



# WATER PERFORMANCE REPORT

Performance of Victorian urban  
water and sewerage businesses  
2012-13

December 2013



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# PERFORMANCE OVERVIEW 2012-13

In 2012-13, Victorian water businesses continued to recover from years of drought followed by the extreme rainfall and flooding of 2010-11. Water consumption across Victoria rose for the second consecutive year (up by 9 per cent in 2012-13).

Businesses again provided high quality water and reliable water and sewerage services. They also continued to reduce the impact of their operations on the environment.

Average household bills increased for all businesses. Regional areas experienced higher increases generally, while the metropolitan Melbourne prices were held at 2011-12 levels to return unrequired desalination payments.

Businesses maintained their support for customers experiencing financial hardship, however more residential concession customers had their water supply restricted for nonpayment of bills this year. The rate of legal action for nonpayment also increased. The metropolitan businesses are currently developing initiatives to improve customer support in this area, and these initiatives should be shared across the wider industry.

Several businesses also reported delays to major projects. While businesses must retain flexibility to respond to changing circumstances, the performance report shows a number of businesses did not deliver critical projects to their original timeline.

The reported performance results show considerable variation can occur across businesses for a given performance indicator. This is to be expected given the diversity in operational conditions across the state, including each business's particular customer base size and makeup, climate, location and geography. However, the Commission expects that businesses would consider how their own performance compares with the best performers in a particular category, and how they might improve their own performance through that exemplar.

## **PERFORMANCE OVERVIEW — 2008-09 TO 2012-13**

2012-13 was the final year of the second regulatory period for Victorian water businesses, which began in 2008-09 for the regional businesses and 2009-10 for the metropolitan Melbourne businesses. A summary of water business performance across the second regulatory period is available on our website at [www.esc.vic.gov.au](http://www.esc.vic.gov.au)

## **HOUSEHOLD CONSUMPTION**

Average annual household water consumption across Victoria rose 9 per cent from 150 kilolitres in 2011-12 to 163 kilolitres in 2012-13. This continues the bounce back in average consumption since its lowest point in 2010-11 (143 kilolitres), but is still well below consumption levels prior to the recent drought.

All businesses reported higher consumption related to a relatively warmer summer and more traditional rainfall patterns. By business, the increases ranged from 2 per cent through to 22 per cent, with the largest increases in the state's hotter northern regions.

## **HOUSEHOLD BILLS**

The Commission uses each business's average household consumption to calculate an indicative average household bill for water and sewerage services. This includes both the fixed and variable water and sewerage charges. Average annual household bills were higher in 2012-13 than in 2011-12 for all water businesses. The average household bills for owner occupiers ranged across businesses from \$832 (Lower Murray Water) to \$1261 (Gippsland Water). For the regional businesses, the increases reflected scheduled price rises and higher average household consumption. Metropolitan prices were frozen at 2011-12 levels, so higher average consumption drove metropolitan bill increases.

Average household bills for tenants, who are not billed fixed charges, ranged from \$120 (Westernport Water, which has a high proportion of fixed charges to account for a

low permanent customer base, and a low average household consumption) to \$511 (Yarra Valley Water) in 2012-13.

## DEALING WITH HARDSHIP

Businesses have a number of avenues available to assist their customers experiencing financial hardship and to address payment difficulties. The particular approach taken varies across businesses, and may change from year to year as business strategies change. For example some businesses prefer to pursue legal action for nonpayment of bills rather than to restrict water supply to customers. As regulator, our priority is monitoring compliance with relevant regulatory obligations, as well as promoting ongoing improvement in assisting customers.

In 2012-13, the use of instalment plans for residential customers increased for 10 of the 16 businesses. The overall rate across all water businesses increased from 5.9 per 100 customers in 2011-12 to 6.3 in 2012-13.

There was a 2 per cent increase in the number of residential customers whose water supply was restricted for nonpayment, from 2381 in 2011-12 to 2439 in 2012-13 (0.1 per cent of a total 2.25 million residential customers). This included more customers on concession (up from 370 to 465). Over the same period, nonresidential customers whose water supply was restricted for nonpayment rose 16 per cent.

Legal actions against residential customers increased by 21 per cent from 668 in 2011-12 to 811 in 2012-13. The average debt level before initiating legal proceedings decreased slightly, and is well above the regulated minimum of \$200.

The number of approved hardship grants fell to 14 416 in 2012-13, from 17 948 in 2011-12.

## CUSTOMER COMPLAINTS

In 2012-13, the Energy and Water Ombudsman (Victoria) (EWOV) received 2198 complaints and 64 enquiries about the metropolitan and regional urban water businesses, up 9 per cent from 2008 complaints and 69 enquiries in 2011-12.

In 2012-13, businesses received 18 202 complaints, a 12 per cent increase from the 16 235 complaints received in 2011-12. This equates to a rate of 0.74 complaints per 100 customers across the state, up from 0.67 in 2011-12. The increase was driven mainly by payment issues and water quality complaints related to colour from metropolitan Melbourne customers.

## NETWORK RELIABILITY

Overall water supply reliability, measured by average customer minutes off supply, remained steady at 30 minutes in 2012-13.

The rate of interruptions to water supply increased to 39 interruptions per 100 kilometres of water main in 2012-13, up from 36 interruptions in 2011-12.

The rate of sewer blockages increased slightly from 18 blockages per 100 kilometres of sewer main in 2011-12 to 19 in 2012-13.

The rate of sewer spills also increased slightly from 9 per 100 kilometres of sewer main in 2011-12 to 10 in 2012-13.

## WATER QUALITY

Fifteen of the 16 urban water businesses delivered water that met *E. coli* bacteriological requirements set out in the Safe Drinking Water Regulations 2005. Coliban Water recorded a noncompliance in one of the smaller towns it supplies.

All urban businesses, except GWMWater, delivered water that met the turbidity requirements set out in the Safe Drinking Water Regulations. GWMWater's

performance continued to improve in 2012-13 as the effects of the January 2011 floods diminished. It met turbidity requirements in 24 of 26 drinking water supply zones; 1.7 per cent of customers were affected by water that did not meet the requirements, an improvement from 2 per cent in 2011-12 and 11 per cent in 2010-11.

Water quality complaints rose slightly from a rate of 0.27 complaints per 100 customers in 2011-12 to 0.29 in 2012-13, driven mainly by an increase in colour complaints by metropolitan Melbourne customers.

## ENVIRONMENTAL PERFORMANCE

Water businesses treated 479 700 megalitres of sewage in 2012-13. This was a 1 per cent decrease from the 2011-12 volume of 483 600 megalitres.

The proportion of total effluent produced in Victoria that was reused increased by 2 percentage points from 18 per cent in 2011-12 to 20 per cent in 2012-13. Total effluent reuse rose by 5 per cent to 91 400 megalitres compared with 87 000 megalitres in 2011-12. However, this was still well below the 115 600 megalitres reused in 2009-10, at the peak of the drought.

Victorian urban water businesses reported 765 300 tonnes of total net carbon dioxide equivalent (CO<sub>2</sub>-e) emissions in 2012-13, a 3 per cent reduction from the 789 100 tonnes reported in 2011-12.

## MAJOR PROJECTS

Water businesses spent \$1.08 billion on capital works in 2012-13. The total capital expenditure investment across the second regulatory period was \$9.1 billion (in \$2012-13).

Businesses identified 120 major projects to be completed during the second regulatory period. However, only 83 projects were completed, with 41 of these completed in the final year of the period. Another 18 projects are underway and will continue into the third regulatory period. Fourteen projects were deferred into the third regulatory period

(commencing July 2013) or beyond, and five projects were cancelled or suspended indefinitely as needs and priorities changed.

## THIS REPORT

This is the ninth annual report published by the Commission on the performance of all the Victorian businesses that provide water, sewerage and related services to urban customers. The report incorporates data provided and independently verified for the 13 regional businesses, three metropolitan retailers and Melbourne Water for the 12 months to June 2013.

The 2012-13 performance report can be used to inform community discussion, to identify shifts in performance outcomes, and to stimulate 'competition by comparison' between the water businesses. The report provides time series data in graphical form for many key indicators to make it easy to identify performance trends for each business, as well as to compare performance across the industry as a whole.

Where statewide averages are discussed, a weighted average is calculated where appropriate to reflect the size of the various water businesses and their relative contribution to the overall average.

As well as this performance report, there is a summary for each business, an industry summary, and data spreadsheets for those who wish to interrogate the data further. This year, there is also a performance overview of the second regulatory period covering 2008-09 to 2012-13. These documents are available on our website at [www.esc.vic.gov.au](http://www.esc.vic.gov.au)

During early 2012, the Commission reviewed the performance reporting indicators. The changes coming from this review have been applied from 2012-13, and appear for the first time in this year's performance report.



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# 1 WHY WE DO THIS

## 1.1 THE COMMISSION'S ROLE

The Essential Services Commission (the Commission) is the economic regulator of the Victorian water sector. One of its regulatory functions is to monitor and to report publicly on the performance of Victorian water businesses.

Monitoring and reporting is important because it provides reliable and consistent information that can be used to:

- inform customers about the performance of their water business
- identify base line performance and provide incentives for water businesses to improve their own performance over time
- compare water businesses and thereby facilitate competition by comparison, which can encourage water businesses to further improve their performance relative to others
- inform the decision making processes of regulated water businesses, regulatory agencies and Government.

This is the Commission's ninth annual report on the performance of all Victorian urban water businesses, which commenced for the 2004-05 period. Performance reporting between 1995 and 2004 was done for the three metropolitan water retailers only.

Performance reports assess the performance of:

- the three metropolitan retailers — City West Water, South East Water and Yarra Valley Water
- the 13 regional urban businesses — Barwon Water, Central Highlands Water, Coliban Water, East Gippsland Water, Gippsland Water, Goulburn Valley Water, Grampians Wimmera Mallee Water (GWMWater), Lower Murray Water, North East

Water, South Gippsland Water, Wannon Water, Western Water and Westernport Water

- Melbourne Water — the supplier of bulk water and sewerage services to the metropolitan retailers (and a number of regional water businesses).

This report covers the businesses' performance over the 2012-13 financial year across key performance indicators that were developed in consultation with the businesses and a range of other stakeholders. The data provided by the businesses was independently audited to provide assurance it is accurate and reliable. Water businesses were invited to comment on various aspects of their performance, and these comments are incorporated into the report.

## 1.2 THE SCOPE OF THIS REPORT

This report focuses on indicators in a number of key performance areas for urban water businesses including:

- **usage, price trends and payment management** — including the size of household bills, consumption levels, and managing nonpayment of bills and customers facing hardship
- **customer responsiveness and service** — including customer complaints and call centre performance
- **network reliability** — including the reliability, responsiveness to faults and interruptions around water and sewer systems
- **water quality** — including drinking water quality and associated complaints
- **conservation and the environment** — including levels of effluent and biosolids reuse and recycling, and greenhouse gas emissions
- **historical performance** — including comparisons for all indicators and businesses with previous years' data
- **major project status** — summary report on the status of those major projects scheduled for completion this year.

This report does not include information on the rural water businesses that supply irrigation, drainage, diversion, storage operator and bulk water services. The Commission has a separate set of performance indicators and a national reporting framework applies to these businesses.

### **1.3 THE COMMISSION'S ROLE IN REGULATING SERVICE STANDARDS**

The Commission is responsible for regulating service standards and conditions of supply. In the urban sector, the framework comprises:

- A Customer Service Code (the Code) that imposes a consistent overarching framework for delivering services to both metropolitan and regional urban customers. The Code sets out service obligations for key matters including connection and service provision, charges, handling complaints and disputes, billing, payment of bills, collection of outstanding bills, actions for nonpayment including restriction of supply or disconnection, quality of supply, reliability of supply, meters, works and maintenance, and information and administrative arrangements for guaranteed service levels. The Code is available on our website at [www.esc.vic.gov.au](http://www.esc.vic.gov.au)
- A separate Trade Waste Customer Service Code that establishes consistent trade waste management requirements for water businesses across Victoria.
- Flexibility for the businesses to propose their own service levels or targets, rather than having to meet a consistent performance standard across businesses. This flexibility recognises the different operating environments each business faces and allows customers to express their preferences about the level of service for which they are prepared to pay. These service targets provide an important reference point for monitoring performance over the regulatory period.
- A requirement each business maintain a Customer Charter that informs customers about its services, the respective rights and responsibilities of the business and its customers, and the service standards the business proposes to deliver over the regulatory period.

