



2013-2018 Water Plan

September 2012



Summary of Barwon Water’s 2013 – 2018 Water Plan

Barwon Water’s 2013 Water Plan proposes a **0.0% price change for the next five years** (excluding CPI), and forecast a **0.0% price change for the subsequent five years** (excluding CPI), demonstrating the corporation’s commitment to delivering quality services to regional communities in an efficient and affordable manner.

The 2013 Water Plan covers the period from 2013/14 to 2017/18. Moving out of the 2008 Water Plan period will see the corporation exit a significant “build phase”, which has achieved its principal objective of guaranteeing the Geelong region’s water security, and enter a consolidation and maintenance phase focussing on the efficient delivery of services. The 2013 Water Plan will re-calibrate our focus and direction to the issue of affordability, delivered through the increased efficiency of our operations. Conscious of cost-of-living pressures on its customers, Barwon Water’s proposed prices will be amongst the lowest in Victoria from 2013.

The region still faces a number of challenges over the medium term, notably climate variability and a growing population. However, with Greater Geelong’s water future secured until 2050 through major projects such as the Anglesea borefield, Northern Water Plant and Black Rock recycled water plant, the infrastructure required to continue to service growth in demand over the next few years is on a much smaller scale.

Operational expenditure is required to increase due to a variety of factors largely beyond the control of Barwon Water in the 2013 Water Plan, most notably an increase in electricity costs and expenditure relating to new facilities becoming operational. Accounting for these factors, Barwon Water’s plan demonstrates significant efficiency savings which are reflected in the proposed prices.

The 2013 Water Plan proposes clear service standards across the business. It demonstrates Barwon Water’s commitment to meeting these standards, government obligations and the expectations of a growing community in an efficient and cost effective manner.

Barwon Water 2013 - 2018 Water Plan: proposals at a glance

The proposed key figures for this 2013 Water Plan are shown in Table 1 below.

Table 1: Key figures

	2013 Water Plan (Simple sum of 5 year total, \$2013)	2013 Water Plan versus 2008 Water Plan ¹
Operational expenditure	\$480.3M	+9%
Gross capital expenditure	\$360.2M	- 53%
Return on assets and depreciation	\$437.0M	+ 29%
Opening regulatory asset base	\$1.01B	+ 78%
Closing regulatory asset base	\$1.17B	+ 16%
Weighted average cost of capital	5.1%	- 12%
Total revenue requirement	\$917.4M	+17%
Price increase / yr (excl. CPI)	0.0%	

¹ 2008 Water Plan actual (2008/09 – 2011/12) and forecast (2012/13).

Table of contents

Summary of Barwon Water’s 2013 – 2018 Water Plan	2
Barwon Water 2013 - 2018 Water Plan: proposals at a glance	2
Background to the 2013 Water Plan	4
Our Strategic Intent	5
Pricing and tariff structures	5
Retail water and sewerage prices and tariff structure	7
Recycled water prices and tariff structure.....	9
Trade waste prices and tariff structure.....	10
New customer contributions prices and tariff structure.....	10
Miscellaneous services prices and tariff structure	10
Service standards	11
Government and regulatory obligations.....	11
Customer service standards.....	13
Additional service standards	14
Guaranteed Service Levels	15
Revenue requirement	17
Operational expenditure	17
Capital expenditure.....	19
Linking expenditure to regulatory and government obligations.....	22
Financing capital investment (depreciation and return on capital)	23
Demand	24
Water demand	25
Recycled water demand.....	25
Supply of drinking water	26
Growth in lot numbers.....	27
Sewerage demand	27
Trade waste demand.....	28
Developer charges demand.....	28
Community engagement	29
Engagement undertaken prior to the Draft 2013 Water Plan	29
Engagement since the release of the Draft 2013 Water Plan	29
Outcomes of engagement.....	30
Barwon Water’s response to feedback.....	31
Appendix A: Proposed prices	33
Appendix B: Major capital expenditure variations in 2008 Water Plan	34

Background to the 2013 Water Plan

This 2013 Water Plan identifies the prices that Barwon Water proposes to charge customers between 1 July 2013 and 30 June 2018. It also provides an indicative forecast for the following five years (1 July 2018 to 30 June 2023).

In proposing these prices, Barwon Water has identified efficient levels of expenditure required to meet its regulatory and government obligations and customer expectations, in the interests of present day and future customers.

In line with the ESC guidelines, Barwon Water has proposed prices which take into account issues of equity, the need to encourage water conservation and the preference for prices to reflect costs incurred in delivering services.

In proposing the levels of expenditure required, Barwon Water has assessed the expected supply and demand for services, and consulted widely in order to determine customer service expectations and preferences. The Essential Services Commission will examine and query aspects of the 2013 Water Plan prior to releasing its Draft Decision on prices in February 2013. The Essential Services Commission will consult on these draft prices, finalising its decision in May 2013. The new prices will take effect from 1 July 2013.

The 2013 Water Plan comprises the following:

- The prices and tariff structure proposed for the services Barwon Water provides.
- The service standards Barwon Water proposes to meet between 2013 and 2018.
- The revenue requirements to meet these standards and match customers' expectations.
- The forecast demand for services - to assist in developing the required expenditure and pricing structure.
- Stakeholder and community engagement undertaken.

This Water Plan is accompanied by a technical supplement, available on request, which contains detailed information relating to the setting of prices, the service standards and expenditure proposed, the forecast demand for services and stakeholder engagement.



Aerial view of Geelong, Victoria

Our Strategic Intent

Barwon Water’s Strategic Intent outlines the corporation’s business direction over the next five years. It is designed to ensure Barwon Water employees and customers have a clear understanding of where Barwon Water is heading and what actions it will take over the 2013 Water Plan period.

The Strategic Intent is based on comprehensive customer and stakeholder feedback, received through perception surveys, organisational alignment surveys and input from the Barwon Water Board, management and employees. Its development truly represents a partnership and its delivery will shape Barwon Water’s future; including how it will deliver water, sewerage, recycled water and other services to customers.

Figure 1: Our Strategic Intent



Pricing and tariff structures

For the majority of services Barwon Water is proposing no change to prices from 2013/14 to 2017/18 (excluding CPI), and forecasting no change from 2018/19 to 2022/23 (excluding CPI).

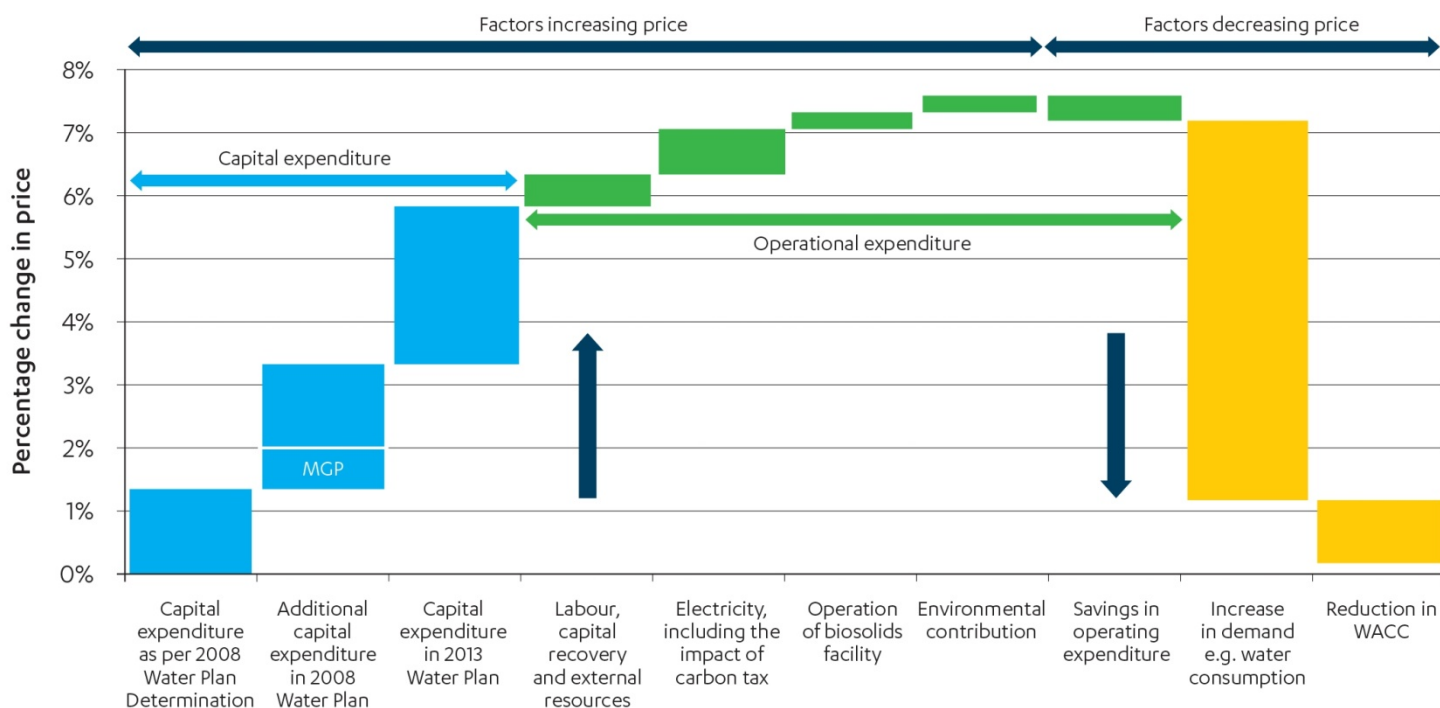
This proposed price follows price increases which were on average over 8.4 per cent per year (excluding CPI)², required to fund large investment to secure the region's water supply. Barwon Water now has a broad range of water supply options that include groundwater, recycled water and water from the Melbourne pool via the Melbourne Geelong Pipeline.

Details for the proposed prices for 2013/14 to 2017/18 and indicative prices for the subsequent five years (2018/19 to 2022/23) for each of Barwon Water's services are provided in this section. Changes in circumstances between now and the completion of the 2013 Water Plan in five years time may alter the indicative prices for 2018/19 to 2022/23.

The prices are based on the services that Barwon Water proposes to deliver, the expenditure required to deliver those services, and the demand for services in the upcoming regulatory period. Each of these factors is discussed later in this Water Plan.

Figure 2 illustrates the components of the proposed zero price change during the 2013 Water Plan period. It is important to emphasise that this diagram is indicative only, due to the complex and interrelated impact of each of the components on price. The diagram shows those factors which increase prices being offset by those factors which decrease prices, resulting in no overall change.

Figure 2: Components of proposed price rise



The graph above demonstrates the impact on price of changes to a number of factors for the upcoming regulatory period in comparison to the forecasts made for each of those factors in the 2008 Water Plan Determination. Further explanation of the graph is given below:

- An increase in supply reliability and demand has required an increase in capital and operational expenditure in order to provide water and wastewater services to customers and maintain service standards. The impact on price of the increase in expenditure has been offset, in large part, by the larger customer base and increased water and wastewater volumes from which the expenditure is recovered.
- Capital investments are recovered from customers over the life of the asset. As a result, expenditure within the 2008 Water Plan period impacts future prices. This includes capital investments not forecast at the time of the 2008 Determination but required to meet the challenges of drought and growth.

² Excluding price rises as a result of the re-opening of prices in 2012/13 due to the Melbourne-Geelong pipeline.

- An expected decrease in the weighted average cost of capital (WACC) to be applied in the 2013 Water Plan period has a further lowering effect on prices.

Retail water and sewerage prices and tariff structure

Barwon Water currently has the following tariff structure for water and sewerage:

- A volumetric charge and service (per connection) charge for all water customers
- A service (per connection) charge only for residential sewerage customers
- A volumetric charge and service (per connection) charge for non-residential sewerage customers.

Barwon Water undertook an extensive review of its tariff structure for the 2008 Water Plan. Barwon Water proposes to continue the same tariff structure for the 2013 Water Plan.

Barwon Water proposes no change to prices for each of these water and sewerage charges (other than a rise in the Consumer Price Index) from 2013/14 to 2017/18, and forecasts no rise in prices in the subsequent five year period.

The prices proposed for all water and sewerage services are listed in Appendix A.

