements all forms of lodgements (includes Melbourne Water share)	19.00	23.00	23.00	23.00	23.00	23.00
Restoration of supply at the meter	70.00	85.00	85.00	85.00	85.00	85.00
Application fee to build over South East Water asset or easement	49.00	60.00	60.00	60.00	60.00	60.00
Application fee non works	183.00	183.00	183.00	183.00	183.00	183.00
Non-core miscellaneous services	Actual cost	Actual cost	Actual cost	Actual cost	Actual cost	Actual cost

11.6 Customer impacts

Based on the price increase and tariff structure changes outlined above, the following tables outline customer impacts for a sample of typical customers. An average customer will see a 33.6 per cent (excluding CPI) increase in their bill in 2013–14. This means that an average household bill (145kL) will increase from $851 to $1,136 per annum or from $16 to $22 per week.

If there is an order of 50 GL of water from the VDP, then the average household bill will increase by approximately $12 from $1,136 to $1,148 per annum.

Table 11.6 Annual customer bills – from 2012–13 to 2013–14 (1 January 2013 dollars)

Indicative customer types	Water use kL	2012–2013 annual bill ($)	2013–14 annual bill ($)	Percentage change from 2012–2013
Single person	56 kL	584	780	33.6%
Couple living in a unit	80 kL	656	883	34.6%
Average customer	145 kL	850	1,136	33.6%
Two adults, two children with a small garden	230 kL	1,111	1,512	36.1%
Family who rent	230 kL	711	990	39.2%
Two adults, two children with a small garden – water only	230 kL	520	772	48.6%
Large water user	410 kL	1,851	2,438	31.7%
Large water user – water only	410 kL	1,043	1,413	35.4%

Note: For those customers with concession cards, the impact may vary according to the concession provided by the Department of Human Services (DHS). Currently the concession would reduce bills by a maximum of $277.

Table 11-7 Annual customer bills in 2017–18 (1 January 2013 dollars)

Indicative customer types	Water use kL	2012–2013 annual bill ($)	2017–18 annual bill ($)	Percentage change from 2012–2013
Single person	56 kL	584	780	33.6%
Couple living in a unit	80 kL	656	883	34.6%
Average customer	145 kL	850	1,136	33.6%
Two adults, two children with a small garden	230 kL	1,111	1,512	36.1%
Family who rent	230 kL	711	990	39.2%
Two adults, two children with a small garden – water only	230 kL	520	772	48.6%
Large water user	410 kL	1,851	2,438	31.7%
Large water user – water only	410 kL	1,043	1,413	35.4%

Note: For those customers with concession cards, the impact may vary according to the concession provided by the DHS. Currently the concession would reduce bills by a maximum of $277.

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