The Commission monitors and enforces compliance with obligations set out in the Customer Service Code. It does this by auditing compliance with the regulatory obligations, and by responding to and following up on issues or concerns raised by customers or other stakeholders about compliance matters.

The Commission is not responsible for regulating or driving performance in the areas of water conservation, the environment and water quality. EPA Victoria is responsible for regulating environmental standards. The Department of Environment and Primary Industries is responsible for water conservation measures, and the Department of Health is responsible for drinking water quality standards.

## **1.4 WHERE WE SOURCE THE INFORMATION FROM**

This report is based on two principal sources of information:

- performance data reported by the businesses against key performance indicators specified by the Commission, and comments from the businesses explaining their performance
- the findings of regulatory audits on the reliability of the performance indicator data reported by the businesses.

Some additional information is also sourced from other government departments and from the Energy and Water Ombudsman (Victoria) (EWOV).

## 2 OVERVIEW OF THE WATER INDUSTRY

The Victorian water businesses are diverse in terms of size, the services they provide and the environments in which they operate.

The three key components of the water sector the Commission regulates are:

- the metropolitan water sector, comprising Melbourne Water, City West Water, South East Water and Yarra Valley Water
- the regional urban water sector, comprising Barwon Water, Central Highlands Water, Coliban Water, East Gippsland Water, Goulburn Valley Water, Gippsland Water, Grampians Wimmera Mallee Water (GMMWater), Lower Murray Water, North East Water, South Gippsland Water, Wannon Water, Western Water<sup>1</sup>, Westernport Water
- the rural water sector, comprising Goulburn Murray Water and Southern Rural Water. GMMWater and Lower Murray Water provide rural water services in addition to urban water services.

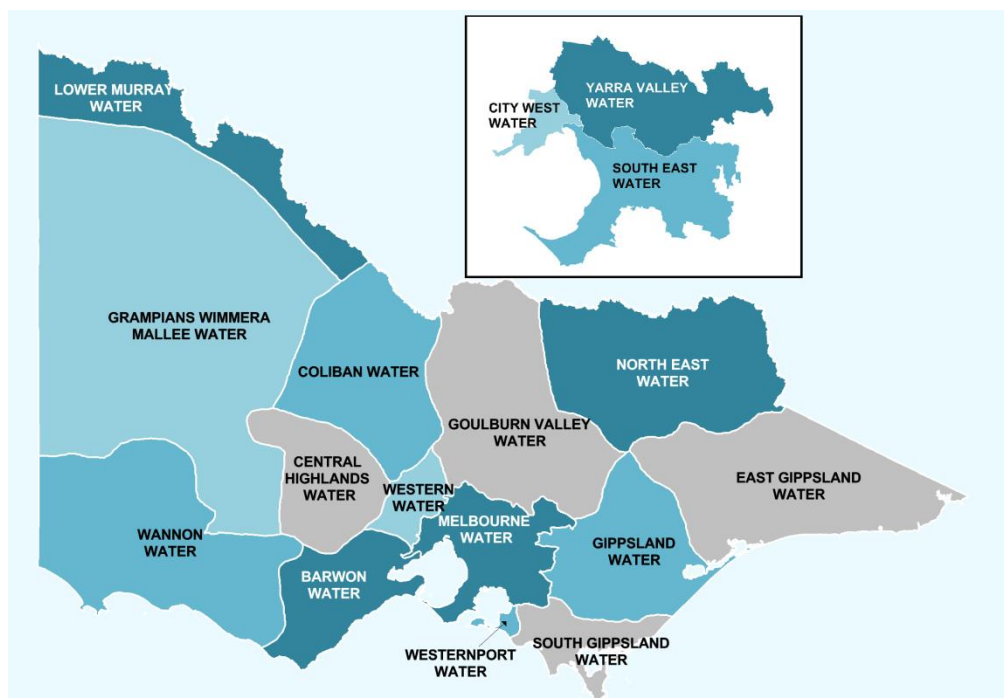
A map of the Victorian water sector is provided in figure 2.1.

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<sup>1</sup> For the recent Water Price Review for the third regulatory period, Western Water was grouped with the metropolitan Melbourne water businesses. For this performance report, it will be considered as a regional business, consistent with previous years.



**FIGURE 2.1 VICTORIAN WATER BUSINESSES 2012-13**



## 2.1 METROPOLITAN BUSINESSES

In the metropolitan area, Melbourne Water provides wholesale services to the three metropolitan retailers. These services include:

- harvesting, storing and treating raw water supplies
- transmitting bulk water supplies
- operating the bulk sewerage service and treating the majority of sewage
- managing rivers and creeks and major drainage systems in the Port Phillip and Westernport regions (municipal councils provide local drainage services).

The three metropolitan retailers supply water and sewerage services to almost 1.8 million customers (table 2.1). This represents about 75 per cent of the state's population and accounts for around 14 per cent of total metered water use in Victoria. Their functions include:

- distributing and supplying water to customers and operating the sewerage network from customer premises through to the trunk sewer network. The retail businesses also operate some small sewage treatment plants from which they may also provide recycled water.
- providing a range of retail functions, including meter reading, customer billing, handling call centre enquiries, and handling complaints. The retailers also bill metropolitan customers for drainage services on behalf of Melbourne Water and parks charges on behalf of the Minister for Water.
- providing trade waste services to commercial and industrial customers.

Each retailer services a specific geographic area and (unlike the gas or electricity industries) does not compete directly with other retailers for customers.

**TABLE 2.1 METROPOLITAN WATER BUSINESSES — OVERVIEW**

	<b>Water customers (no.)</b>	<b>Sewerage customers (no.)</b>	<b>Length of water main (km)</b>	<b>Length of sewer main (km)</b>
City West	389 551	386 099	4 617	4 093
South East	682 450	645 928	9 013	8 659
Yarra Valley	723 256	680 134	9 586	9 234
Melbourne Water	na	na	1 271	343

na Not applicable

## 2.2 REGIONAL BUSINESSES

Regional urban water businesses operate within geographically defined areas providing services to regional cities and towns throughout Victoria. Their customer base is smaller than that of the metropolitan retailers, representing about 25 per cent of the state’s population, and their customers are generally dispersed across broader geographical regions (table 2.2). Total water use in regional urban areas is half that of the metropolitan areas, and accounts for about 7 per cent of total metered water use in Victoria.

Unlike the metropolitan sector, these businesses are generally vertically integrated, providing wholesale, distribution and retail services for both water and sewerage.

**TABLE 2.2 REGIONAL WATER BUSINESSES — OVERVIEW**

	<b>Water customers (no.)</b>	<b>Sewerage customers (no.)</b>	<b>Length of water main (km)</b>	<b>Length of sewer main (km)</b>
Barwon	142 494	128 326	3 710	2 448
Central Highlands	63 934	53 918	2 432	1 336
Coliban	69 479	62 517	2 142	1 839
East Gippsland	22 220	18 561	924	659
Gippsland	65 167	56 230	2 081	1 586
Goulburn Valley	55 305	48 493	1 794	1 233
GWMWater	31 177	25 121	1 054	665
Lower Murray	32 246	27 856	906	628
North East	47 499	41 878	1 615	1 119
South Gippsland	19 237	16 464	695	423
Wannon	41 550	35 009	1 878	884
Western	55 481	49 555	1 823	1 185
Westernport	15 567	14 174	415	351

# 3 USAGE, PRICE TRENDS AND PAYMENT MANAGEMENT

## 3.1 BACKGROUND

Affordability of water, sewerage and other related services is a key issue for customers. This affordability is influenced by:

- the size of a customer's bill, which is determined by both price and a customer's level of consumption
- the suitability of the payment options available
- the availability and effectiveness of assistance offered by the businesses to customers experiencing payment difficulties (including financial assistance and payment plans, hardship policy initiatives and advice on reducing water use)
- the availability of concessions or emergency financial relief from the Victorian Government.

The Commission approves maximum prices for urban water and sewerage, rural water and other prescribed services. In June 2008 the Commission approved prices for regional and rural businesses for a five year regulatory period (from 2008-09 to 2012-13). In June 2009 the Commission approved prices for four years (from 2009-10 to 2012-13) for the metropolitan water businesses.

The Commission does not determine the level of concessions or emergency relief (for example, through the Utility Relief Grants Scheme (URGS)) available to customers. These support mechanisms are provided by the Victorian Government and administered through the Department of Human Services (DHS).

The Commission's Customer Service Code (the Code) includes specified standards and conditions for payments, collections and actions for nonpayment, with which the Victorian urban water businesses must comply.

This section reports the:

- impact of price changes on households between 1 July 2012 and 30 June 2013
- typical household bills for owner occupiers and tenants (showing relative fixed and variable components)
- number of customers on instalment payment plans
- number of customers receiving government assistance through concession payments and the URGS
- number of restrictions of supply and legal actions for nonpayment and the average debt levels at the time such action is taken
- number of hardship grants applied for and awarded by water businesses.

## 3.2 PRICE IMPACTS ON HOUSEHOLD CUSTOMERS

Prices and tariff structures for water and sewerage differ between businesses. All businesses have a fixed fee and a usage based charge for water. Only the metropolitan retail businesses have a usage based charge for residential sewerage. Usage based charges provide households with the capacity to influence their total bill by reducing water consumption.

A number of businesses use an 'inclining block' tariff structure for water, where the usage price rises with the level of consumption. City West Water, South East Water, Yarra Valley Water, Central Highlands Water, Coliban Water, Lower Murray Water, Wannon Water, Western Water and Westernport Water used an inclining block tariff structure in 2012-13. The other seven urban water service providers had a single tier water usage charge. Some businesses have changed their tariff structures for the third regulatory period which commenced on 1 July 2013.

Maximum prices are predetermined through the water businesses' approved Water Plans for the five year period, 2008-09 to 2012-13. Each year, the Commission reviews the proposed price increases to ensure they still comply with the price determination for each business, and approves the annual increment including the consumer price index (CPI) component. Annual price increases for a particular business may vary from year to year across the regulatory period; hence the relative increases for various

businesses may differ each year. Some businesses had larger increases built in at the beginning of the regulatory period, while others had relatively small increases early on with larger increases later.

### 3.3 AVERAGE ANNUAL HOUSEHOLD CONSUMPTION

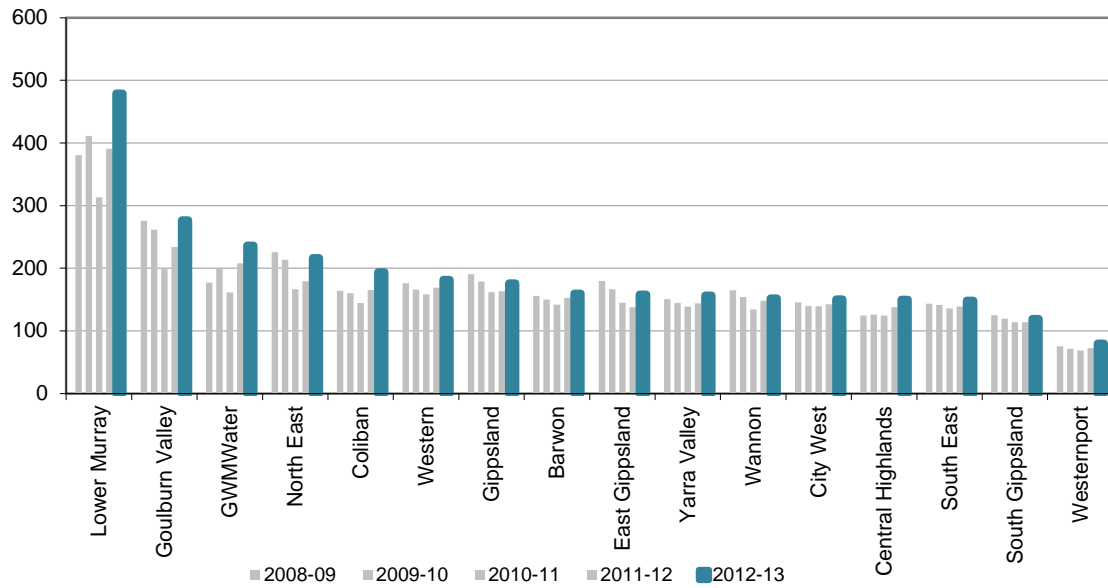
A greater emphasis on usage based charges means trends in consumption are increasingly important in calculating average bills and in assessing affordability. Consumption patterns differ throughout the state for a number of reasons including climate, demographics, housing mix and any water restrictions that may be in place.