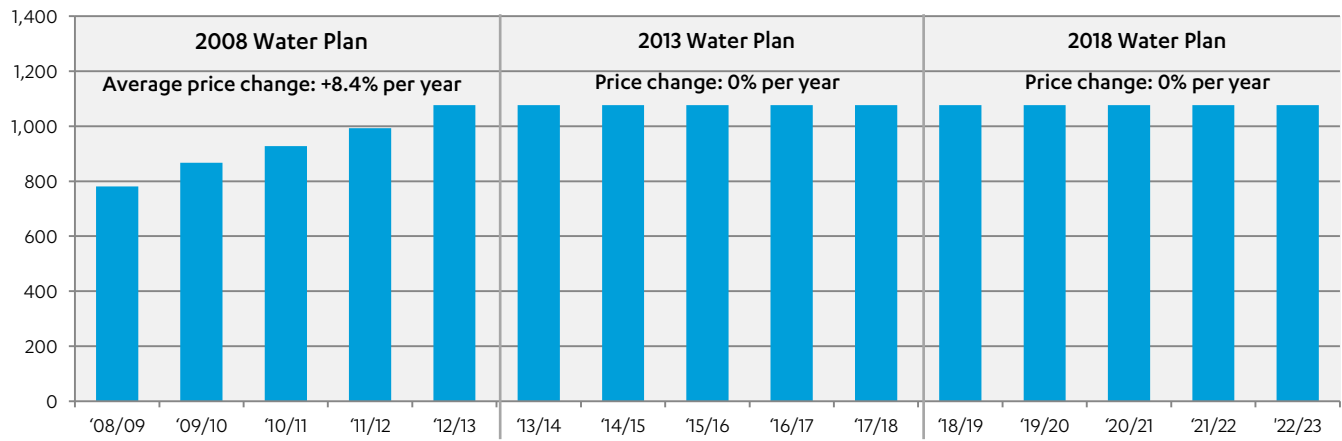
The impact on typical residential bills of the proposed prices is given in Table 2 and illustrated in Figure 3.

Table 2: Total (water and sewerage) annual bill for residential customers (\$ as at 2013)

Use per year		50 kilolitre	150 kilolitre	165 kilolitre	200 kilolitre	300 kilolitre
'08/09	Actual	598.46	756.75	780.49	835.89	994.18
'09/10	Actual	664.87	840.72	867.10	928.65	1,104.50
'10/11	Actual	711.40	899.55	927.77	993.62	1,181.77
'11/12	Actual	761.18	962.49	992.69	1,063.14	1,264.45
'12/13	Actual	822.07	1,043.51	1,076.73	1,154.23	1,375.67
'13/14	Proposed	822.07	1,043.51	1,076.73	1,154.23	1,375.67
'14/15	Proposed	822.07	1,043.51	1,076.73	1,154.23	1,375.67
'15/16	Proposed	822.07	1,043.51	1,076.73	1,154.23	1,375.67
'16/17	Proposed	822.07	1,043.51	1,076.73	1,154.23	1,375.67
'17/18	Proposed	822.07	1,043.51	1,076.73	1,154.23	1,375.67
'18/19	Forecast	822.07	1,043.51	1,076.73	1,154.23	1,375.67
'19/20	Forecast	822.07	1,043.51	1,076.73	1,154.23	1,375.67
'20/21	Forecast	822.07	1,043.51	1,076.73	1,154.23	1,375.67
'21/22	Forecast	822.07	1,043.51	1,076.73	1,154.23	1,375.67
'22/23	Forecast	822.07	1,043.51	1,076.73	1,154.23	1,375.67

Note: Under the Residential Tenancies Act 1997, residential tenants are only required to pay for the water volume used, and do not incur water service charges.

Figure 3: Proposed annual residential customer bill 165 kL (\$ as at 2013)



Figures 4 and 5 demonstrate how the percentage-variable components of a residential 'water only' bill and 'combined residential water and sewerage' bill vary as water consumption varies, noting a typical customer uses 165kL per year.

Figure 4: Proportion of volumetric charge on residential water only bill (percentage)

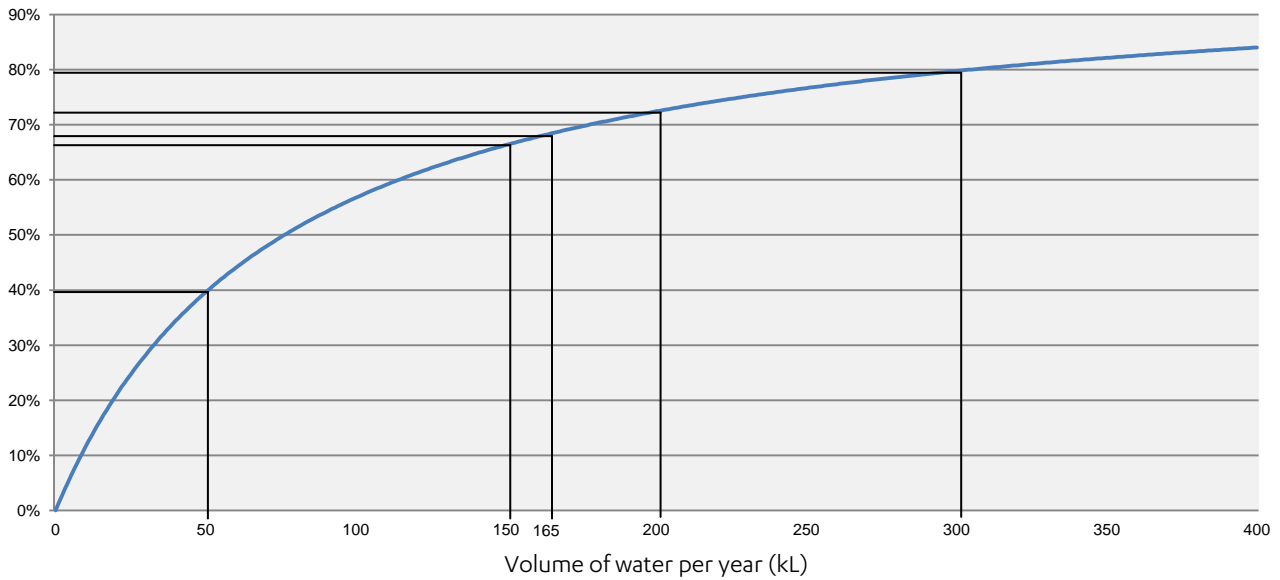
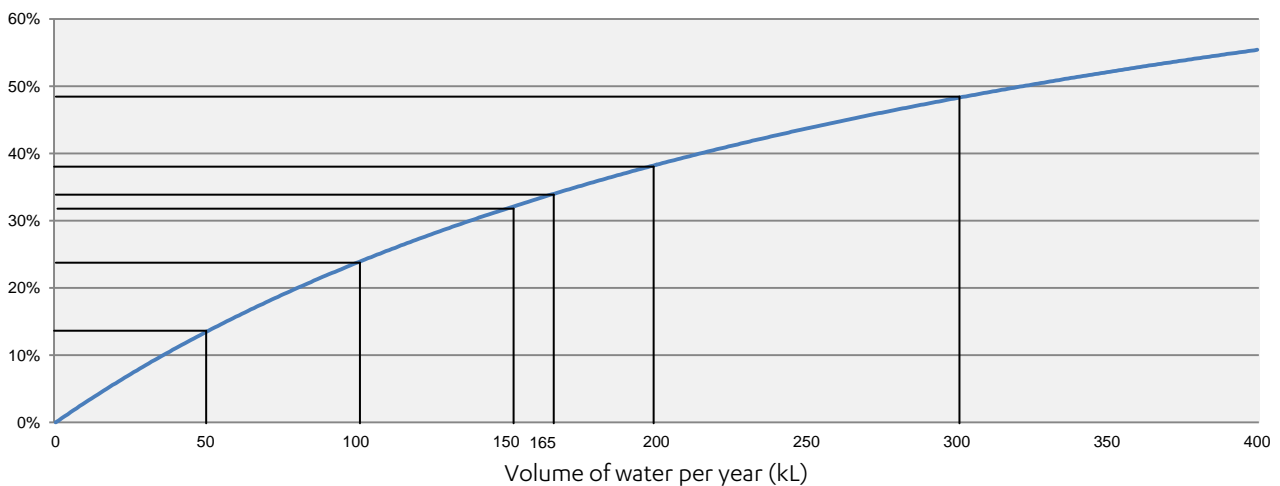


Figure 5: Proportion of volumetric charge on residential water and sewerage bill (percentage)



For the 2013 Water Plan:

- the proportion of a residential 'water only' bill related to the volumetric component is 68 per cent (based on a water consumption of 165kL per year).
- the proportion of a residential 'combined water and sewerage' bill related to the volumetric component is 34 per cent (based on a water consumption of 165kL per year).

The impact of the proposals on typical non-residential bills is given in Table 3.

Table 3: Total (water and sewerage) annual bill for non-residential customers (\$ as at 2013)

Use per year		1,000 kilolitre	5,000 kilolitre	10,000 kilolitre	20,000 kilolitre	50,000 kilolitre
'08/09	Actual	3,230	14,700	29,039	57,716	143,746
'09/10	Actual	3,588	16,332	32,261	64,120	159,697
'10/11	Actual	3,839	17,474	34,518	68,605	170,867
'11/12	Actual	4,108	18,697	36,933	73,405	182,822
'12/13	Actual	4,460	20,312	40,127	79,756	198,644
'13/14	Proposed	4,460	20,312	40,127	79,756	198,644
'14/15	Proposed	4,460	20,312	40,127	79,756	198,644
'15/16	Proposed	4,460	20,312	40,127	79,756	198,644
'16/17	Proposed	4,460	20,312	40,127	79,756	198,644
'17/18	Proposed	4,460	20,312	40,127	79,756	198,644
'18/19	Forecast	4,460	20,312	40,127	79,756	198,644
'19/20	Forecast	4,460	20,312	40,127	79,756	198,644
'20/21	Forecast	4,460	20,312	40,127	79,756	198,644
'21/22	Forecast	4,460	20,312	40,127	79,756	198,644
'22/23	Forecast	4,460	20,312	40,127	79,756	198,644

Note: For the purposes of this table, sewage discharges has been assumed at 95 per cent of water consumption. This will vary depending on the type of non-residential customer.

Recycled water prices and tariff structure

Barwon Water proposes the following recycled water tariff structure and prices:

- Pricing for Class A recycled water delivered to all customers other than Shell will continue to be priced at 80 per cent of the drinking water volume price (with no additional fixed charge for Class A recycled water). As such, the price of Class A water is proposed to remain unchanged in alignment with the change in price for potable (drinking) water. This pricing structure is based on the following factors:
 - Pricing should reflect the role of recycled water as part of an integrated water resource planning system – it is another option in the suite of water supply options. Therefore, the costs should be recovered the same way as all other water supply options.
 - Recycled water helps maintain the balance of supply and demand and reduces the impact on the drinking water system - which benefits the general customer base.
- For Class A recycled water delivered to Shell from the Northern Water Plant, a contract is in place which contains a combination of both fixed charges and volume charges. The price is determined through Barwon Water's contract with Shell.
- Barwon Water proposes that Class C recycled water be charged on a 'postage stamp' basis. The proposal is to charge \$417 per ML for Class C recycled water (\$428 per ML including CPI in 2013/14) from all water reclamation plants throughout the region, adjusted annually by the CPI only. This price is equal to the average cost associated with Class C recycled water.

The prices proposed for recycled water are listed in Appendix A.

Trade waste prices and tariff structure

Barwon Water proposes to continue with the current trade waste tariff structure, which includes:

- trade waste quality charges applied if the trade waste is above 'domestic' strength for a number of analytes (chemicals)
- a volume charge consistent with the non-residential sewer volume charge
- a number of one-off fees for the application and renewal of licences and sampling.

The charges for each analyte (chemical) are determined on the forecast cost that is incurred to collect, treat and dispose of that analyte over and above the cost at the level of domestic strength. Changes have been made to these charges to reflect forecast costs.

It is proposed that all other trade waste fees and charges remain unchanged and are to increase annually by the CPI only.

The prices proposed for trade waste services are listed in Appendix A.

New customer contributions prices and tariff structure

Barwon Water proposes to continue to charge new customer contributions (NCCs) based on the water efficiency of new construction/developments. The standard charge will vary according to the water sensitivity of developments, and the likely demand for future infrastructure. This is based on the ESC's recommendations.