Weighted average annual household consumption across Victoria rose further this year, up 9 per cent from 150 kilolitres in 2011-12, to 163 kilolitres in 2012-13. This continues the bounce back in consumption since its lowest point in 2010-11 (143 kilolitres). Consumption fell with water restrictions and then extreme rain events in 2010-11, but bounced back following the removal of restrictions and a warmer summer.

Generally, average household consumption remained higher in regional Victoria (194 kilolitres per household, up from 174 kilolitres in 2011-12), than in metropolitan Melbourne (152 kilolitres per household, up from 142 kilolitres in 2011-12). Average household consumption ranged from 80 kilolitres for Westernport Water's region (which has a large seasonal population) to 479 kilolitres in Lower Murray Water's region in the state's north west, traditionally the highest consumption in the state (figure 3.1). Average consumption in Melbourne was fairly consistent across the three metropolitan retail businesses, with 156 kilolitres for Yarra Valley Water, 150 kilolitres for City West Water, and 148 kilolitres for South East Water.

All water businesses observed an increase in average household consumption in 2012-13. Lower Murray Water and North East Water saw the largest percentage increases in average household consumption (22 per cent and 21 per cent respectively), followed by Goulburn Valley Water (18 per cent) and Coliban Water (17 per cent). These regions, similar to the rest of the state, recorded a warmer summer and lower rainfall than in preceding years.

**FIGURE 3.1 AVERAGE ANNUAL HOUSEHOLD CONSUMPTION**  
(kilolitres per household)



### 3.4 AVERAGE HOUSEHOLD BILLS

Differences in calculated average household bills across the businesses can be attributed to a number of factors: the cost to service different regions, sources of water, historical decisions about tariff structures and the average volume of water used.

Customers serviced by businesses with a higher variable water component can exercise greater control over their bills. Coliban Water had the highest proportion of water charges collected through variable charges of the regional urban water businesses. Its proportion of variable water charges began at 49 per cent of the water bill in 2007-08 and rose to 80 per cent by the end of the regulatory period in 2012-13. For metropolitan businesses, South East Water had the greatest water variable charge proportion, rising from 72 per cent in 2007-08 to 76 per cent by the end of the regulatory period.

We use each business's average household consumption (figure 3.1) to calculate an indicative average household bill for water and sewerage services. This includes both the fixed and variable water and sewerage charges. Metropolitan customers also pay drainage charges on behalf of Melbourne Water and parks charges on behalf of the Minister for Water, which are not included in our typical household bill estimates. For regional businesses with multiple pricing zones, the prices in the largest town were used to calculate each business's average household bill.

The average household bills for Melbourne metropolitan customers include the price freeze to return unrequired desalination payments.<sup>1</sup> Although prices remained at 2011-12 levels, average household bills increased as average consumption rose.

Statewide, average household bills for owner occupiers increased by \$115 (or 15 per cent) from \$885 in 2011-12 to \$939 in 2012-13. The average household bill across businesses ranged from \$832 to \$1261 (figure 3.2):

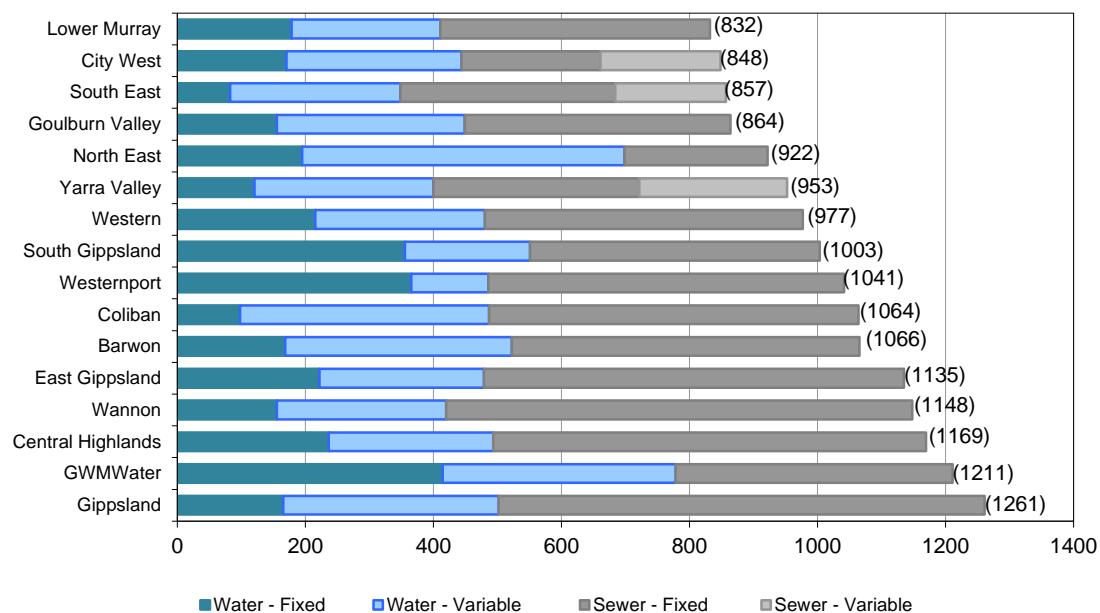
- Lower Murray Water (\$832), City West Water (\$848) and South East Water (\$857) reported the lowest average water bills.
- As in 2011-12, Gippsland Water (\$1261) and GWMWater (\$1211) had the highest average water bills.
- Of the metropolitan businesses, City West Water and South East Water remained below the industry average, while Yarra Valley Water (\$953) did not.
- North East Water recorded a large increase (\$118) in average household bills between 2011-12 and 2012-13. This increase was largely driven by increased consumption and price increases.
- Western Water recorded the lowest increase in average household bills, from \$956 in 2011-12 to \$977 in 2012-13. This was due to the price freeze.

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<sup>1</sup> In 2011-12 construction delays meant Melbourne Water and four water retailers — City West Water, South East Water, Yarra Valley Water and Western Water — collected more payments than required from customers to cover the costs of the Victorian desalination plant. In June 2012, the Victorian Government and the four metropolitan water retailers announced they would return funds to customers by freezing prices for metropolitan Melbourne at 2011-12 levels for the 2012-13 financial year. For further information refer to our website at [www.esc.vic.gov.au](http://www.esc.vic.gov.au)



**FIGURE 3.2 OWNER OCCUPIERS — AVERAGE HOUSEHOLD BILLS 2012-13**  
(\$, nominal)



**Note:** Where businesses have multiple pricing zones, the average household bill was calculated using the prices in the largest town. The average household bill for GWMWater was based on bills in Horsham; South Gippsland Water's on Inverloch and Wonthaggi; Central Highlands Water's on Ballarat; Wannon Water's on Warrnambool; North East Water's on Wodonga; East Gippsland Water's on Bairnsdale; and Coliban Water's on Bendigo.

Historical average household bills for owner occupiers are presented in table 3.1. All businesses' average household bills increased steadily over the current regulatory period.

**TABLE 3.1 OWNER OCCUPIERS — AVERAGE HOUSEHOLD BILLS**  
(\$, nominal)

	2008-09	2009-10	2010-11	2011-12	2012-13
City West	527	597	687	791	848
South East	520	619	722	829	857
Yarra Valley	553	649	763	910	953
Barwon	692	778	843	953	1 066
Central Highlands	881	951	1 007	1 096	1 169
Coliban	662	778	877	966	1 064
East Gippsland	805	878	932	1 017	1 135
Gippsland	847	1 049	1 098	1 185	1 261
Goulburn Valley	600	654	662	759	864
GWMWater	852	941	947	1 096	1 211
Lower Murray	658	719	691	770	832
North East	623	717	735	804	922
South Gippsland	824	868	906	958	1 003
Wannon	743	830	902	1 044	1 148
Western	759	812	865	956	977
Westernport	816	883	929	988	1 041

**Note:** Average household bills are in that year's dollars, and calculated using that year's average consumption levels for each business.

Tenants do not pay service or fixed charges and are only responsible for the usage, or variable, component of the bill. Melbourne tenants pay the sewer variable charges as well as the water variable charges. Tenants' average household bills ranged from \$120 (Westernport Water, which has a high proportion of fixed charges and low average consumption) to \$511 (Yarra Valley Water) in 2012-13. On average, all water businesses increased their average household bills for tenants. These price increases were consistent with the approved price increases outlined in each business's price determination for the 2008 Water Price Review and the 2009 Metropolitan Melbourne Water Price Review (except for City West Water, South East Water, Western Water and Yarra Valley Water, whose prices were frozen at 2011-12 levels for 2012-13). The increase in the average household bills for these four businesses reflected higher average household water consumption for the year.

**TABLE 3.2 TENANTS — AVERAGE HOUSEHOLD BILLS**  
(\$, nominal)

	2008-09	2009-10	2010-11	2011-12	2012-13
City West	267	298	347	404	461
South East	270	316	357	411	439
Yarra Valley	293	332	380	468	511
Barwon	223	244	255	303	354
Central Highlands	165	180	190	224	257
Coliban	172	218	270	323	389
East Gippsland	205	209	198	207	257
Gippsland	237	279	271	295	337
Goulburn Valley	185	196	168	223	293
GWMWater	215	259	215	301	364
Lower Murray	136	164	120	179	232
North East	256	333	338	394	503
South Gippsland	142	151	158	174	195
Wannon	190	200	192	241	265
Western	185	194	204	244	265
Westernport	90	91	93	104	120

**Note:** Average household bills are in that year's dollars, and calculated using that year's average consumption levels for each business.

There is a bill estimator available to consumers on our website at [www.esc.vic.gov.au](http://www.esc.vic.gov.au)

### 3.5 PAYMENT DIFFICULTIES

The urban water businesses must assist customers with payment difficulties on a case-by-case basis by:

- providing alternative payment arrangements in accordance with a customer's capacity to pay, including offering a range of payment options (such as flexible payment plans) or redirecting the bill to another person to pay
- offering to extend the due date for some or all of an amount owed
- appropriately referring customers to government funded assistance programs (including the URGs) or to an independent financial counsellor

- observing minimum periods of notice before applying supply restrictions or pursuing legal action to recover outstanding debts
- not restricting water supply of a customer or pursuing legal action before first taking additional steps to secure payment, including making a reasonable attempt to contact the person, offering a payment arrangement and resolving any dispute over the outstanding amount.

The Commission extended the hardship related guaranteed service level (GSL) scheme to all 16 urban retail water businesses from 1 July 2012. It gives businesses another incentive to try contacting a customer before initiating legal action or restricting water services in response to nonpayment. Please see the Commission's website for more information about hardship GSLs.

### **CUSTOMERS WITH INSTALMENT PLANS**

Instalment plans help to address affordability issues by providing customers experiencing financial difficulties the flexibility to manage their bill payments. An increase in the number of instalment plans being used by customers could mean:

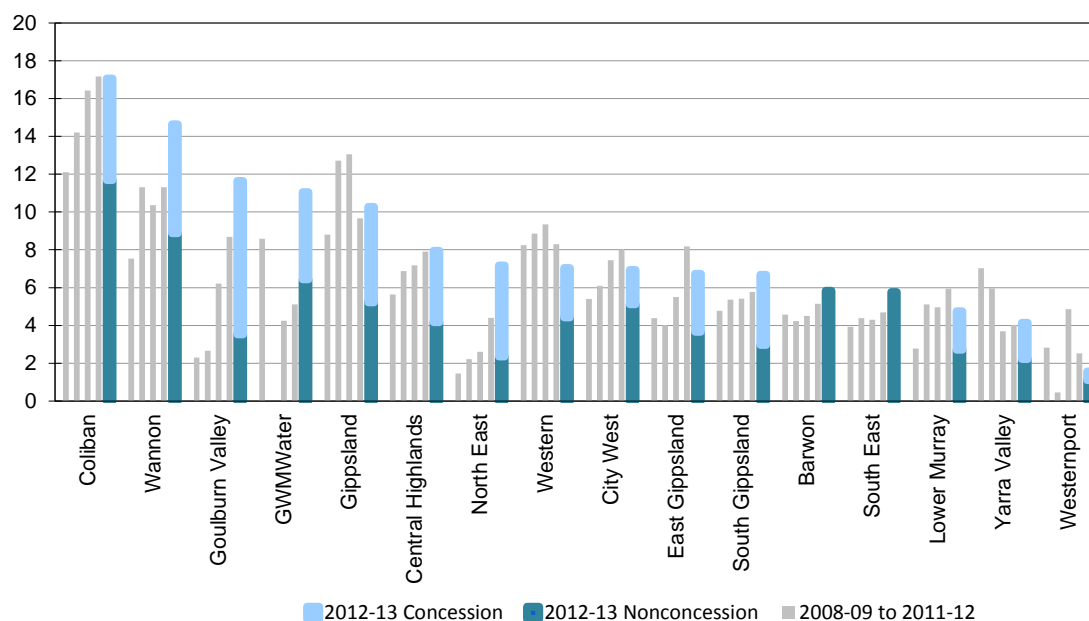
- an increase in the number of customers experiencing hardship
- the businesses are using the instalment plans more frequently or instead of other methods to assist customers having financial difficulties.

2012-13 is the first year to report concession and nonconcession customers separately.

In 2012-13, the use of instalment plans for residential customers ranged from 1.6 per 100 customers for Westernport Water (with its large seasonal customer base) to 17.1 per 100 customers for Coliban Water (figure 3.3). GWMWater's rate of instalment plans more than doubled in 2012-13, and accompanied a 10.6 per cent increase in GWMWater's average household bills. Goulburn Valley Water, North East Water and Wannon Water all reported increases of around 3 per cent in their rate of instalment plans. These increases accompanied increases of over 10 per cent in these businesses' average household bills.

The overall rate of residential instalment plans increased from 5.9 per 100 customers in 2011-12 to 6.3 in 2012-13; the number of residential instalment plans increased from 130 400 in 2011-12 to 141 935 in 2012-13. Most water businesses reported increasing rates of instalment plans over the five years to 2012-13.

**FIGURE 3.3 RESIDENTIAL CUSTOMERS WITH INSTALMENT PLANS**  
(per 100 customers)



**Note** Barwon Water and South East Water did not report on concession and nonconcession customers separately. GWMWater changed its billing system during 2009-10 and could not report on many of the indicators throughout this section for that year.

The range of nonresidential customers using instalment plans was smaller across all businesses than for residential customers. However, some water businesses reported significant increases in nonresidential customers using instalment plans from previous years, which may reflect a greater focus by these businesses on managing hardship. As with previous years, Coliban Water and Wannon Water used instalment plans more than the other water businesses (7.1 and 6.6 per 100 customers respectively). However, Goulburn Valley Water and South Gippsland Water had significant increases and now have similar levels of nonresidential instalment plans (6.1 and 5.7 per 100 customers respectively).

Coliban Water prefers to use instalment plans to manage payment difficulties for both residential and nonresidential customers. Wannon Water used instalment plans to provide flexibility to nonresidential customers to pay their account. It aims to ensure customers pay their account in full before the next quarterly account is issued.

## **UTILITY RELIEF GRANTS SCHEME**

DHS administers the URGS, which provides one-off financial contributions towards a bill of a customer experiencing payment difficulties. The URGS payment is generally used for a short term financial crisis. It is different from the hardship programs provided by the water businesses to customers who experience ongoing financial hardship (see section 3.7).

The number of URGS grants increased by 17 per cent from 3763 in 2011-12 to 4412 in 2012-13 (table 3.3); the rate of grants increased from 1.7 per 1000 customers in 2011-12 to 2.0 in 2012-13.

Gippsland Water, Central Highlands Water, Goulburn Valley Water and Wannon Water had the highest rates of URGS uptake for the period with 6.7, 5.4, 4.5 and 4.2 per 1000 customers respectively. Gippsland Water also had the highest average household bill for owner occupiers. A third of all URGS payments went to Yarra Valley Water customers, with a total of \$485 536 paid between the 1220 customers.

The average grant amount in 2012-13 was \$401, up \$17 from 2011-12. The average value of grants ranged from \$279 for Westernport Water to \$456 for Western Water.

**TABLE 3.3 AVERAGE AMOUNTS OF UTILITY RELIEF GRANTS 2012-13**  
(\$, 2012-13)

	Approved	Grants paid (\$)	Average amount grant paid (\$)	Grants per 1000 customers
City West	505	204 994	406	1.4
South East	796	313 227	394	1.3
Yarra Valley	1 220	485 536	398	1.8
Barwon	204	80 257	393	1.6
Central Highlands	314	132 157	421	5.4
Coliban	102	40 256	395	1.6
East Gippsland	20	7 834	392	1.0
Gippsland	400	164 859	412	6.7
Goulburn Valley	220	83 148	378	4.5
GWMWater	72	30 099	418	2.7
Lower Murray	31	9 751	315	1.1
North East	125	50 430	403	2.9
South Gippsland	38	16 243	427	2.4
Wannon	147	60 942	415	4.2
Western	165	75 234	456	3.1
Westernport	53	14 765	279	3.7
<b>TOTAL</b>	<b>4 412</b>	<b>1 769 732</b>	<b>401</b>	<b>2.0</b>

Source: Department of Human Services.

## CONCESSIONS

The Victorian Government provides concessions to assist low income households with water and sewerage bills at their principal place of residence.

In 2012-13 the Government contributed \$152 million in concession payments towards water bills (table 3.4). This was an increase of \$8 million compared with 2011-12.

**TABLE 3.4 CONCESSION PAYMENTS**  
(\$, nominal)

<b>Water business</b>	<b>2011-12</b>	<b>2012-13</b>
City West	19 154 570	20 200 806
South East	38 540 852	41 444 895
Yarra Valley	44 551 789	46 463 765
Barwon	8 428 447	8 857 403
Central Highlands	4 159 788	4 412 676
Coliban	4 484 686	4 673 133
East Gippsland	1 623 532	1 645 846
Gippsland	4 399 857	4 618 013
Goulburn Valley	3 471 339	3 863 635
GWMWater	2 555 455	2 515 565
Lower Murray	1 879 700	1 964 877
North East	3 216 001	3 436 532
South Gippsland	1 219 143	1 287 477
Wannon	2 609 817	2 841 571
Western	3 298 112	3 208 078
Westernport	601 510	600 805
<b>TOTAL</b>	<b>144 194 598</b>	<b>152 035 077</b>

Source: Department of Human Services.

## 3.6 SUPPLY RESTRICTIONS AND LEGAL ACTIONS

The Customer Service Code, which took effect on 1 July 2005, requires all urban water businesses to assist customers facing payment difficulties on a case-by-case basis. It also requires water businesses take steps before restricting supply. A revised Code, released in October 2010, increased the minimum outstanding payment amount at which businesses could initiate supply restriction or legal action to \$200. This Code applied for 2012-13.

Most businesses apply water supply restrictions or take legal action only after providing all possible assistance to customers, and where the level of outstanding debt is high.



## **WATER SUPPLY RESTRICTIONS APPLIED FOR NONPAYMENT OF BILL**

Water businesses reported on:

- the number of customers restricted for nonpayment of their water bills
- restrictions data disaggregated by concession/nonconcession for residential customers
- the average level of outstanding debt for which supply restrictions were applied.

In 2012-13, 2439 residential customers (including 465 residential concession customers) had their water supply restricted for nonpayment of water bills. This was an increase from 2011-12, with 58 more residential customers overall having their water supply restricted (95 more residential concession customers and 37 fewer residential nonconcession customers). The number of nonresidential customers whose water supply was restricted also increased, from 64 in 2010-12 to 74 in 2012-13.

The overall rate of water supply restrictions remained steady in 2012-13. Lower Murray Water and South Gippsland Water reported large reductions in their number of supply restrictions from 2011-12. City West Water, East Gippsland Water and Westernport Water did not restrict any customers for nonpayment of bills.

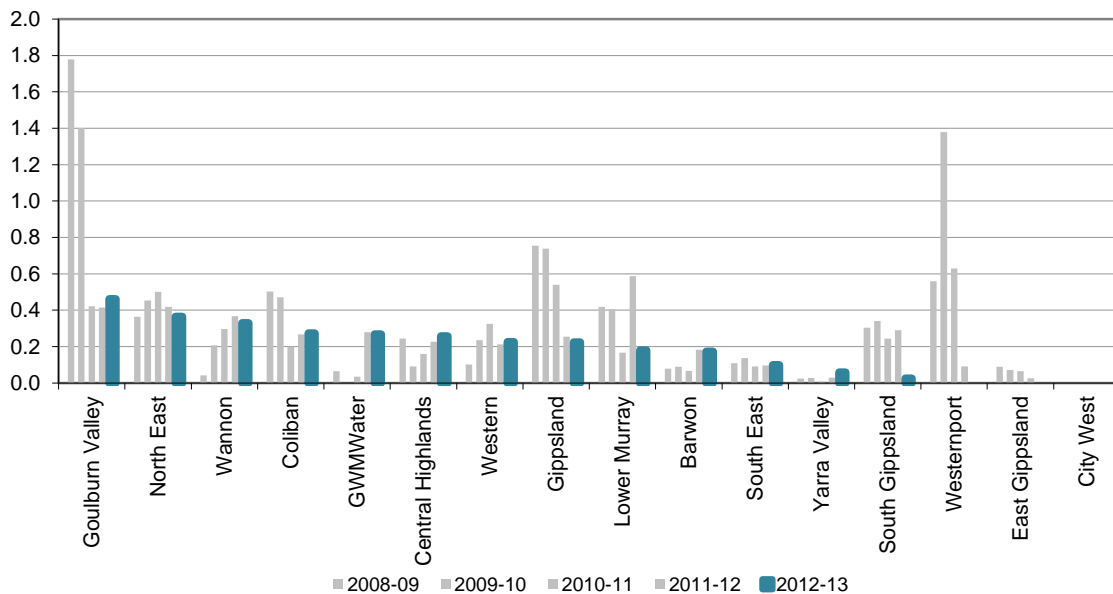
Westernport Water reported a significant decline in its level of restrictions over the past two years. Historically it had high levels of restrictions, reflecting the large number of seasonal nonpermanent residents who do not require water supply year round. These customers do not seem to mind having restrictions applied; the restrictions are removed when customers return to the property and pay their outstanding bills. However, the business focused on identifying hardship customers and assisting customers with payment arrangements over the past year, as it implemented a new billing system. It expects to reinstate the restrictions process when the new system is in place.

Goulburn Valley Water had the highest proportion of residential water supply restrictions of any business, with 0.46 per 100 residential customers, a small increase from 0.42 in 2011-12 (figure 3.4). It also had the highest proportion of nonresidential water supply restrictions, with 0.46 per 100 nonresidential customers. The business commented it continued to target debt more than 120 days overdue and it considers

restricting customers as a last resort means of collection. It also increased its rate of instalment plans and hardship grants over the same period.

Lower Murray Water significantly reduced its number of supply restrictions (from 165 in 2011-12 to 51 in 2012-13). It attributed this fall to introducing the hardship GSL. Residential water restrictions also fell for South Gippsland Water, from 46 restrictions in 2011-12 to just 4 in 2012-13. The business attributed this decrease to an unexpected staffing issue and also commented its rate of restrictions would rise in 2013-14.

**FIGURE 3.4 RESIDENTIAL SUPPLY RESTRICTIONS FOR NONPAYMENT OF BILLS**  
(per 100 customers)



In 2012-13 the average debt levels for restricting supply were slightly higher than those in 2011-12 for most water businesses. They ranged from \$454 for North East Water to \$1982 for Yarra Valley Water.

## **RESTRICTION DURATION (RESIDENTIAL)**

Water businesses must identify how long customers restricted for nonpayment remain on supply restrictions. Specifically, they must report the number of residential customers whose water supply is restored within three days of being restricted, as well as the number of residential customers with restrictions still in place after 14 days. A high proportion of customers on supply restrictions for long periods of time may suggest the restriction policy is poorly targeted, with customers unable to pay their bill rather than being unwilling to do so. Supply restrictions may also be less effective in rural areas where people have access to alternative water supplies such as water tanks and dams.