However, the ESC notes that the existing NCC tariff structure is under review and further guidance will be provided by the end of 2012. Barwon Water has played an active role in the combined VicWater/Essential Services Commission water industry working group to develop a new framework for new customer contributions for the 2013 Water Plan.

Barwon Water strongly supports a framework which recovers the costs associated with future distribution growth assets directly via new customers so that the existing customer base is not unfairly burdened by the additional demand on the system as a result of new customers. Barwon Water will continue to develop its thinking on NCCs for the 2013 Water Plan and beyond, based on this principle. It is intended that a new framework will be in place prior to the start of the 2013 Water Plan.

In the interim, Barwon Water has continued to forecast prices based on the framework in place in the current regulatory period, adjusted annually to account for CPI. These prices are listed in Appendix A.

Miscellaneous services prices and tariff structure

Miscellaneous charges are determined (but not limited to) the following services:

- Property information statements
- Supply of meters to new properties
- Provision of water tapplings
- Installation of meter connections
- Reading of meters.

Miscellaneous charges were reviewed in detail as part of the 2013 Water Plan development to ensure these reflected the direct cost of providing the service.

Most miscellaneous charges have been adjusted downwards to accurately reflect the latest cost of providing these services. These charges will be adjusted for changes to the CPI.

Service standards

Customer service standards underpin Barwon Water's proposed expenditure and therefore the proposed prices for the upcoming regulatory period. Service standards can be separated into the following:

- Obligations as required by government and industry regulators.
- Customer service standards (as averages) for water and sewerage reliability and efficiency across Barwon Water's customer base.
- Guaranteed service levels for water and sewerage reliability and efficiency for each individual customer.

Government and regulatory obligations

The *Water Act 1989*, the *Water Industry Act 1994* and the *Water (Governance) Act 2006* provide the applicable legal guidance for regional water corporations in Victoria. Key elements of these Acts support the integrated management of the water cycle and promote the orderly, equitable and efficient use of water resources. The Acts also seek to maximise community involvement in making and implementing arrangements relating to the use, conservation or management of water resources.

Figure 6 shows Barwon Water's obligations and the regulators that have a bearing on its activities and duties. The Victorian Minister for Water, through the Department of Sustainability and Environment, has primary responsibility for water resources and water policy in Victoria. However, other regulators play roles in determining economic, environmental and social obligations.

Figure 6: Obligations and regulators



Business as usual obligations on Barwon Water in place prior to 1 July 2013 are summarised in the table below.

Table 4: Business as usual government and regulatory obligations

		Act: <i>Water Industry Act 1994</i>		<i>Safe Drinking Water Act 2003</i>	<i>Environment Protection Act 1970</i>		
		Regulation: Statement of Obligations		Safe Drinking Water Regulation	Corporate Licence		Other Regulations and Guidance papers
					Commitment	Obligation	
Obligation to provide services	Provision of service		✓				
Quality and health obligations	General quality and health obligations	✓					
	Water quality and fluoridation	✓		✓			
	Reliable services		✓				
	Customer services		✓				
	Incidents and emergencies	✓					
	Dam safety	✓					
Environmental obligations	General environmental obligations	✓			✓		
	Biosolids/sludge					✓	
	Sewerage treatment and disposal					✓	
	River and aquifer health, catchment, waterways and groundwater management	✓				✓	
	Greenhouse gases/climate change				✓	✓	
	Resource efficiency				✓	✓	
	Odour and noise					✓	
Water security Obligations	General water security obligations	✓					
	Water use efficiency				✓	✓	
	Recycled water	✓			✓	✓	
	Metering	✓					
	Responding to drought	✓					
Other Obligations	Planning	✓					
	Research and knowledge	✓					
	Hardship policy		✓				
	Customer engagement		✓		✓		
	Administration of concessions and rebates	✓					
	Reporting	✓				✓	
	Smart water fund	✓					

The following obligations carry through from the 2008 Water Plan:

- Provision of services – To provide services to customers within the region.
- Health and quality – To meet all relevant Victorian Government health and quality standards for water and for the reliability of services.
- Environmental – To act in a manner in which environmental impacts are addressed, as well as specific obligations regarding trade waste and sewerage quality.
- Water security – To act in a manner which addresses the security of the region’s water supply.
- Other obligations – A variety of additional obligations, around engagement, planning and research and knowledge.

New government and regulatory obligations for the upcoming regulatory period are minor, and have negligible cost implications.

Customer service standards

In the 2008 Water Plan, the ESC introduced a service standards scheme. The scheme sets targets that Barwon Water is required to measure and report itself against on an annual basis.

Barwon Water proposes to maintain 17 out of 21 of the current core customer service standard targets for the 2013 Water Plan because customers have communicated through the 2012 customer perception survey and through consultation with the Customer Consultative Committee that they like the service standards received. Changes to four of the customer service standards are reflective of Barwon Water’s historical performance against these standards and their likely future achievement. Their change results in efficient operational expenditure.



Field Services working to repair a burst water main near Queens Park, Geelong

Proposed customer service standards for the 2013 Water Plan are provided in Table 5 below:

Table 5: Proposed customer service standards

No		5 year average actual	2008 Water Plan target	2013 Water Plan target	▲
Water network reliability and efficiency					
1	Unplanned water supply interruptions (per 100km main)	17	30	30	=
2	Average minutes to respond to bursts and leaks – (priority 1)	24	35	35	=
3	Average minutes taken to attend bursts and leaks (priority 2)	40	68	68	=
4	Average minutes taken to attend bursts and leaks (priority 3)	170	360	360	=
5	Unplanned water supply interruptions restored within 5 hours (per cent)	96.6	96.5	96.5	=
6	Planned water supply interruptions restored within 5 hours (per cent)	89	80	80	=
7	Average unplanned customer minutes off water supply (minutes per customer)	15	20	20.0	=
8	Average planned customer minutes off water supply (minutes per customer)	39.7	46.2	46.2	=
9	Average unplanned frequency of water supply interruptions (per customer)	0.13	0.20	0.18	↑
10	Average planned frequency of water supply interruptions (per Customer)	0.21	0.22	0.22	=
11	Average duration of unplanned water supply interruptions (minutes)	114	100	110	↓
12	Average duration of planned water supply interruptions (minutes)	191	210	210	=
13	Customers experiencing 5 unplanned water supply interruptions in the year	67	150	150	=
Sewerage network reliability and efficiency					
14	Sewer Blockages per 100km of Sewer Main (per 100km main)	24.9	43.0	43	=
15	Average time to attend sewer spills and blockages (minutes from notification)	47	80	80	=
16	Average time to rectify a sewer blockage (minutes from notification)	151	250	250	=
17a	Spills contained within 5 hours (per cent of Spills) (Priority 1)	100	100	100	=
17b	Spills contained within 5 hours (per cent of Spills) (Priority 2)	100	97	97	=
18	Customers receiving more than 3 sewer blockages in the year	1	3	3	=
Customer service					
19	Complaints to EWOV (per 1000 customers)	0.3	0.50	0.65	↓
20a	Telephone calls answered within 30 seconds (Accounts Line) (% of Calls)	95	95	90	↓
20b	Telephone calls answered within 30 seconds (Faults Line) (% of Calls)	98	96	96	=
21	Flow Rate - Flow rates to each customer are not monitored continuously but are checked for compliance when responding to customer feedback.	20mm: 20 25mm: 35 32mm: 60 40mm: 90 50mm: 160		20mm: 20 25mm: 35 32mm: 60 40mm: 90 50mm: 160	= = = = =

Additional service standards

In addition to the core customer service standard measures referred to above, Barwon Water proposes to maintain all additional service standards that have previously been in operation, with the following changes:

- The removal of the service standard (target) for small town sewerage scheme properties – we expect to have connected all properties within the Birregurra sewerage scheme by the beginning of the 2013 Water Plan and there are no new small town sewerage schemes proposed for delivery in the 2013 Water Plan period.

- Recycled water will continue to be produced, but only where:
 - it is the most cost effective way to meet our water supply security obligations, or
 - it meets Barwon Water’s obligations towards reducing our environmental impact, or
 - it becomes an affordable and requested product from our customers.

The additional service standard (target) for recycled water usage is proposed to be removed.

- Greenhouse gas emissions will continue to be reduced when:
 - this requirement meets our obligations to consider the environmental impacts of our activities, or
 - it is financially viable to do so, such as through a reduction in electricity costs.

As such, Barwon Water will aim for a 5 per cent reduction in emissions on our 2004/05 levels by 2017/18. This is in keeping with the Victorian Government’s announcement of its intention to repeal the 20 per cent reduction target and adopt the Federal Government’s target of a 5 per cent reduction in emissions on 2000 levels by 2020.

The additional service standard (target) for greenhouse gas emission reduction is proposed to be removed.

Proposed additional service standards for the 2013 Water Plan are provided in Table 6 below.

Table 6: Proposed additional service standards

No	Service standard	Measure	2008 Water Plan (target at 2012/13)	2013 Water Plan (target at 2017/18)	Rationale	Source of additional service level
22	Biosolid mass reused (tonne)	Tonnes reused	100% reuse	100% reused	Biosolids is managed in accordance with Environment Protection (Industrial Waste Resource) regulations 2009 and the Sludge Management Plan agreed with the Environment Protection Authority (EPA).	Environment Protection Authority
23	Compliance with Environment Protection Authority licence parameters (%)	Compliance	100%	100%	The business aims to always comply with the EPA licences.	Environment Protection Authority
24	Percent population receiving water meeting E.Coli standards	Compliance	100%	100 %	The business aims to always comply with the Department of Health (DoH) licences.	Department of Health
25	Percent of population receiving drinking water meeting turbidity standards	Compliance	100%	100 %	The business aims to always comply with DoH parameters.	Department of Health
26	Percent of population receiving drinking water meeting disinfection by-products standards	Compliance	100%	100 %	The business aims to always comply with DoH parameters.	Department of Health

Guaranteed Service Levels

The Guaranteed Service Levels (GSL) scheme involves making payments to customers who receive a level of service that is significantly worse than the average level of performance expected, and where these services do not meet defined levels of performance.

Table 7 highlights Barwon Water’s GSLs and proposed penalty payments for the 2013 Water Plan. The differences between the current and proposed GSLs are:

- the addition of a hardship GSL, as introduced by the Essential Services Commission
- the reduction from ‘no more than three’ to ‘no more than two’ sewerage spills per year on a customer’s property for compensation to be granted, based on customer feedback.

Table 7: Proposed guaranteed service levels

Service attribute	Guaranteed level of service	Payment (\$ as at 2013)
Water supply reliability	No more than five unplanned water supply interruptions per customer per year	\$72
Sewerage service reliability	No more than three unplanned sewerage service interruptions to a customer's property per year	\$72
Sewerage service reliability	No more than two sewer spills on a customer's property per year	\$553
Hardship	Customer contact prior to restriction and legal action	\$300

The proposed GSL payment amounts are the same as those made currently, adjusted for inflation.

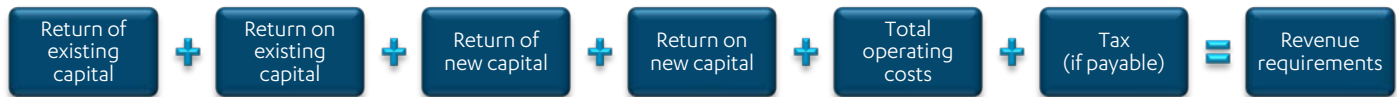


Customer Service and Field Service Officers ready to assist in Colac, Victoria.

Revenue requirement

The ESC uses the building block approach to determine the revenue required to provide Barwon Water’s services to its customers. The revenue required aids in the setting of prices that Barwon Water charges to its customers. Figure 7 provides an overview of the components that make up the total revenue required.

Figure 7: Building block approach



Barwon Water’s revenue requirement for the upcoming regulatory period is \$917 million. Table 8 summarises the proposed revenue requirement for this period.