Businesses reported a range of 17 per cent to 78 per cent of restricted customers had their water supply restored within three days. The proportion of supply restrictions not restored within 14 days generally ranged from 3 per cent (Western Water) to 85 per cent (GWMWater). For most businesses, these proportions were reasonably consistent with previous years.

GWMWater commented it was more active in implementing restrictions in 2012-13, resulting in more customers not having the capacity to meet outstanding bills and restore services within 14 days.

## **LEGAL ACTIONS FOR NONPAYMENT OF BILLS**

Overall, legal action was taken against 912 customers across Victoria in 2012-13 for nonpayment of water bills — 95 customers more than the previous year. Legal action was taken against 811 residential customers (696 nonconcession customers and 115 concession customers) and 101 nonresidential customers.

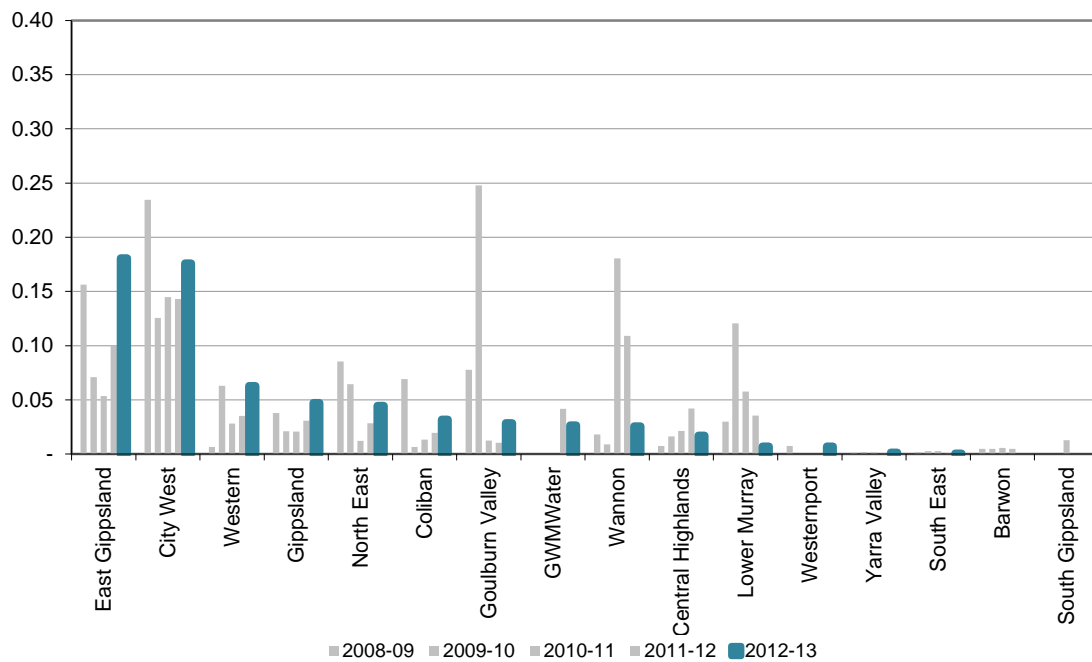
Despite this increase, rates of water businesses taking legal action against residential customers for nonpayment of bills remained low (figure 3.5). This ranged from no legal actions (Barwon Water) to 0.18 per 100 customers (City West Water and East Gippsland Water).

As well as recording the highest rate in 2012-13 (0.18 per 100 customers), City West Water also accounted for 76 per cent of all legal actions against residential customers. It also recorded the largest increase (from 0.14 per 100 customers in 2011-12).

According to the business, these results reflect its practice to take legal action, rather than to restrict supply, recognising the essential nature of its service to households.

Similarly, East Gippsland Water did not restrict water for nonpayment of bills but shared the highest rate of legal action for nonpayment of bills. By contrast, Wannon Water's rate of legal action fell for the second year, from 0.11 per 100 customers in 2011-12 to 0.03 per 100 customers in 2012-13.

**FIGURE 3.5 RESIDENTIAL LEGAL ACTIONS**  
(per 100 customers)



The average debt for initiating legal action was substantially higher than the \$200 minimum specified in the Code, ranging from \$823 for Lower Murray Water to \$5565 for GMMWater. City West Water, with the highest rate of legal actions, had the second lowest average debt level (\$1110).

## 3.7 HARDSHIP GRANTS (RESIDENTIAL)

The Code requires all water businesses serving urban customers to have policies to assist residential customers in hardship. At a minimum, the hardship policies must:

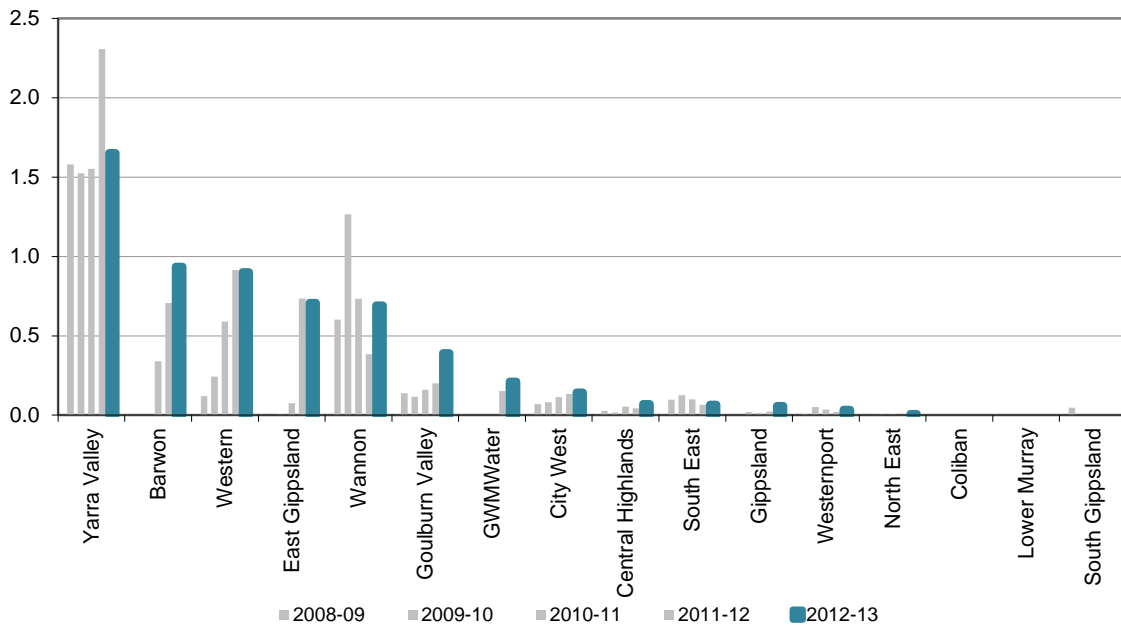
- exempt customers in hardship from supply restriction, legal action and additional debt recovery costs while payments are made to the business according to an agreed flexible payment plan or other payment schedule
- offer information about the water business's dispute resolution policy and the Energy and Water Ombudsman (Victoria) or other relevant dispute resolution forum.

Water businesses approved 14 416 hardship grants in 2012-13, down from 17 948 in the previous year. Yarra Valley Water again had the most extensive hardship grant scheme, accounting for 77 per cent of the total number of grants approved or 11 086 grants approved at an average value of \$153 (figure 3.6). It also accounted for the largest share of the fall in grants. It attributed this fall to writing off customers' debts in a single transaction in 2012-13; in previous year, it wrote off these customers' debts in multiple transactions.

By contrast, some businesses approved more hardship grants in 2012-13. Gippsland Water more than doubled its hardship grants from 7 grants in 2010-11 to 14 grants in 2011-12 and 35 grants in 2012-13. Barwon Water also expanded its hardship program, increasing the number of grants from 428 in 2010-11 to 909 in 2011-12 and 1227 in 2012-13. The business attributed the rise to increased cost of living pressures and its continued focus on better identifying and providing assistance to hardship customers.

Coliban Water, Lower Murray Water and South Gippsland Water did not provide any hardship grants to customers. Coliban Water and Lower Murray Water have not done so since 2007-08.

**FIGURE 3.6 HARDSHIP GRANTS APPROVED**  
(per 100 customers)

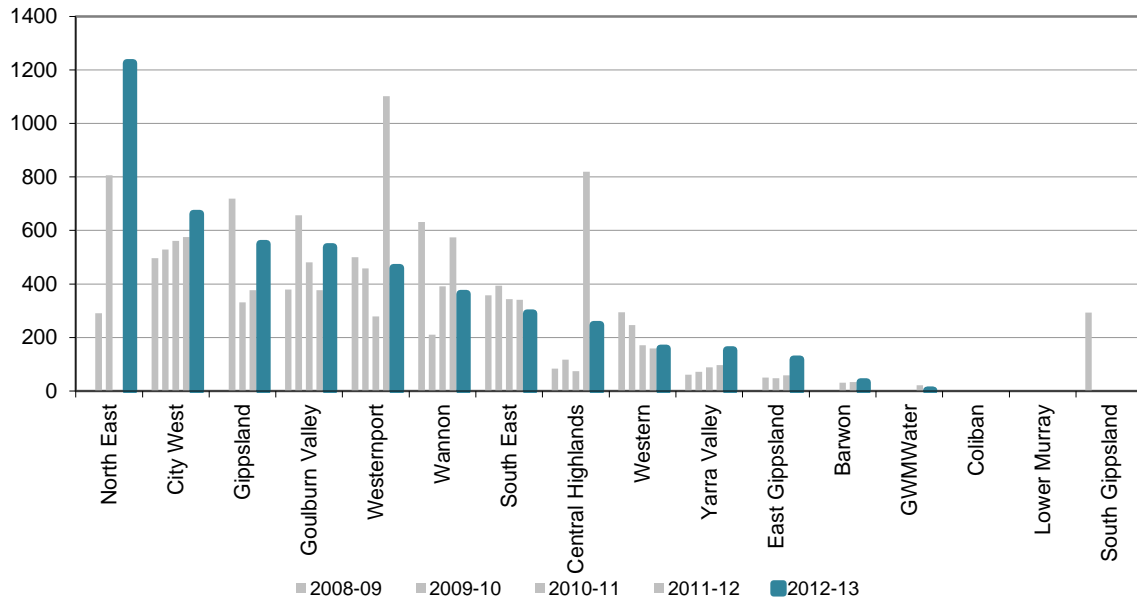


Note: Wannon Water’s figure for 2011-12 previously reported in the 2011-12 performance report was revised to reflect the number of customers on grants. The figure reported in 2011-12 was the number of grant instalments paid.

The average value of hardship grants across businesses ranged from \$2 to \$1226 in 2012-13, with an overall average of \$174. North East Water reported the highest average value of hardship grants, although it only approved three grants (figure 3.7). GWMWater had the lowest average value of hardship grants (\$2) because it reported interest free periods and bill extensions (both valued at \$0) as hardship grants.

Westernport Water reported the largest decrease in the average value of hardship grants, from \$1102 in 2011-12 to \$459 in 2012-13 (a decrease of \$642). However, with its small customer base it only approves a small number of grants, so its annual average varies considerably. The average value of Central Highlands Water’s hardship grants fell \$573, down from \$820 in 2011-12 to \$247 in 2012-13. According to Central Highlands Water, this is because it extended its hardship program to approve a larger volume of grants — including assistance such as top up payments to accounts and step tariff rebates for large families — reducing the average value of grants.

**FIGURE 3.7 AVERAGE VALUE OF HARDSHIP GRANTS**  
(\$, nominal)



# 4 CUSTOMER RESPONSIVENESS AND SERVICE

## 4.1 BACKGROUND

This chapter reports on customer service and responsiveness performance — in particular, call centre performance and customer complaints.

The Customer Service Code places obligations on businesses for customer responsiveness and service. These include having policies, practices and procedures for handling customers' complaints and disputes, and providing certain information to customers on request. Auditing businesses' compliance with the Code is done in conjunction with performance report audits.

## 4.2 RESPONSIVENESS OF WATER BUSINESS CALL CENTRES

In 2012-13 the water businesses received 2.23 million phone calls, 83 per cent of which were calls to account enquiry lines. This was a 3 per cent increase from 2.16 million calls in 2011-12.

Call centre performance is measured in terms of the:

- time taken for a customer call to be connected to an operator
- percentage of calls connected to an operator within 30 seconds
- response to 'mystery caller' surveys.

Connection measures are disaggregated between account enquiries and emergency contact numbers. Ten businesses have a separate number for faults and emergencies.



These businesses are Goulburn Valley Water, Barwon Water, South East Water, North East Water, Westernport Water, Central Highlands Water, Gippsland Water, City West Water, GWMWater and Yarra Valley Water. Businesses without a separate fault and emergency number must record all calls against account lines. These businesses are Coliban Water, East Gippsland Water, Lower Murray Water, South Gippsland Water, Wannon Water and Western Water. This can make direct comparisons between businesses difficult, although calls are generally answered faster when a business has a fault line available to customers.

## **TIMELINESS OF CALL CENTRES IN CONNECTING CALLS TO AN OPERATOR**

Timeliness of call centres in connecting incoming calls to operators is an important factor influencing customer satisfaction.

The time taken to connect to an operator depends on the nature of the phone system used by the business. Businesses may use interactive voice response (IVR) systems to intercept calls before directing the customer to the appropriate customer service area. This increases the time taken to connect to an operator. City West Water — with the longest average connect time this year (90 seconds) — uses an IVR, while East Gippsland Water — with the shortest connect time (5 seconds) — has external calls answered by an operator.

Across the Victorian water industry, the weighted average time to connect to an operator was 41 seconds in 2012-13, 23 seconds shorter than the average of 64 seconds in 2011-12. This result reflected large reductions in call connect times for City West Water and Yarra Valley Water, down from spikes in the previous year. By contrast, South East Water's call connect times were 23 seconds longer in 2012-13 than in 2011-12. The remaining businesses reported connection times similar to those reported in 2011-12 (figure 4.1).

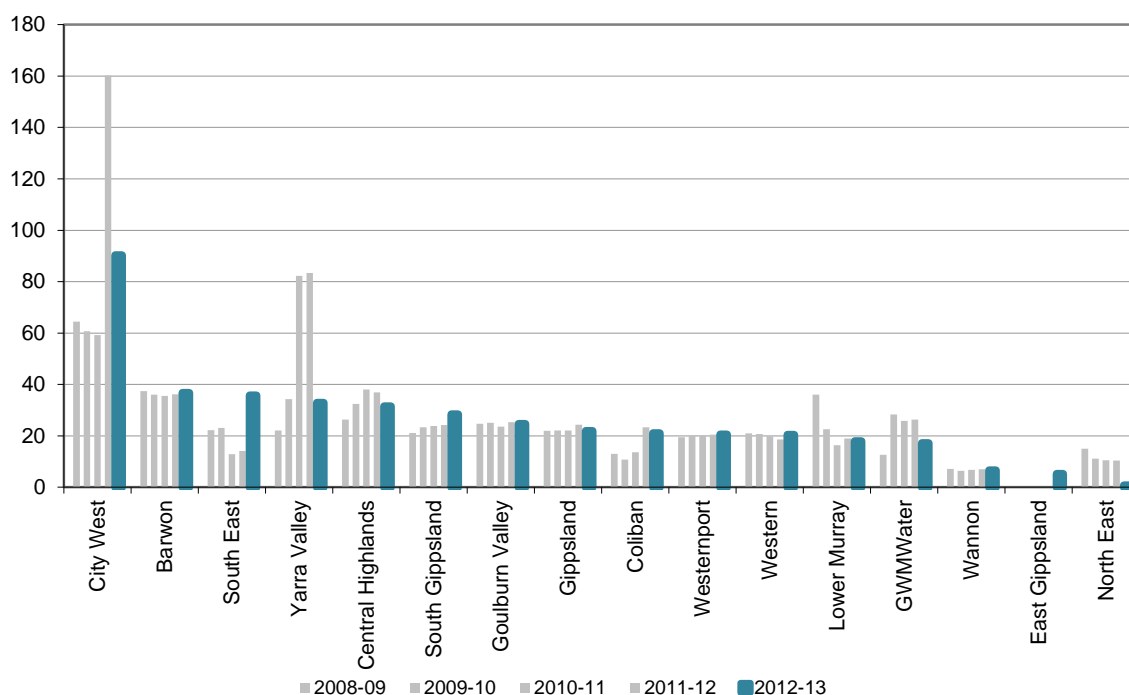
South East Water's auditor identified South East Water's figures for 2012-13 and previous years did not include the duration of the IVR (16 seconds in 2012-13). The auditor changed the reported call connect times to include the IVR, so 16 seconds of the 23 second increase was attributable to the more accurate recording of call connect times. South East Water attributed the remaining increase to fewer call centre staff, an increase in call volumes about desalination refunds and the introduction of a new billing system.

City West Water attributed its large decrease in call connect times to introducing a customer operations department. This improved strategic planning and meant resources were allocated more efficiently during peak times.

According to Yarra Valley Water, its call connect times improved as staff adapted to the new customer care and billing system. It also removed the IVR option from its call handling system.

All 10 businesses with a separate emergency fault line reported connection times of 31 seconds or less for the fault line. No business recorded a significant increase in call connect times to its fault line. However, Central Highlands Water improved call connect times to its fault line by 11 seconds, following a 5 second increase in 2011-12.

**FIGURE 4.1 AVERAGE TIME TAKEN TO CONNECT TO AN OPERATOR — ACCOUNT AND FAULT LINES**  
(seconds)



**Note:** East Gippsland Water was unable to report this data for previous years.

## **CALLS ANSWERED WITHIN 30 SECONDS**

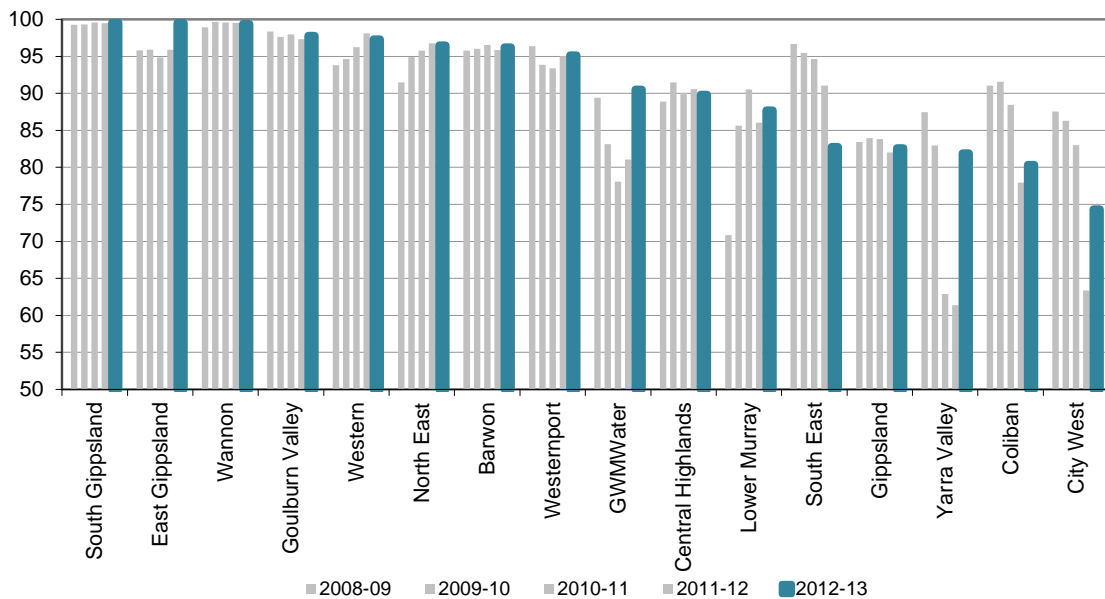
While the average call connect time measures the overall responsiveness of a call centre, it does not capture the frequency with which calls are answered promptly. The percentage of calls answered within 30 seconds is important because it more accurately reflects the incidence of poor waiting times.

Nine businesses reported at least 90 per cent of calls answered within 30 seconds. South Gippsland Water, East Gippsland Water and Wannon Water reported over 99 per cent — South Gippsland Water and Wannon Water for the fourth consecutive year (figure 4.2).

City West Water and Coliban Water had the lowest percentage of calls answered within 30 seconds (74 per cent and 80 per cent respectively). South East Water recorded the most significant decline in performance over the period, falling from 91 per cent in 2011-12 to 83 per cent in 2012-13 for reasons explained in the previous section.

Yarra Valley Water's proportion of calls answered within 30 seconds improved by 21 percentage points, from 61 per cent in 2011-12 to 82 per cent in 2012-13 (see previous section).

**FIGURE 4.2 CALLS ANSWERED WITHIN 30 SECONDS — ACCOUNT AND FAULT LINES**  
(per cent)



### 4.3 BENCHMARKING OF CALL CENTRES

The Commission engaged Customer Service Benchmarking Australia (CSBA) to benchmark call centre performance in 2012-13 against Australian water and energy sector averages. CSBA assesses a business’s performance from calls to its account lines using the ‘mystery caller’ technique, which can result in different figures than those reported to us by businesses.

CSBA reported performance for sector averages (metropolitan retail and regional urban) and for the top performing business in a particular category. In 2012-13 CSBA made 1435 calls to regional urban businesses and 325 calls to the metropolitan retailers.

## **CALL CENTRE CONNECT TIMES**

CSBA's 'mystery caller' survey for the metropolitan water businesses reported an average connect time of 47 seconds in 2012-13, 6 seconds faster than in 2011-12. Yarra Valley Water had the shortest connect time, averaging 27 seconds per call; this was 20 seconds quicker than the Victorian metropolitan water average.

Regional businesses recorded an average connect time of 33 seconds which was consistent with 2010-11 and 2011-12. GWMWater and Wannon Water were the best performing regional urban businesses, with a 12 second connect time, 21 seconds quicker than the Victorian regional water average.

The average connect time for the Australian water sector was 35 seconds in 2012-13 (down from 41 seconds in 2011-12), while the average response time for all utilities in Australia (which includes energy and water) remained steady at 61 seconds.

## **CALLS ANSWERED WITHIN 30 SECONDS**

CSBA reported metropolitan retailers answered 71 per cent of calls within 30 seconds in 2012-13, up from 62 per cent in 2011-12. South East Water was the best performer again this year, answering 73 per cent of all calls within 30 seconds (although down 15 percentage points from 2011-12).

As for previous years, the regional urban businesses outperformed the metropolitan retailers, answering 90 per cent of all calls within 30 seconds, 19 percentage points ahead of their metropolitan counterparts. Wannon Water was the best performer for the second year, answering 100 per cent of calls within 30 seconds during the year.

Victorian regional water businesses compared favourably with the Australian average for the water sector, where 87 per cent of calls were answered within 30 seconds in 2012-13 (up from 80 per cent in 2011-12 and 83 per cent in 2010-11). The Australian utility sector remained fairly steady, answering 72 per cent of calls within 30 seconds in 2012-13 and 74 per cent of calls in 2010-11 and 2011-12.

## **GREETING QUALITY**

CSBA measures greeting quality according to an index comprising: welcome salutation, giving the business name, giving the agent's name, making an offer to help the caller and sign off.

Greeting quality remained relatively constant over the three years to 2012-13. The metropolitan retailers achieved an overall greeting quality score of 91 per cent in 2012-13, up 2 percentage points from 2011-12. City West Water achieved the best result, with 93 per cent over the year, up from 91 per cent in 2011-12.

The regional urban businesses achieved an overall greeting quality score of 90 per cent, a slight increase from 2011-12. Coliban Water led the Victorian regional water sector for 2012-13, with 97 per cent.

Victorian water businesses were consistent with Australian utility averages. The overall greeting quality score for the Australian water sector was 90 per cent in 2012-13, up from 88 per cent in 2011-12. The overall greeting quality score for the Australian utility sector was 92 per cent (up slightly from 90 per cent in 2011-12).

## **AGENT MANNER**

CSBA measures agent (operator) manner using four mutually exclusive ratings: interested, helpful and warm (best practice agent manner); businesslike and unemotive; laidback and easy going; and disinterested and curt.