Table 8: Summary of proposed revenue requirement

	'13/14 Forecast	'14/15 Forecast	'15/16 Forecast	'16/17 Forecast	'17/18 Forecast	WP3 Total Forecast
Operational expenditure	93.67	94.51	95.60	97.66	98.89	480.32
Opening RAB	1,012.61	1,065.75	1,091.04	1,121.64	1,167.94	NA
Net capital expenditure	83.78	56.79	63.21	80.22	39.69	323.69
Proceeds from disposal	1.74	1.78	1.83	1.87	1.92	9.15
Return of investment (depreciation)	28.90	29.72	30.78	32.04	33.10	154.54
Closing RAB	1,065.75	1,091.04	1,121.64	1,167.94	1,172.61	NA
Return on investment	53.00	55.00	56.42	58.38	59.68	282.49
Taxation	-	-	-	-	-	-
Total	175.57	179.22	182.79	188.08	191.68	917.35

This following section discusses the major components of the proposed revenue required.

Operational expenditure

Operational expenditure is the ongoing cost of running the business. Examples of operating expenditure items include energy, chemicals and labour.

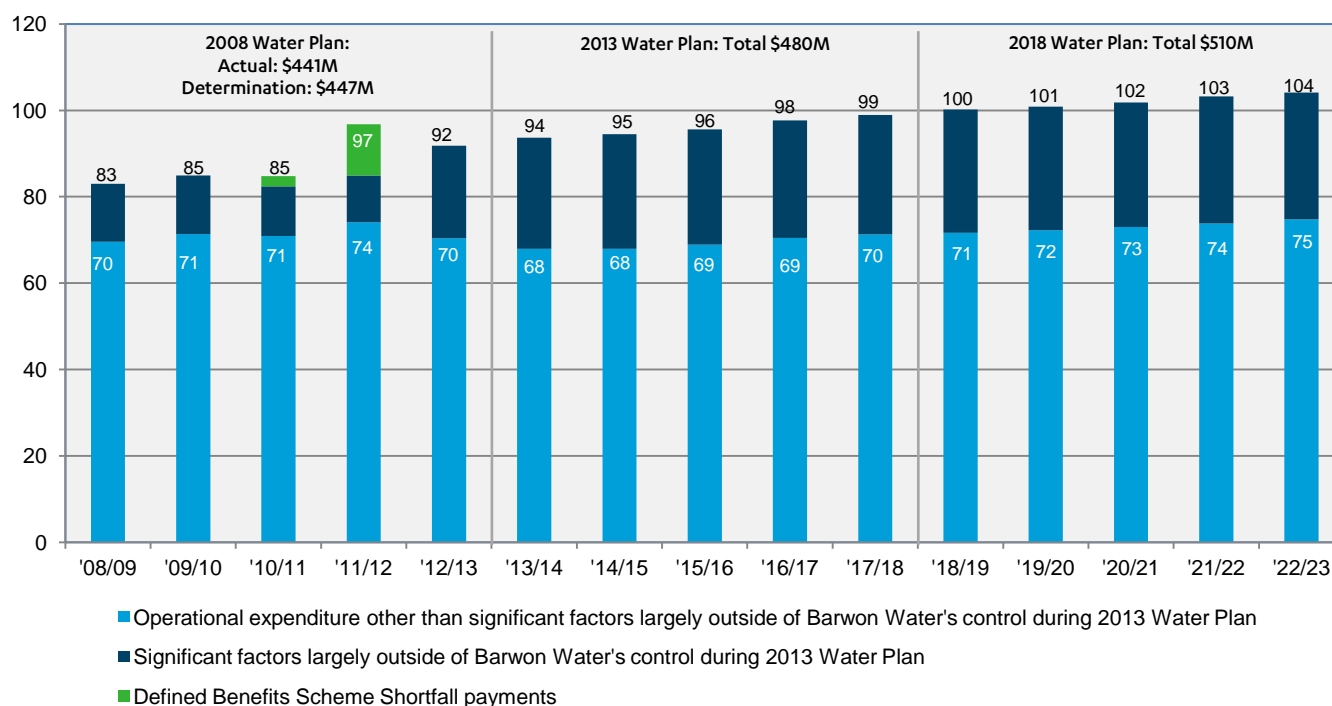
Forecasts for operational expenditure requirements are based on demand forecasts and activity levels to deliver the proposed service standards.

The change in business direction from a growth to consolidation phase for the 2013 Water Plan has seen a marked change in the operating cost base of the business. Without a strong and resolute drive for a fundamental shift in cost structure, the business would have seen operating costs of \$535 million during the 2013 Water Plan. Instead the proposed total operating expenditure for the 2013 Water Plan is \$480 million, an increase of 9 per cent on the current regulatory period.

This lower increase is required due to a number of factors, many of which are outside of the control of Barwon Water during the 2013 Water Plan, notably the operation of new facilities, an increase in energy costs and an increase of the Victorian Government’s environmental contribution. Taking these factors into account, Barwon Water’s expenditure is forecast to be 3.4 per cent less than that incurred in the current regulatory period, demonstrating Barwon Water’s continued commitment to efficiency savings, as shown in Figure 8. Barwon Water’s operational expenditure per customer is forecast to decrease by 2.3 per cent between 2012/13 and the end of the upcoming regulatory period, providing further evidence of increased productivity.

Figure 8 illustrates the proposed operational expenditure for the next five years and beyond, in comparison to the 2008 Water Plan.

Figure 8: Overview of proposed operation expenditure (\$M as at 2013)



Approach to forecasting operational expenditure

The ESC's approach to assessing operating expenditure is to:

- A. Establish an efficient level of operational expenditure for the most recent completed year (2011/12)
- B. Adjust this efficient level of operational expenditure to create a "baseline" by adjusting the 2011/12 year for the following:
 - o operational expenditure incurred in that year which will not be required in the 2013 Water Plan
 - o growth in customer numbers
 - o productivity savings to be made
- C. Adjust the baseline by accounting for the following factors:
 - o justified variations in expenditure to meet current obligations
 - o operational expenditure linked to new service outcomes for the 2013 Water Plan.

The derivation of the proposed operational expenditure is summarised in Table 9 below.

Table 9: Overview of derivation of proposed operational expenditure

Step in approach to forecasting expenditure	Operational expenditure (\$M per year, average)
Step A: Efficient 2011/12 operational expenditure	96.8
Step B: "Baseline expenditure" Accounts for customer numbers, productivity savings and expenditure in 2011/12 not forecast to be incurred in the 2013 Water Plan	81.0
Step C: Final forecast expenditure Adjusts for justified variations in expenditure and changed obligations	96.1

This is further discussed below.

A. Establishing efficient operating expenditure during the current regulatory period

During the 2008 Water Plan period, operational costs were approximately \$5.3 million (1 per cent) below those forecast in the 2008 determination. This decrease has largely been the result of:

- a reduction in volumes of water and sewage volumes, as a result of water restrictions
- the delay in the commencement of full operation of the new biosolids drying facility at the Black Rock environmental precinct.

Expenditure was maintained below 2008 Water Plan levels, despite the additional costs related to the defined benefits shortfall payments to the Vision Super superannuation fund in 2010/11 and 2011/12 totalling \$14 million.

This decrease in expenditure, supplemented by the savings made through various efficiency programmes, demonstrates Barwon Water's operational efficiency during the current regulatory period.

Barwon Water's efficient operating expenditure for 2011/12 was \$97 million.

B. Establishing the "baseline" operating expenditure

Barwon Water's operating expenditure for 2011/12 is a starting point to estimate the baseline 2013 Water Plan operating expenditure. However, the figure includes a number of expenditure items that will not be required in the 2013 Water Plan, and does not take account of the expected productivity savings to be made during the 2013 Water Plan period or the forecast rise in customer numbers.

These elements result in average baseline operating expenditure of around \$84 million per year over the course of the 2013 Water Plan regulatory period.

C. Adjusting the baseline for justified variations and changes to service levels

The baseline figure is not reflective of the total operational expenditure required for the 2013 Water Plan period. Notable changes to the baseline include the following factors, many of which are outside of Barwon Water's influence in the 2013 Water Plan period:

- Expenditure relating to biosolids is forecast to increase by an average of \$7.6 million per year (\$38 million total over the five year period). This is due to operation beginning at the new biosolids drying facility, budgeted to be operational from 2012.
- Electricity costs forecast to increase from approx \$4 million per year currently, to over \$9 million per year in 2017/18, as a result of:
 - price increases for electricity network and other charges (estimated \$1.8 million average per year)
 - price increase for electricity and gas with the introduction of the carbon tax (estimated \$1.2 million average per year)
 - an increase in energy usage to service new infrastructure sites commissioned during the 2008 Water Plan (\$1.3 million average per year)
- Additional expenditure (excluding energy costs) of \$2 million (average) per year on new infrastructure sites to be commissioned in 2012/13 – the Northern Water Plant and Black Rock Recycled Water Plant.
- The Victorian Government's Environmental Contribution will cost an average of \$1.5 million extra per year.
- The changes in service levels proposed result in no impact on operational expenditure versus the 2008 Water Plan. Where service level changes have been proposed, this reflects an operational expenditure changes deemed to be in the interest of customers.

These changes result in an efficient average operational expenditure of \$96 million per year for 2013 Water Plan.

Capital expenditure

Capital expenditure is investment in assets that will be used for a period greater than 12 months.

It is proposed that gross capital expenditure for the 2013 Water Plan is halved compared to the expenditure actually incurred in the 2008 Water Plan period for the following reasons:

- Significant capital investments were made during the 2008 Water Plan to improve water security during drought. Similar levels of investment will not be required in the 2013 Water Plan.
- Fewer growth-driven projects are anticipated, given the forecasts for population growth for the region. This follows a significant upfront investment made in the 2008 Water Plan period in providing water, recycled water and sewerage services to the first stages of major growth areas, such as the 22,000 lot development at Armstrong Creek.

Table 10 demonstrates a capital expenditure increase of \$147 million versus the determination³.

Table 10: Capital expenditure during 2008 Water Plan (\$M 2013)

	2008 Determination target plus MGP reopening allowance	Actual expenditure	Variance
Gross expenditure	596.9	771.7	174.8
Net expenditure	503.5	650.2	146.7

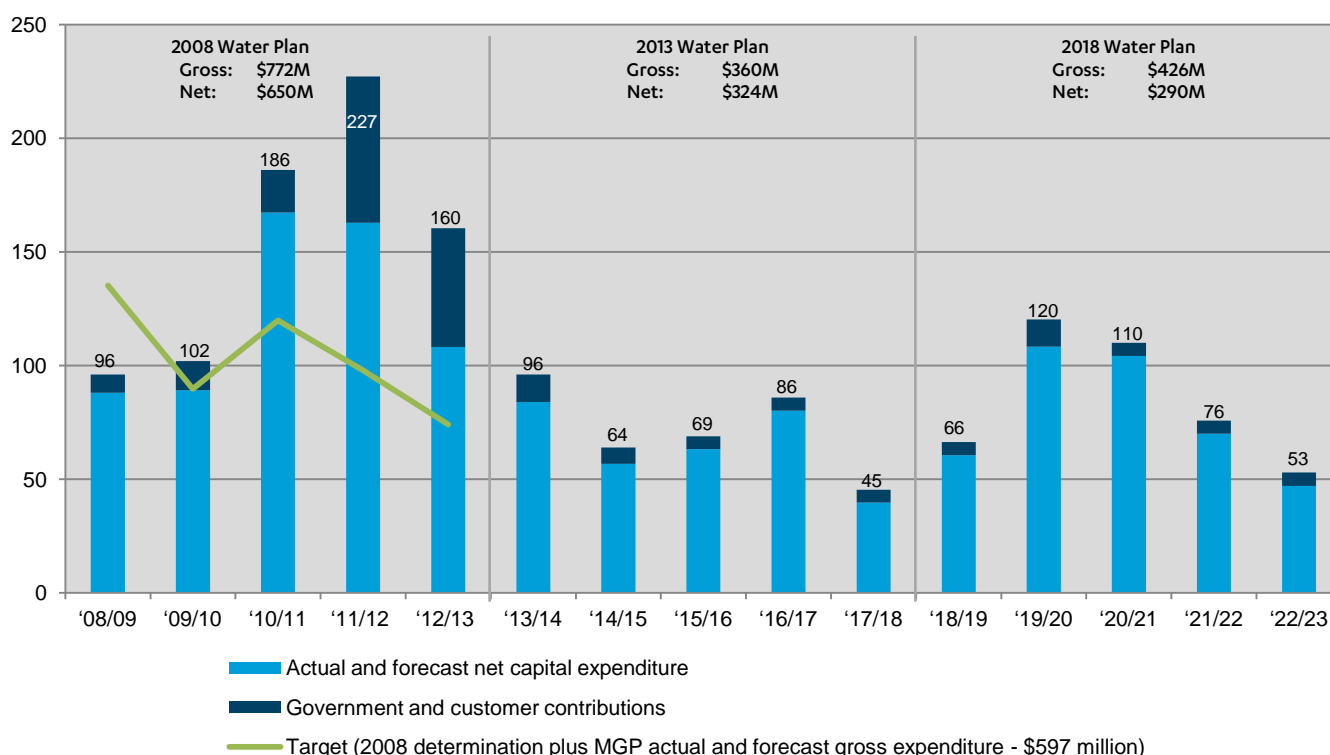
The main reasons for the additional expenditure during the 2008 Water Plan included:

- in response to the continuing extreme drought conditions, investment in water security projects to provide a more robust and drought resistant water supply systems
- the delivery of recycled water infrastructure to the Armstrong Creek growth area in response to strong community, developer, City of Greater Geelong and Federal Government support
- maintaining reliability of water supply services to Barwon Water’s second largest township of Colac and the rural township of Meredith.

Appendix B sets out the key activities and new initiatives undertaken during the 2008 Water Plan period not included in the 2008 Water Plan determination.

The proposed capital expenditure requirements for the 2013 Water Plan are summarised in Figure 9. It shows a forecast capital expenditure of \$360 million (gross) over the five-year 2013 Water Plan period. This is a decrease of \$237 million compared to the 2008 Water Plan forecast (including the MGP reopening), and a reduction of \$412 million from the actual capital spend forecast for the 2008 Water Plan period.

Figure 9: Overview of proposed capital expenditure (\$M as at 2013)



The 10 largest capital expenditure items proposed in the 2013 Water Plan are outlined in Table 11.

³ This takes account of government and customer contributions to projects and the approval for capital expenditure made through the reopening of the determination as a result of the Melbourne Geelong pipeline (MGP).

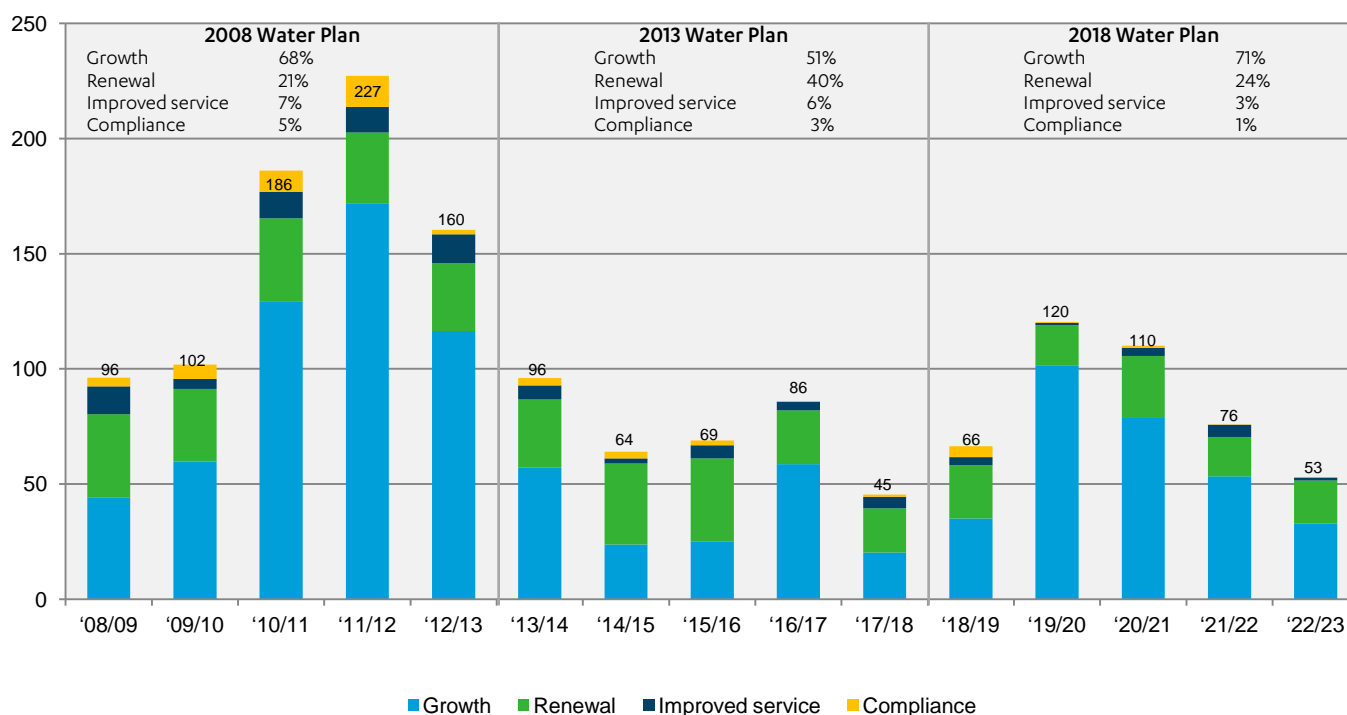
Table 11: Top ten forecast capital expenditure items

Project	Drivers	Outcomes	Expected delivery date	Gross expenditure
Sewer mains replacement and rehabilitation	Renewal	Maintain current service levels, fulfilling obligations of providing reliable services	Ongoing	27.6
Colac water source expansion	Growth	Meeting water security obligations	2017	27.4
Water mains water replacements	Renewal	Efficiently maintain service levels at acceptable risk, fulfilling obligations of providing reliable services	Ongoing	18.9
Inverleigh low level feeder main	Growth	Water supply for new development, fulfilling obligations towards the provision of service	2016	12.4
Black Rock Water Reclamation Plant hydraulic capacity upgrade	Renewal	Replacement of asset that is at end of serviceable life and capacity for growth, fulfilling environmental obligations towards sewerage treatment.	2016	11.8
Sewer main relining	Renewal	Increased life of the asset and maintain acceptable risk of asset failure, fulfilling obligations of providing reliable services	Ongoing	9.0
Apollo Bay bulk water supply expansion	Growth	A new 250 million litre water storage will meet forecast growth in Apollo Bay, Marengo and Skenes Creek until 2055.	2015	8.7
Vehicles ⁴	Renewal	To aid productivity and efficiency of organisation across service outcomes	Ongoing	7.9
Aireys Inlet water treatment plant upgrade	Renewal	Maintain current service levels, fulfilling obligations of providing reliable services	2016	7.5
Pettavel water basin upgrade	Growth	Capacity for growth, meeting water security obligations	2015	7.0
Total				138.1
Percentage of overall capital works plan				38%

Figure 10 details the cost drivers and the ratio of expenditure that will be spent on each category per year. The graph shows a substantial reduction in capital expenditure in the upcoming regulatory period as the major growth and water security projects come to an end, and expenditure returns to a business-as-usual level.

⁴ Barwon Water's gross expenditure on vehicles is forecast to be \$7.9 million for the upcoming regulatory period. However, this will be substantially offset through revenue as a result of sales of vehicles.

Figure 10: Capital expenditure cost drivers (\$M as at 2013)



As was the case in the 2008 Water Plan, growth is still the main driver for capital expenditure in the 2013 Water Plan. This is due to a number of medium-sized growth fronts requiring water and sewerage infrastructure.

There are 23 different growth areas across the region, varying in size and requiring different levels of infrastructure. Two of the major growth areas, and the associated costs and infrastructure requirements, are listed below:

- Armstrong Creek, the identified major growth zone for the City of Greater Geelong, will require a further approximately \$25 million of works to service development in this area in the upcoming regulatory period across a range of projects including water, sewerage and recycled water mains.
- Torquay growth areas requires \$9.9 million of recycled water infrastructure across a range of projects. The part federally funded project will deliver Class A recycled water to over 2,500 homes.

The other significant growth-driven project is the Colac Water Source Expansion (\$27.4 million). Budgeting for this augmentation has been based on infrastructure required to supply up to 1,000 million litres per year. This includes estimated costs based on preliminary design work for:

- All planning approvals, investigations and design work
- Land purchase
- The construction of a small balancing storage
- The construction of a transfer pump station and pipeline
- Ancillary site works and supporting infrastructure
- All project management, HSE, and administrative overheads

The current concept designs will be refined in the lead up to construction works in 2017. It is certain that the augmentation of this system is required during the 2013 Water Plan.

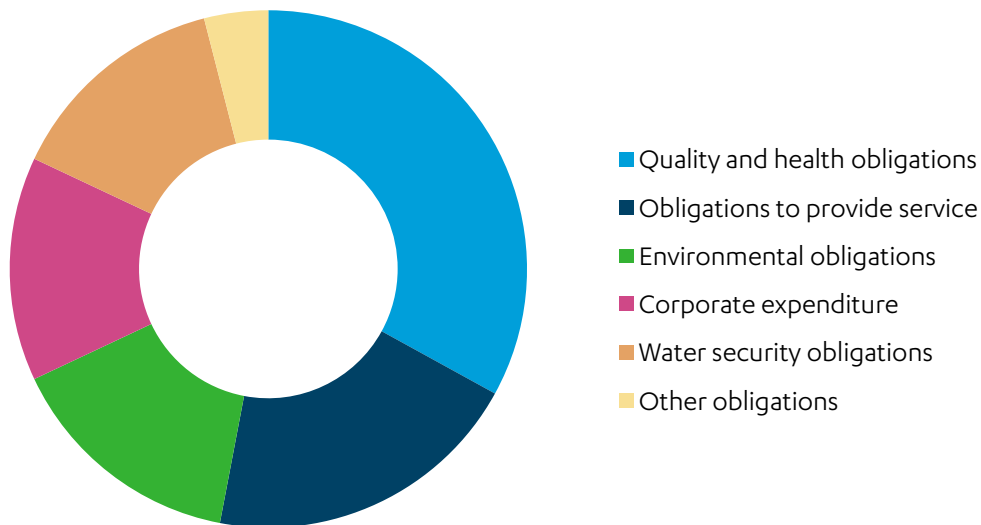
Renewal of existing assets is the second largest contributor to the proposed capital expenditure, and is required to maintain existing levels of service. Proposed expenditure on renewal for the upcoming five year period is consistent with the historic levels of required expenditure in this category.

Linking expenditure to regulatory and government obligations

Both the proposed operational and capital expenditure are split across many regulatory and government obligations, without any one set of obligations dominating expenditure.

Corporate expenditure is required to meet all obligations, and cannot be allocated to any one set of obligations. 96 per cent of the expenditure is related to either corporate expenditure or the four core categories of obligations identified on page 12. Only four per cent relates to the other obligations. This is illustrated in Figure 11.

Figure 11: Expenditure by obligation



All expenditure for the 2013 Water Plan is expected to be primarily related to current obligations required in the 2008 Water Plan. This is because of:

- the small number and minimal impact of new service outcomes for the 2013 Water Plan
- the ongoing need to meet service obligations to satisfy growth in demand, water security requirements, health and quality obligations and environmental obligations. Without this continued capital and operational expenditure, Barwon Water’s ability to meet these existing obligations would be compromised.

Financing capital investment (depreciation and return on capital)

The costs associated with capital expenditure are recovered from customers over the life of the assets. This avoids present day customers having to pay the full cost of long-term assets which will be used by future customers.

Given the long lifespan of many of the assets Barwon Water has invested in (such as water, recycled water and sewerage networks and treatment facilities), the costs associated with construction and maintenance during the 2013 Water Plan will be recovered both during the 2013 Water Plan and beyond. Similarly, the costs associated with previous capital expenditure will need to be recovered, in part, during the 2013 Water Plan.

The revenue requirement to be recovered during the 2013 Water Plan as a result of historic and new capital investment is \$437 million, an increase of 29 per cent compared to the current regulatory period. This is about half of the \$917 million in total revenue required. The other half is required for operational expenditure. The increase in financing costs is due to the significant increase in actual capital expenditure during the 2008 Water Plan compared to Barwon Water’s original 2008 Determination.