The metropolitan retailers achieved best practice agent manner 83 per cent of the time in 2012-13 (up from 78 per cent in 2011-12). City West Water had the best result with 84 per cent in 2012-13.

The regional urban businesses achieved best practice agent manner for 85 per cent of calls in 2012-13, up 10 percentage points from 2011-12 (75 per cent). GWMWater was the best performing regional urban business in 2012-13 (with 96 per cent), overtaking East Gippsland Water (the best performer in 2011-12).

The performance of the Victorian water businesses was largely consistent with Australian averages. The overall best practice agent manner score for the Australian water sector was 85 per cent in 2012-13, compared with 75 per cent in 2011-12 and 74 per cent in 2010-11. The overall score for the Australian utility sector was 83 per cent (compared to 74 per cent in 2011-12).

The Victorian metropolitan and regional water businesses also performed well in terms of 'acceptable' agent manner, which incorporates both the interested, helpful and warm rating and the businesslike and unemotive rating. The metropolitan retailers achieved a

score of 97 per cent in this category, unchanged from 2011-12. The regional urban businesses achieved a score of 98 per cent (compared with 96 per cent in 2011-12 and 97 per cent in 2010-11). These results were consistent with the performance of the Australian water and utility sectors.

## **ENQUIRY HANDLING SKILLS**

CSBA measures four key enquiry handling skills: ability to probe to clarify customer needs; product service knowledge; agent provides a clear outcome for the enquiry; and agent is helpful and courteous.

In 2012-13 call centre staff of the metropolitan retailers:

- fully probed the caller's needs 78 per cent of the time (compared with 64 per cent in 2011-12 and 78 per cent in 2010-11)
- demonstrated good product knowledge 87 per cent of the time (up from 80 per cent in 2011-12 and 78 per cent in 2010-11)
- provided a clear outcome to an enquiry 89 per cent of the time (up from 85 per cent in 2011-12 and 81 per cent in 2009-10)
- were courteous and helpful 92 per cent of the time (compared with 89 per cent in 2011-12 and 91 per cent in 2010-11).

Of the metropolitan retailers, City West Water was the best performer across all enquiry handling skill categories, with 88 per cent overall for 2012-13.

In 2012-13 call centre staff of the regional urban businesses:

- fully probed the caller's needs 81 per cent of the time (compared with 65 per cent in 2011-12 and 72 per cent in 2010-11)
- demonstrated good product knowledge 91 per cent of the time (up from 83 per cent in 2011-12 and 84 per cent in 2010-11)
- provided a clear outcome to an enquiry 92 per cent of the time in 2012-13 (up from 85 per cent in both 2010-11 and 2011-12)
- were courteous and helpful 94 per cent of the time (up from 89 per cent in 2011-12 and 88 per cent in 2010-11).

GWMWater and South Gippsland Water were the best Victorian regional water companies in the enquiry handling skills category for 2012-13, with 94 per cent.

## 4.4 COMPLAINTS

Customer complaints indicate dissatisfaction with the services provided by water businesses. The subject matter of customer complaints can also provide important information about aspects of performance needing improvement. Where a business is unable to resolve a complaint directly with the customer, the customer may refer the matter to the Energy and Water Ombudsman (Victoria) (EWOV) for further investigation.

### TOTAL NUMBER OF COMPLAINTS

The performance reporting framework requires businesses to report the number of customer complaints for the following:

- water quality
- water supply reliability
- sewerage service quality and reliability
- payment issues (The Commission combined the affordability and billing categories from previous years to form a new category, payment issues.)
- water pressure/flow rate
- sewage odour
- 'other' complaints.

A complaint is recorded if a customer registers dissatisfaction in a complaint category.

Businesses must also further categorise the types of water quality complaints they receive into:

- colour
- taste and odour
- 'other'.



Water quality complaints are discussed in more detail in chapter 6.

In 2012-13, businesses received a total of 18 202 complaints, a 12 per cent increase from the 16 235 complaints received in 2011-12. This equates to a frequency of 0.74 complaints per 100 customers across the state in 2012-13, up from 0.67 in 2011-12. However, the increase came from only five businesses, with a decreased complaint rate for 11 of the 16 businesses. The metropolitan businesses' rate of complaints increased, led by payment issues and water quality complaints. By contrast, the regional businesses' rate of complaints decreased.

East Gippsland Water reported the lowest complaint rate with 0.13 per 100 customers, followed by North East Water with 0.16 (figure 4.3).

GWMWater's complaint rate was highest for the fourth consecutive year in 2012-13, with 2.15 complaints per 100 customers. This high result reflected continued water quality issues (see chapter 6), and rural customer billing complaints. However, GWMWater recorded fewer complaints than in 2011-12 (2.64 complaints per 100 customers), which the business attributed to improved raw water quality and billing processes.

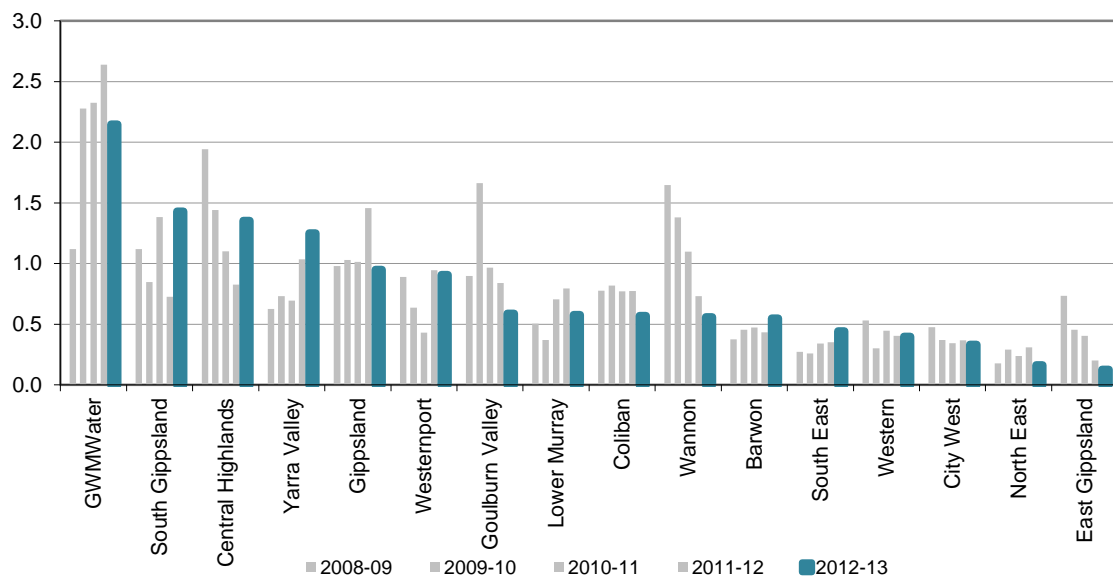
By contrast, the complaint rate rose for several metropolitan and regional water businesses:

- Complaints to South Gippsland Water rose from 0.73 complaints per 100 customers in 2011-12 to 1.43 in 2012-13, driven largely by water quality and water pressure issues (see chapter 6).
- Complaints to Central Highlands Water rose from 0.83 complaints per 100 customers in 2011-12 to 1.35 in 2012-13, driven largely by water pressure issues.
- Complaints to Yarra Valley Water rose for the second consecutive year (1.25 complaints per 100 customers, up from 1.03 in 2011-12 and 0.69 in 2010-11). Yarra Valley Water attributed the rise to complaints about the return of unrequired desalination funds to customers and underreporting of complaints in 2011-12 (following a new billing system).

City West Water's and South East Water's results did not change significantly, despite also facing pricing and desalination issues. Gippsland Water reported the greatest improvement in complaint numbers, falling from 1.46 complaints per 100 customers in 2011-12 to 0.95 complaints in 2012-13. This reflected a return to normal results following water quality issues in 2011-12.

The complaint types received by the water businesses in order of frequency were: water quality (28.6 per cent), payment issues (24.6 per cent), water pressure (8.9 per cent), sewer odour (2.3 per cent), water supply reliability (0.9 per cent), and sewer service reliability (0.5 per cent). Other complaints not included in these categories comprised 8.3 per cent of total complaints. Both South East Water and Yarra Valley Water saw an increase in water quality complaints related to colour (see chapter 6).

**FIGURE 4.3 COMPLAINTS RECEIVED BY WATER BUSINESSES**  
(per 100 customers)



**Note:** Barwon Water's results could not be verified. This is because it changed its complaints system in the fourth quarter and its auditor was unable to verify the results for that quarter.

## 4.5 COMPLAINTS RECEIVED BY THE ENERGY AND WATER OMBUDSMAN (VICTORIA)

EWOV has investigated complaints about water businesses since 2001. Its role is to help resolve complaints and disputes between consumers and electricity, gas and water providers in Victoria.

EWOV records complaints under three separate categories: investigated complaints; assisted referrals; and unassisted referrals. It also records the number of enquiries it receives. Information on the number of enquiries and complaints EWOV receives about each business is set out in table 4.1. The Commission only reports on the complaints and enquiries EWOV receives for the metropolitan and regional water sectors; rural water sector complaints and enquiries are not reported.

In 2012-13 EWOV received 2198 complaints about the metropolitan and regional urban water businesses, up 9 per cent from 2008 complaints in 2011-12. EWOV also received 64 enquiries, down slightly from 69 last year. By contrast, electricity complaints were up 20 per cent over the same period, and gas complaints were up 30 per cent.

South East Water had the smallest frequency of complaints to EWOV of the metropolitan retailers, accounting for 25 per cent of metropolitan complaints while servicing a sector share of 38 per cent of metropolitan customers. By contrast, City West Water and Yarra Valley Water again had a higher proportion of complaints than their sector shares.

For the regional businesses, Wannon Water had the highest number of complaints referred to EWOV relative to sector share, with 11 per cent of all regional complaints while only servicing 6 per cent of the regional population. This was followed by Westernport Water (3 per cent of regional complaints and a 2 per cent sector share). Lower Murray Water experienced the lowest ratio of customer complaints to EWOV relative to customers served, with only 2 per cent of all regional complaints while servicing 5 per cent of regional customers. This was followed by South Gippsland Water (2 per cent of regional complaints and a 3 per cent sector share).

**TABLE 4.1 EWOV COMPLAINTS (2012-13)**

Water Businesses	Total Cases				Total Enquiries		Total Complaints		2012-13 Complaints			Sector Share	Ratio
	2012-13	%	2011-12	%	2012-13	%	2012-13	%	Investigated Complaints	Assisted Referrals	Unassisted Referrals	%	Complaints to Sector Share
Melbourne	51		100		3		48		6	19	23	–	–
City West	455	27	424	27	11	25	444	27	59	275	110	22	1.26
South East	415	25	373	24	15	34	400	25	29	282	89	38	0.65
Yarra Valley	802	48	753	49	18	41	784	48	71	560	153	40	1.20
<b>Total – Metropolitan</b>	<b>1 672</b>	<b>100</b>	<b>1 550</b>	<b>100</b>	<b>44</b>	<b>100</b>	<b>1 628</b>	<b>100</b>	<b>159</b>	<b>1 117</b>	<b>352</b>	<b>100</b>	
Barwon	108	20	65	19	6	35	102	20	9	51	42	22	0.91
Central Highlands	54	10	54	8	1	6	53	10	4	32	17	10	1.05
Coliban	77	14	52	6	3	18	74	14	12	49	13	11	1.35
East Gippsland	13	2	10	4	0	0	13	2	1	10	2	3	0.74
Gippsland	45	8	48	8	0	0	45	9	1	33	11	10	0.87
Goulburn Valley	32	6	21	10	1	6	31	6	1	23	7	8	0.71
GWMWater	26	5	25	3	0	0	26	5	1	18	7	5	1.06
Lower Murray	10	2	17	3	0	0	10	2	1	5	4	5	0.39
North East	47	9	20	6	3	18	44	8	4	29	11	7	1.17
South Gippsland	10	2	13	3	1	6	9	2	1	6	2	3	0.59
Wannon	60	11	39	11	0	0	60	11	5	32	23	6	1.83
Western	40	7	45	12	2	12	38	7	0	28	10	8	0.87
Westernport	17	3	18	7	0	0	17	3	0	12	5	2	1.38
<b>Total – Regional</b>	<b>539</b>	<b>100</b>	<b>427</b>	<b>100</b>	<b>17</b>	<b>100</b>	<b>522</b>	<b>100</b>	<b>40</b>	<b>328</b>	<b>154</b>	<b>100</b>	
<b>TOTAL – VICTORIA</b>	<b>2 262</b>		<b>2 077</b>		<b>64</b>		<b>2 198</b>		<b>205</b>	<b>1 464</b>	<b>529</b>		

# 5 NETWORK RELIABILITY

## 5.1 BACKGROUND

A reliable supply of water and sewerage services to customers is the cornerstone of a water business's operation. This chapter presents information on network reliability, considering asset performance, service interruptions to customers and responsiveness to service problems.