In proposing this figure, Barwon Water has given consideration to:

- The opening regulatory asset base (RAB)
- Return of capital (depreciation)
- The forecast RAB throughout the upcoming regulatory period
- Return on capital (the rate of return applied to the RAB)
- Income tax.

Demand

Demand forecasts are a fundamental component of the business planning process.

The forecasts not only aid in the development of prices, but also are essential for forecasting capital expenditure and operating expenditure, including the timing of capital investment projects.

When developing demand forecasts, a mixture of historical trends, key drivers and external influences has been used that will impact future water consumption and customer numbers. Models, such as the Integrated Supply Demand Planning model for drinking water demand and the Resource Allocation Model for drinking water supply, have been used in the creation of the forecasts.

Figure 12 provides an overview of the main external and internal strategies that influence Barwon Water's forecasts.

Figure 12: External and internal demand influencers



When preparing demand forecasts, Barwon Water has considered:

- key drivers of demand
- relevant trends in economic conditions and reasonable prospects for future market developments
- reasonable assumptions using the best available information
- the most reasonable data available, as well as historic data that can identify trends in demand
- the need to be statistically unbiased
- other existing forecasts or methodologies.

Demand forecasting has been undertaken for each of the following:

- Drinking water demand
- Recycled water demand
- Sewerage demand
- Growth in lot numbers
- Trade waste demand
- Developer charges demand

In addition, forecasts for the supply of drinking water have been developed to enable expenditure forecasting for water from different sources.

The results of demand forecasting (for each service category) and drinking water supply forecasting are discussed below.

Water demand

Demand for bulk water (including drinking water, Class A recycled water and non-revenue water) is expected to rise by 12.3 per cent compared to 2012/13 over the 2013 Water Plan. Demand for potable water alone will rise by 7.3 per cent.

Population growth, expected to be 8.2 per cent over the 2013 Water Plan period (based on the Department of Planning and Communities *Victoria in Future* forecasts), is the main driver of the upward demand trend.

After water restrictions were lifted in Geelong in 2010, continuing wet weather suppressed demand for drinking water. However, analysis indicates that consumption behaviour did begin to bounce back. Recent consumption figures during the summer of 2011/12 show that this trend has continued. It is expected that demand will continue to rise over the next few years with a limited return in discretionary water use.

Non-residential demand is assumed to grow proportionally to the population growth rate as business (and therefore employment) services, recreational and other uses grow with residential customer numbers.

In creating forecasts, the following key drivers of demand were considered:

- Population growth
- Forecast climatic conditions
- The 'bounce back' in demand after the easing of water restrictions
- Water conservation measures
- Water losses
- Price changes
- The effect of recent supply augmentation.

Recycled water demand

Recycled water (for non-drinking purposes) from water reclamation plants is a critical component of a more diverse water supply system. It has positive environmental impacts and allows for the cost effective use of lower classes of water for purposes other than drinking.

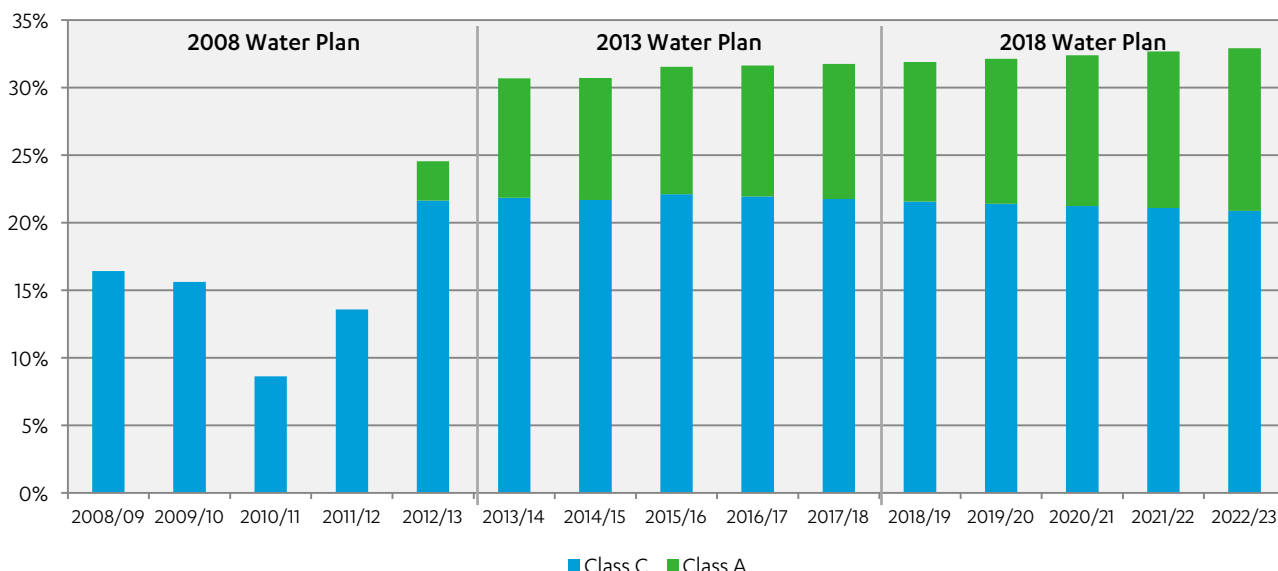
In partnership with private investors, or with Government contributions, Barwon Water has a number of existing Class C recycled water schemes in operation. Class C recycled water is used for horticulture, viticulture and golf course watering.

The following two new recycled water plants will increase recycled water delivery significantly during the 2013 Water Plan:

- The Black Rock Class A Recycled Water Plant, to be commissioned in 2013
- The Northern Water Plant (in partnership with Shell and the Victorian and Australian governments), also to be commissioned in 2013.

The anticipated increase in recycled water demand is detailed in Figure 13.

Figure 13: Proportion of water recycled by Barwon Water



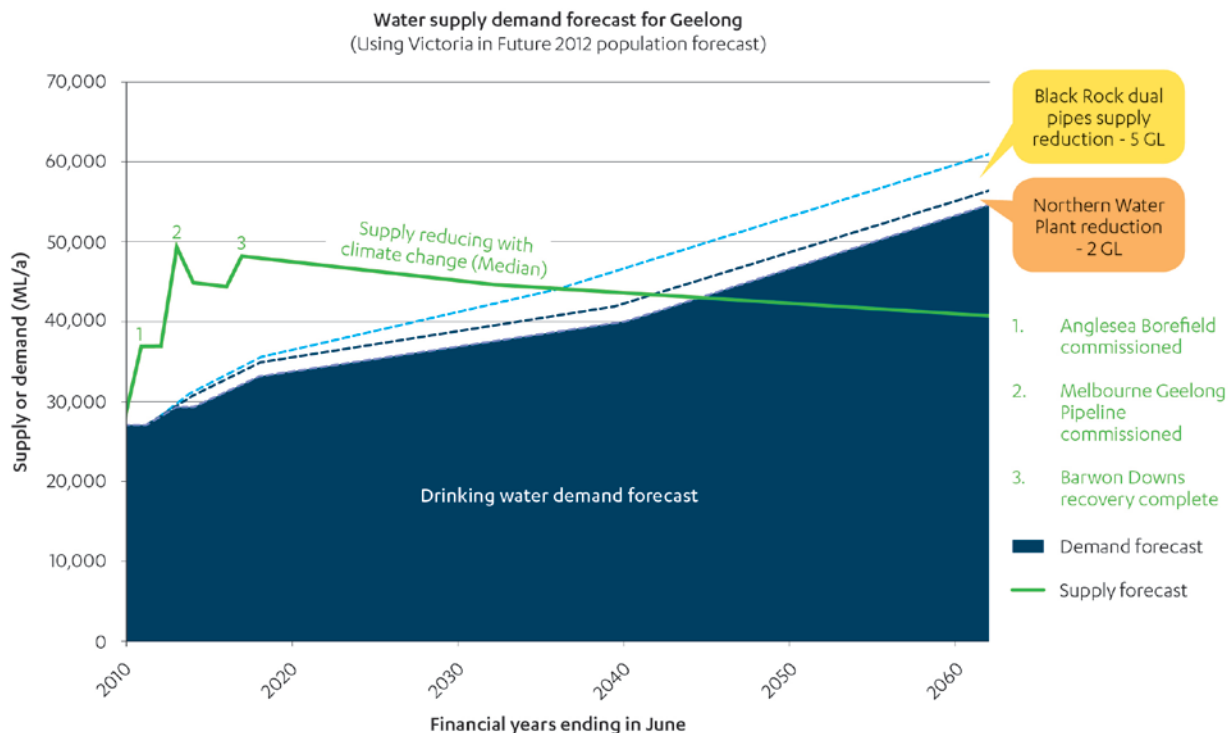
Supply of drinking water

In addition to demand forecasts, Barwon Water also undertakes forecasts for the supply of water from different water sources. This helps to identify operational costs that may result from using different water sources, and the requirement for capital investment. This modelling is completed using the Resource Allocation Model, a standard model built for, and used by, the Victorian water industry. Long-term analysis is undertaken using scenarios guided by the Department of Sustainability and Environment’s advice from the Commonwealth Scientific and Industrial Research Organisation.

Water supplies are now secure in greater Geelong, Aireys Inlet and Lorne. With the construction of a new storage facility in 2014, Apollo Bay will also be secure. Until then, Apollo Bay’s demand will be managed by seasonal water restrictions and continued water efficiency programs to maintain consumption behaviours.

Based on historical climate variability, and the latest climate change and growth projections, the supply of drinking water should meet demand in the Geelong system until the middle of the century. This level of security is driven by the significant investment in capital infrastructure to increase drinking water supplies and the replacement of large segments of demand for drinking water with recycled water, as demonstrated in Figure 14.

Figure 14: Supply and demand forecasts for Geelong

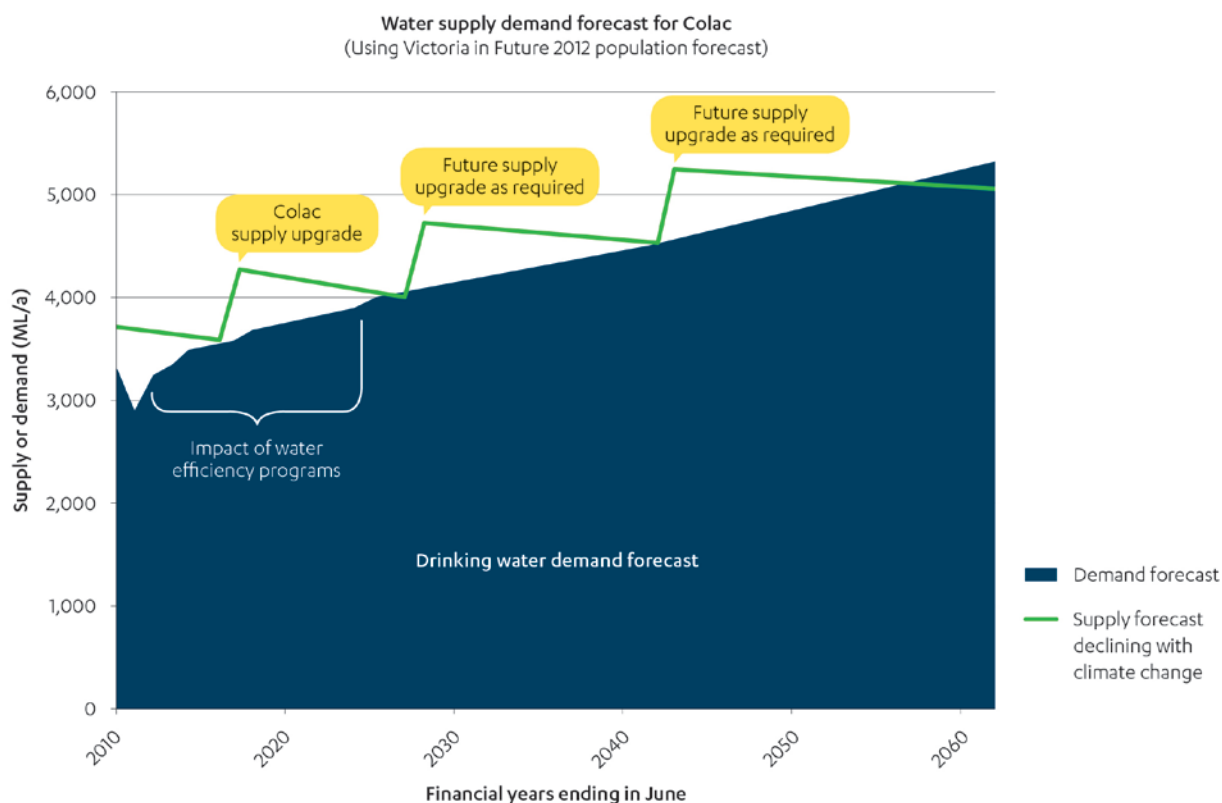


It is important to note that the Geelong forecasts presented in Figure 14 do not assume any further targeted capital investment in water source projects, apart from current commitments to Class A recycled water schemes at the Black Rock Recycled Water Plant and the Northern Water Plant.

Figure 14 also shows the reduction in demand for drinking water as a result of these recycled water projects over time. These projects defer the need for future augmentation by removing some demand for drinking water.

New forecasts for the Colac system show that there is a need to expand the supply system, as shown in Figure 15 (on page 33). Reliance on seasonal catchment inflows, limited storage capacity and the potential for bushfire and landslip risk to the water supply system indicate that a water source upgrade is required within the next five years. This brings forward an upgrade previously identified for the subsequent five year period (2018/19 to 2022/23).

Figure 15: Supply and demand forecasts for Colac



Growth in lot numbers

As a fixed charge is levied on each property, consideration must be given not only to total population growth, but also the growth in lot numbers.

Generally, the connection growth rate increases more quickly than the population growth rate. This is due to various trends, including a decline in the average household size and an increase in one-person households.

Connection numbers are expected to rise by 10.3 per cent over the 2013 Water Plan, in comparison with an expected population rise of 8.3 per cent, based on *Victoria in Future* forecasts. This percentage increase is forecast for both water and sewerage connections.

Sewerage demand

The volume of sewage is expected to rise by 10.3 per cent over the course of the 2013 Water Plan, in alignment with sewerage connection increases. Barwon Water notes that sewerage demand forecasts are not directly linked to prices, but do aid in expenditure forecasting.

Trade waste demand

The total volume of trade waste is expected to fall by an average of 2 per cent per year over the course of the 2013 Water Plan. This forecast is based on historic trends and is driven by:

- a decrease in the number of major trade waste customers
- a number of large trade waste customers installing onsite resource efficiency systems, including recycled water systems.

Various trade waste quality parameters for specific types of trade waste are also forecast to decline.

Developer charges demand

The occurrence of developer charges are forecast to rise by 10.3 per cent over the course of the upcoming regulatory period, based on Victoria in Future forecasts of lot growth.



Community engagement

Barwon Water is committed to open and transparent engagement with its customers, stakeholders and community members. Our engagement objectives include:

- actively encouraging community participation in managing the water cycle
- promoting community awareness of water issues and developing an understanding of the true value of water.

These activities continue to occur in addition to undertaking more targeted consultation, specifically in relation to the 2013 Water Plan.

The purpose of our engagement is to have open dialogue with stakeholders, community members and customers. The aim of the engagement around the 2013 Water Plan has been to inform the development of the 2013 Water Plan, including:

- the value to customers of service standards in addition to those required by government and regulatory bodies
- opinions on water security
- opinions on the value of specific capital and operational expenditure projects
- opinions on pricing matters such as tariff structures and price changes.

Engagement undertaken prior to the Draft 2013 Water Plan

Stakeholder and community engagement undertaken over the past two years has seen long-term dialogue regarding alternative water supply options for the region.

Engagement prior to the release of the Draft 2013 Water Plan included the following:

- Advertising campaigns, media releases, sponsorships and the overhaul of the Barwon Water website have supported an extensive marketing and communications campaign.
- Regular stakeholder and community forums throughout the service region, such as the Trade Waste Forum and Developers' Forum.
- Information kiosks and exhibition stands have been hosted at community events in Geelong and Colac.
- Consultative committees have been briefed and provided with presentations focussing on the 2013 Water Plan and its impacts for specific customer groups. Two consultative groups play a pivotal role in keeping Barwon Water informed of the ideas, concerns and expectations of the community and a broad range of stakeholders. They are the:
 - Customer Consultative Committee
 - Environmental Consultative Committee
- Surveys were conducted to hear feedback from customers on issues, including service level performance and satisfaction, recycled water pricing, and willingness to pay for carbon mitigation and alternative water supplies, including the 2012 customer perception survey.
- Ongoing consultation with government agencies including the Department of Sustainability and Environment, the Department of Health, the Environment Protection Authority, the Department of Treasury and Finance, and the Essential Services Commission.
- Project stakeholder and community engagement plans have been implemented for specific projects, including the Colac water supply augmentation and Armstrong Creek recycled water infrastructure.

Engagement since the release of the Draft 2013 Water Plan

Barwon Water has engaged with customers, community members and stakeholders since the submission of the Draft Water Plan.

Activities have included:

- The Draft 2013 Water Plan has been made available on the Barwon Water website with an opportunity to all stakeholders to provide feedback via the website, post, email, twitter, facebook or telephone

- Feedback has been encouraged by means of an advertisement at the bottom of the quarterly customer bill at the end of May 2012 and a media advertising campaign running from mid-May to mid-July 2012
- Targeted community and customer engagement has been undertaken to seek additional input and feedback if required
- Meetings and consultation with regulators has been undertaken on a regular basis as required
- Consultative committees have been briefed and updated as feedback is received and incorporated

During the public consultation period, where the Draft 2013 Water Plan was on public display for the months of June and July 2012, Barwon Water received 13 formal submissions.

Outcomes of engagement

As extensive consultation was undertaken to inform the Draft 2013 Water Plan submission in May 2012, there has been limited feedback from the post draft consultation which has resulted in significant changes to the Final Water Plan. The sections below highlight the feedback received prior to and since the release of the Draft Water Plan.

Service standards

Customer (community) and business satisfaction with service standards are monitored through a customer perception survey. The 2012 customer perception survey indicated 87 per cent (up from 78 per cent in 2010) of the community were extremely satisfied or satisfied with the overall performance of Barwon Water in supplying quality water and sewerage services.

The Customer Consultative Committee was consulted on core service standards. The committee was supportive of maintaining the current core service level performance.

The Customer Consultative Committee was also consulted on Guaranteed Service Levels. The Customer Consultative Committee feedback was to continue with the same Guaranteed Service Levels, specifically noting that a spill to a customer's property is equally significant if it is outside or inside the house. The Customer Consultative Committee proposed the following changes to the Guaranteed Service Levels:

- Customers should be entitled to compensation after two sewer spills to their property, a reduction from three spills in the Guaranteed Service Levels for the current regulatory period.
- The payment amount should be increased by the Consumer Price Index annually.

Water security

Barwon Water undertook significant engagement in developing the Water Supply Demand Strategy. It included feedback from customers, government, businesses and technical experts during a number of engagement activities in 2011.

The feedback received has led to the inclusion of more information on water supply options in this strategy. Suggested supply or demand management options were evaluated and, if considered to be potentially feasible, included in the strategy. Consistent feedback included:

- concern about surface water and groundwater extraction impacting the environment
- strong support for recycled water and water saving programs to continue where required to meet demand for water
- some support for water restrictions to remain in place permanently.

Feedback on the Draft Water Plan was received by several key environmental groups and the Colac Otway Shire regarding general water supply management and water supply options for Colac. Feedback included:

- A positive response from Colac Otway Shire on the commitment for new water supply augmentation project in Colac to cater for growth
- Strong support from environmental groups and Colac Otway Shire for Barwon Water to consider developing water efficiency projects and investigate alternative water supply options for the region, especially in Colac (for example recycled water and stormwater)

- Support for Barwon Water to allow for significant variability in demand forecasts as a result of climate variability. Although a period of wet climate had been experienced for the past several years, the possibility of dryer climate (as experienced previously to the current wet period) should be factored into demand forecasts
- A call for greater consultation with communities and agencies impacted by groundwater usage
- A push for Barwon Water to promote and install more rainwater tanks and create more dams.

Expenditure

The clear message received from customers and stakeholders has been to keep expenditure to a minimum in order to minimise the impact on prices.

The 2012 customer perception survey concluded that, as a result of the end of the drought and cost of living pressures, there was a reduced willingness to pay for items such as:

- recycled water and stormwater (where not required to promote water security)
- conservation programs (where not required to promote water security)
- renewable energy.

This reflects customers' recent unwillingness to pay for expenditure which could be considered discretionary.

Tariff structure

The feedback from customers was supportive of a two-part tariff, tariffs which reflected the value of water, pricing consistency across the region and the reduction of cross-subsidies. However, two residents questioned the size of the 'fixed' charge component of their bills. Both residents were small water users and were concerned that they had limited ability to influence the cost of their bills, as the fixed charges dominated bill cost, and provided no incentive to conserve water. There was a desire to increase the 'variable' component of bill and reduce the 'fixed' component on the bill.

Pricing

The Customer Consultative Committee supported keeping prices as low as possible to ensure customer affordability.

Barwon Water's response to feedback

Barwon Water notes that in many cases, differing customer opinions needed to be balanced when formulating the Water Plan, and as such it is not possible to satisfy all parties. This Water Plan reflects what Barwon Water considers to be a fair and balanced position in the best interests of all customers and other stakeholders.

Customer feedback has been integrated into this 2013 Water Plan, as follows:

- Core service standard targets are proposed to remain unchanged, reflecting Barwon Water customer's general level of satisfaction with services.
- Three, rather than four, sewage spills on a property entitle a customer to Guaranteed Service Level compensation.
- Proposed expenditure in the 2013 Water Plan has been reduced to minimal levels (close to expenditure levels experienced prior to the 2008 Water Plan) to reduce price impact on customers.
- Capital expenditure has been returned to historical levels experienced prior to the 2008 Water Plan.
- Analysis of Barwon Water's supply/demand balance suggests that further investment to supplement recent water supply augmentation is not required (other than in Colac).
- Barwon Water will continue with targeted investment (capital and operational) in water efficiency, conservation and education to ensure messages are maintained.
- Barwon Water will continue to investigate options for demand management and water efficiency measures to be integrated with any water supply solutions for Colac.
- Demand modelling has accounted for a variety of climate scenarios.

- Barwon Water is proposing to coordinate a community reference group and agency reference group for extensive consultation on the renewal of the Barwon Downs groundwater licence, a critical water supply source for the greater Geelong region.
- Customers have indicated a reduced willingness to pay for Barwon Water to invest in carbon mitigation, water conservation and alternative water sources. As a result, only capital and operating expenditure has been included for these items where projects or activities are financially viable, and in the case of alternative water supply projects, are required for environmental benefits, water security or substitute for drinking water.

Appendices

Appendix A: Proposed prices

	Unit	'08/09	'09/10	'10/11	'11/12	'12/13	'13/14	'14/15	'15/16	'16/17	'17/18	'18/19	'19/20	'20/21	'21/22	'22/23
		Actual	Actual	Actual	Actual	Actual	Proposed	Proposed	Proposed	Proposed	Proposed	Forecast	Forecast	Forecast	Forecast	Forecast
Water Services																
Water volume charge	/kL	1.5829	1.7585	1.8815	2.0131	2.2144	2.2144	2.2144	2.2144	2.2144	2.2144	2.2144	2.2144	2.2144	2.2144	2.2144
Water service charge	/year	120.32	133.66	143.01	153.02	168.31	168.31	168.31	168.31	168.31	168.31	168.31	168.31	168.31	168.31	168.31
Sewage Services																
<u>Residential</u>																
Sewer Volume Charge	/kL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sewer Service Charge	/year	399.00	443.29	474.31	507.51	543.03	543.03	543.03	543.03	543.03	543.03	543.03	543.03	543.03	543.03	543.03
<u>Non Residential</u>																
Sewer Volume Charge	/kL	1.3524	1.5025	1.6076	1.7201	1.8405	1.8405	1.8405	1.8405	1.8405	1.8405	1.8405	1.8405	1.8405	1.8405	1.8405
Sewer Service Charge	/year	241.72	268.54	287.33	307.44	328.95	328.95	328.95	328.95	328.95	328.95	328.95	328.95	328.95	328.95	328.95
Fire Services																
Service Charge	/year	169.84	188.69	201.89	216.02	237.62	237.62	237.62	237.62	237.62	237.62	237.62	237.62	237.62	237.62	237.62
Trade Waste services																
Trade waste volume charge	/kL	1.3524	1.5025	1.6076	1.7201	1.8405	1.8405	1.8405	1.8405	1.8405	1.8405	1.8405	1.8405	1.8405	1.8405	1.8405
Trade Waste Permit	/year	129.94	129.94	129.93	129.93	129.92	129.92	129.92	129.92	129.92	129.92	129.92	129.92	129.92	129.92	129.92
Trade Waste Agreement	/year	469.22	469.22	469.21	469.20	469.19	469.19	469.19	469.19	469.19	469.19	469.19	469.19	469.19	469.19	469.19
Renewable licence fee																
Category 5	/year	2165.66	2165.65	2165.65	2165.65	2165.65	2165.65	2165.65	2165.65	2165.65	2165.65	2165.65	2165.65	2165.65	2165.65	2165.65
Category 4	/year	870.59	870.59	870.59	870.58	870.58	870.58	870.58	870.58	870.58	870.58	870.58	870.58	870.58	870.58	870.58
Category 3	/year	392.69	392.69	392.69	392.68	392.67	392.67	392.67	392.67	392.67	392.67	392.67	392.67	392.67	392.67	392.67
Category 2	/year	222.35	222.34	222.34	222.34	222.33	222.33	222.33	222.33	222.33	222.33	222.33	222.33	222.33	222.33	222.33
Category 1	/year	166.03	166.02	166.01	166.01	168.63	168.63	168.63	168.63	168.63	168.63	168.63	168.63	168.63	168.63	168.63
Re-sampling and analysis of non-compliant trade waste	/item	324.84	324.83	324.82	324.82	324.81	324.81	324.81	324.81	324.81	324.81	324.81	324.81	324.81	324.81	324.81
Asset Protection Fee	/item	1107.36	1107.35	1107.35	1107.34	1107.34	1107.34	1107.34	1107.34	1107.34	1107.34	1107.34	1107.34	1107.34	1107.34	1107.34
Re-assessment of risk ranking	/item	144.36	144.36	144.36	144.35	144.35	144.35	144.35	144.35	144.35	144.35	144.35	144.35	144.35	144.35	144.35
Trade waste quality charge: Geelong																
Chemical oxygen demand	/kg	0.2245	0.2364	0.2600	0.2836	0.3071	0.2327	0.2346	0.2365	0.2386	0.2407	0.2407	0.2503	0.2503	0.2503	0.2599
Suspended solids	/kg	0.1536	0.1654	0.1771	0.1889	0.2008	0.1742	0.1756	0.1770	0.1786	0.1802	0.1802	0.1802	0.1802	0.1802	0.1896
Nitrogen	/kg	0.5554	0.5670	0.5789	0.5904	0.5904	0.6321	0.7292	0.8264	0.9527	1.0499	1.0499	1.0499	1.0499	1.0499	1.0499
Sulphur	/kg	0.7563	0.7797	0.8030	0.8263	0.8618	0.9043	0.9723	1.0500	1.0888	1.1471	1.1471	1.1471	1.1471	1.1471	1.1471
Trade waste quality charge: Colac																
Chemical oxygen demand	/kg	0.3072	0.3188	0.3306	0.3424	0.3540	0.3598	0.3695	0.3986	0.4083	0.4180	0.4277	0.4374	0.4471	0.4568	0.4665
Suspended solids	/kg	0.1418	0.1535	0.1652	0.1769	0.1887	0.1945	0.2042	0.2139	0.2236	0.2430	0.2527	0.2624	0.2721	0.2818	0.2915
Nitrogen	/kg	0.9454	0.9575	0.9575	0.9690	0.9806	1.0210	1.0890	1.1667	1.2153	1.2639	1.3125	1.3611	1.4097	1.4583	1.5069
Phosphorus	/kg	2.2807	2.3035	2.3380	2.3613	2.3967	2.5282	2.6740	2.7712	2.8684	2.9656	2.9656	2.9656	3.0142	3.0142	3.0628
Recycled water - Class A	/kL					1.7715	1.7715	1.7715	1.7715	1.7715	1.7715	1.7715	1.7715	1.7715	1.7715	1.7715
Recycled water - Class C	/ML						416.52	416.52	416.52	416.52	416.52	416.52	416.52	416.52	416.52	416.52
New Customer Contributions																
< 450 sq m		608.64	608.64	608.64	608.64	608.64	608.64	608.64	608.64	608.64	608.64	608.64	608.64	608.64	608.64	608.64
450 to 1350 sq m		1217.30	1217.30	1217.30	1217.30	1217.30	1217.30	1217.30	1217.30	1217.30	1217.30	1217.30	1217.30	1217.30	1217.30	1217.30
> 1350 sq m		2434.63	2434.63	2434.63	2434.63	2434.63	2434.63	2434.63	2434.63	2434.63	2434.63	2434.63	2434.63	2434.63	2434.63	2434.63

Appendix B: Major capital expenditure variations in 2008 Water Plan

Major initiatives	Description	Gross expenditure 2008 (\$M 2013)			Contributions 2008 Water Plan (\$M 2013)			Net expenditure 2008 (\$M 2013)			Key reason(s) for difference	Project driver	Regulatory obligation
		Water Plan Target	Actual	Gross variance	Water Plan Target	Actual	Contributions variance	Target	Actual	Net variance			
Melbourne to Geelong Pipeline*	A 59km underground pipeline linking Melbourne and Geelong's water supplies	\$84.45	\$80.42	-\$4.03	\$20.80	\$20.79	-\$0.01	\$63.65	\$59.63	-\$4.02	Project identified and required by previous government in <i>Our Water Our Future – the next steps</i> .	Growth	General water resource obligations
Black Rock Recycled Water Plant	Water recycling plant for: - supply of Class A recycled water to dual pipe schemes at Armstrong Creek and Torquay - prevention of increase of salinity to Class C customers above sustainable levels	\$0.00	\$42.06	\$42.06	\$0.00	\$12.00	\$12.00	\$0.00	\$30.06	\$30.06	Contributes to meeting Statement of Obligations requirements for sustainable management of water resources and security of supply in an environment of climate uncertainty. Contributes to achieving sustainability objectives for region's major growth precinct as identified in Council's vision for Armstrong Creek Urban Growth Area and associated Infrastructure Plan. Contributes to achieving per capita potable water use target as required by government's Central Region Sustainable Water Strategy. Independent assessment by Sustainability Victoria supported regional recycling solution compared to a decentralised recycling solution. Strong community support for dual pipe to major growth area (supported by customer surveys) Federal Government support for project (\$10 million funding provided) Financial analysis using discounted cash flows indicated neutral Net Present Value over 66 years. Positive Triple Bottom Line outcome compared to base case.	Growth	General water resource obligations
Armstrong Creek recycled water mains (including tank and transfer main)	Pumping station and pipeline from Black Rock Recycled Water Plant to Armstrong Creek Urban Growth Area, Recycled Water Storage Tank at Mt Duneed and recycled water distribution pipelines to precincts within the Growth Area, staged to meet development timeframes.	\$0.00	\$40.93	\$40.93	\$0.00	\$0.00	\$0.00	\$0.00	\$40.93	\$40.93	Contributes to meeting Statement of Obligations requirements for sustainable management of water resources and security of supply. Contributes to meeting future water security in environment of climate uncertainty. Dual pipe recycled water was part of Department of Planning and Community Development and City of Greater Geelong vision for the Armstrong Creek growth area. This is a commercially viable project which would be pursued by private sector participants.	Growth	Provision of service
Armstrong Creek water feeder mains	Water mains to deliver recycled water to the Armstrong Creek development	\$0.14	\$13.54	\$13.40	\$0.00	\$0.00	\$0.00	\$0.14	\$13.54	\$13.40	Required to meet water service needs of Armstrong Creek growth corridor. More detailed information on timing and sequence of development in the growth corridor resulted in an increase in estimated cost during 2008 Water Plan period	Growth	Provision of service
Torquay recycled water dual pipe scheme	Pipeline from Armstrong Creek Class A system to Torquay, recycled water storage and distribution pipelines to growth precincts, staged to meet north Torquay (2,500 lot) development timeframes.	\$0.00	\$10.44	\$10.44	\$0.00	\$3.38	\$3.38	\$0.00	\$7.06	\$7.06	Developers and council looking for an integrated water solution. Project leverages off the Black Rock Recycled Water plant and the Armstrong Creek Dual Pipe scheme. \$10.5 million to be contributed by the Federal Government (\$3.3 million to be provided in the 2008 Water Plan period, remaining in 2013 Water Plan).	Growth	Provision of service
Colac pipeline future stages	Replacement of sections of the Colac supply pipeline, assess to be in poor condition and high risk of failure. 2008 Water Plan assumed sections would be replaced in stages over several years, including beyond the 2008 Water Plan. Future stages originally scheduled for after 2013 were brought forward for construction in the 2008 Water Plan.	\$5.20	\$18.92	\$13.72	\$0.00	\$0.00	\$0.00	\$5.20	\$18.92	\$13.72	Efficiencies of completing all stages at one time justified by Net Present Value analysis as being lower cost from a lifecycle perspective. Bringing forward future stages also reduced risk of failure of this critical water supply pipeline.	Renewal	Reliability of service
Cowies Creek sewerage pump station upgrade	Replacement of major sewerage pumping station located on former landfill site at Cowies Creek	\$0.00	\$11.15	\$11.15	\$0.00	\$0.00	\$0.00	\$0.00	\$11.15	\$11.15	Station condition assessment identified structural deterioration of station and associated Occupational Health and Safety risk for operations staff. Previously assumed approach of repair of station was found to be not practical or safe and replacement of station was found preferred solution.	Renewal	Reliability of service
Meredith water supply improvements	New pumping station and 11.5 km pipeline are under construction, and will enable Meredith to receive water from Geelong's supply system	\$0.00	\$7.46	\$7.46	\$0.00	\$0.00	\$0.00	\$0.00	\$7.46	\$7.46	Severe drought resulted failure of Meredith Water supply system that draws 'run-of-river' flows from the West Moorabool River. Tankering of water was required from Moorabool Water Treatment Plant. Construction of this project required to avoid high ongoing cost of water cartage.	Improved service	General water resource obligations
Lovely Banks lining and covering	Lining and covering of water supply basins to improve water quality and ensure compliance with Safe Drinking Water Act.	\$6.04	\$12.61	\$6.57	\$0.00	\$0.00	\$0.00	\$6.04	\$12.61	\$6.57	Cost of project increased significantly from that assumed in 2008 Water Plan due mainly to poor geotechnical conditions.	Improved service	Water quality
Torquay high level feeder main Stage 3	New high level feeder main to provide water for growing Torquay and Jan Juc townships	\$0.00	\$4.26	\$4.26	\$0.00	\$0.00	\$0.00	\$0.00	\$4.26	\$4.26	Project is needed to facilitate the construction of the Torquay high level tank and meet the faster than anticipated growth of Torquay North.	Growth	Provision of service
Moolap sewerage scheme	Sewerage scheme for the currently unsewered township of Moolap	\$10.58	\$0.00	-\$10.58	\$0.00	\$0.00	\$0.00	\$10.58	\$0.00	-\$10.58	Concept design for providing sewerage to Moolap area has been completed as required by the Department of Sustainability and Environment. Need for implementation not yet confirmed.	Improved service	Provision of service

Wye River and Separation Creek sewerage	A new sewerage scheme for the townships of Wye River and separation Creek	\$5.70	\$0.00	-\$5.70	\$0.00	\$0.00	\$0.00	\$5.70	\$0.00	-\$5.70	Business case could not be developed for implementation due to landslide risk – i.e. not technically viable.	Improved service	Provision of service
Total		\$112.11	\$241.79	\$129.68	\$20.80	\$36.17	\$15.37	\$91.31	\$205.62	\$114.31			
Other Projects	Minor project cost increases, estimation variances and/or minor capital project additions	\$484.79	\$529.93	\$45.14	\$72.60	\$85.43	\$12.83	\$412.19	\$444.50	\$32.31			
Total		\$596.90	\$771.72	\$174.82	\$93.40	\$121.60	\$28.20	\$503.50	\$650.12	\$146.62			