We look firstly at water supply, then at sewerage services.

## 5.2 WATER SUPPLY RELIABILITY

This section reports information about water supply reliability from two perspectives — asset performance and the impact on customers.

Reliability is assessed primarily by:

- the frequency of interruptions (as measured by the number of interruptions per 100 kilometres of water main, the average number of customer interruptions and the number of customers receiving multiple interruptions).
- the time taken to respond to and restore water supply following interruptions (as indicated by the number of interruptions restored within specified timeframes and the average duration of customer interruptions).

## 5.3 WATER SUPPLY INTERRUPTIONS

A water supply interruption is an event that causes a total loss of supply to one or more customers. Interruptions may be due to planned maintenance activities, or unplanned

activities resulting from pipeline or delivery system failures. The frequency of interruptions across different networks is compared by measuring the number of water supply interruptions per 100 kilometres of water main.

Soil type, geography and the assets' age and material cause regional variations in interruption rates for water mains, but asset management can also significantly affect supply reliability in the medium to long term.

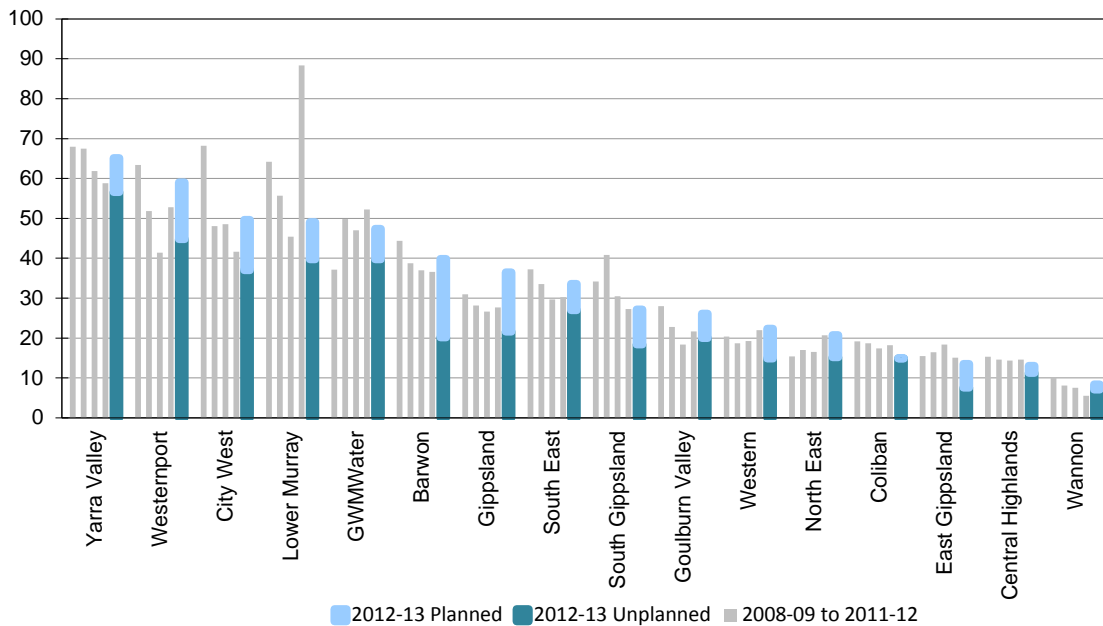
The average number of water supply interruptions across the state was 38.7 interruptions per 100 kilometres of water main in 2012-13, a 7 per cent increase from 36.1 interruptions in 2011-12. However, this is still below the rate of 42.4 in 2008-09. In 2012-13 Wannon Water again reported the lowest rate of water supply interruptions (at 8.4 per 100 kilometres); it has done so for the past five years, although its result was up from 5.5 interruptions in 2011-12 (figure 5.1). By contrast, Yarra Valley Water reported the highest number of water supply interruptions (65.1 per 100 kilometres) caused by an increase in unplanned interruptions. Yarra Valley Water commented it is susceptible to water supply interruptions during hot, dry periods given the expansive clays in its service area. The hot and dry weather between January and March 2013 caused a 34 per cent increase in interruptions, when compared with the same period in 2012.

Most water businesses' 2012-13 performance on water supply interruptions was a little poorer than in previous years. Wannon Water reported the largest increase of 51 per cent, however this comes off a very low base and it is still the best performer. Gippsland Water and Goulburn Valley Water recorded the next largest increases. Gippsland Water attributed its increase to increased asset failures and its air scouring program.

Lower Murray Water conducted an extensive air scouring program in 2011-12 which resulted in a high interruption rate of 88.4 interruptions per 100 kilometres. The 2012-13 interruption rate returned to 49.0, consistent with previous years.

Water supply interruption rates improved over the past five years for City West Water (68.2 in 2008-09 down to 49.6 in 2012-13) and Lower Murray Water (64.2 in 2008-09 down to 49.0 in 2012-13). Over the same period, Wannon Water, Central Highlands Water, Coliban Water and East Gippsland Water consistently maintained low water supply interruption rates (around 20 or less).

**FIGURE 5.1 WATER SUPPLY INTERRUPTIONS (PLANNED AND UNPLANNED)**  
(per 100 kilometres of water main)



## 5.4 CUSTOMER INTERRUPTION FREQUENCY

Customer interruption frequency measures how often on average a customer will experience an interruption. One water supply interruption will generally inconvenience a specific number of customers. An event causing 50 customers to lose supply is recorded as one water supply interruption and 50 customer interruptions, for example.

In 2012-13 the average frequency of customer interruptions (planned and unplanned) across the state was 0.26 interruptions per customer (up slightly from 0.24 interruptions per customer in 2011-12). Wannon Water reported the least water supply interruptions per customer (0.06) and has done so since 2009-10 (figure 5.2).

By contrast, Westernport Water again reported the highest number of interruptions per customer (0.94), as it has over the past five years. Its high rates reflect the unusual nature of its business; it has a very small customer base mostly located on Phillip

Island with a single water supply main to the island. Any interruption to this supply, planned or unplanned, affects a large proportion of the customer base. Further, the region's population is seasonal, with many empty holiday houses during the non-summer months leading to water stagnating in dead end supply mains. However, its result improved in 2012-13, reflecting fewer unplanned interruptions (down to 0.45 from 0.67 in 2011-12). Westernport Water attributed the fewer unplanned interruptions to its preventative maintenance program and repairing more bursts and leaks under pressure (without interruption to customers).

The frequency of customer interruptions for the metropolitan businesses rose by 13 per cent for 2012-13. All of the regional businesses — except Barwon Water, Gippsland Water, Goulburn Valley Water and Wannon Water — reported improved results.

### **PLANNED AND UNPLANNED INTERRUPTIONS**

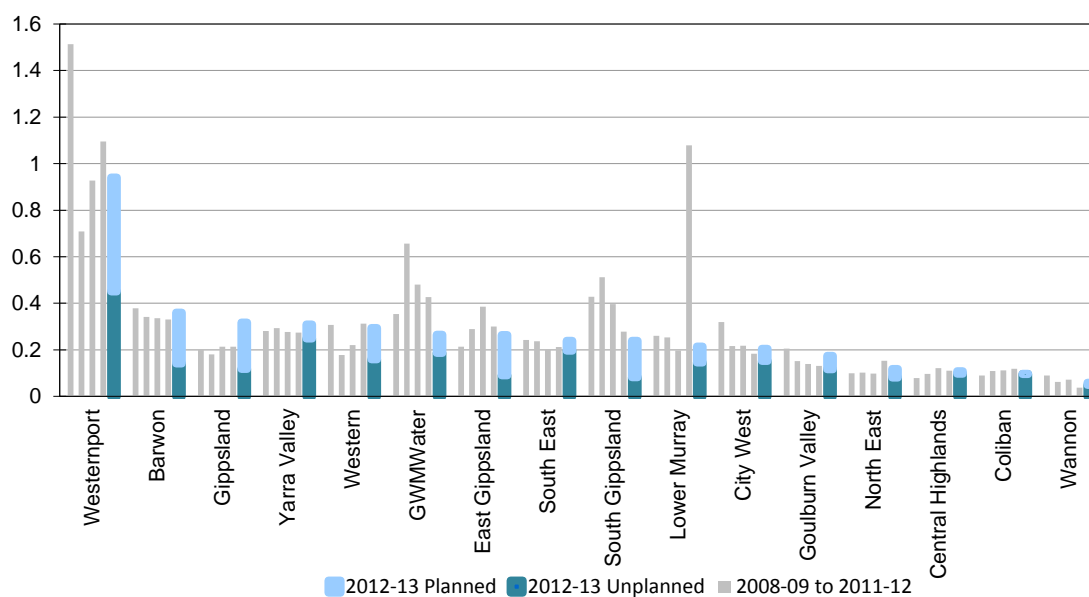
Results are also presented separately for planned and unplanned interruptions per customer. Six businesses experienced increases in planned customer interruption frequency while 11 businesses experienced increases in unplanned interruptions rates.

Most water businesses' performance in unplanned interruptions improved between 2008-09 and 2012-13; all businesses but Yarra Valley Water, Central Highlands Water, Coliban Water and Gippsland Water reduced their unplanned interruptions over the period. South Gippsland Water reduced its frequency of interruptions by 73 per cent. South Gippsland Water attributed its improvement to its ongoing pipe replacement program and implementing pressure management in the Yarram system.

Those businesses with increased frequency of unplanned interruptions over the period had relatively small increases, with Central Highlands Water recording the largest increase (3 per cent).



**FIGURE 5.2 CUSTOMER INTERRUPTION FREQUENCY — PLANNED AND UNPLANNED**  
(interruptions per customer)



## TIMING OF INTERRUPTIONS

The timing of customer interruptions, as well as the frequency, affects the inconvenience caused to customers. Peak hours of water use occur from 5am–9am and 5pm–11pm, and interruptions during these peak times generally cause greater inconvenience than during the off-peak times.

In 2012-13, Wannon Water, Western Water and Westernport Water reported no planned customer interruptions during peak hours. This was the case for Western Water for all but one of the past five years. East Gippsland Water reported the highest result, with a frequency of 0.03 planned interruptions per customer during peak hours, a significant increase from its 2011-12 result of 0.01. The business attributed the increase to its air scouring program.

## 5.5 AVERAGE DURATION OF INTERRUPTIONS

Average interruption duration indicates how long it takes, on average, to restore supply after an interruption. It is measured from the time water supply is shut down until it is returned to normal service levels.

The frequency of interruptions may be influenced by matters outside the control of water businesses, but it is possible to establish practices and procedures to restore supply quickly when an interruption does occur.

### PLANNED INTERRUPTIONS

Supply interruptions for planned work can vary greatly in duration, depending on the nature and extent of the planned work. On the one hand, businesses may conduct extensive programs to clean or replace pipes, and choose to maximise the amount of work performed during each scheduled supply interruption; this will increase the average duration. On the other hand, a business may strive to minimise or avoid planned supply interruptions wherever possible. This can produce quite varied results for a particular business from year to year, depending on the planned workload and strategy.

In 2012-13, the average duration of planned interruptions across the state improved slightly to 158 minutes, down from 162 minutes in 2011-12. Figure 5.3 shows the average duration of planned interruptions for each business. GWMWater recorded the shortest average duration of planned interruptions (67 minutes) while South Gippsland Water recorded the longest (229 minutes and its highest result in the past four years).

Among the metropolitan businesses, South East Water and City West Water improved their average duration for planned interruptions compared with 2011-12. For the regional businesses, GWMWater, Lower Murray Water and Central Highlands Water reported large improvements. Lower Murray Water and GWMWater attributed their improvements to their extensive air scouring programs in 2011-12.

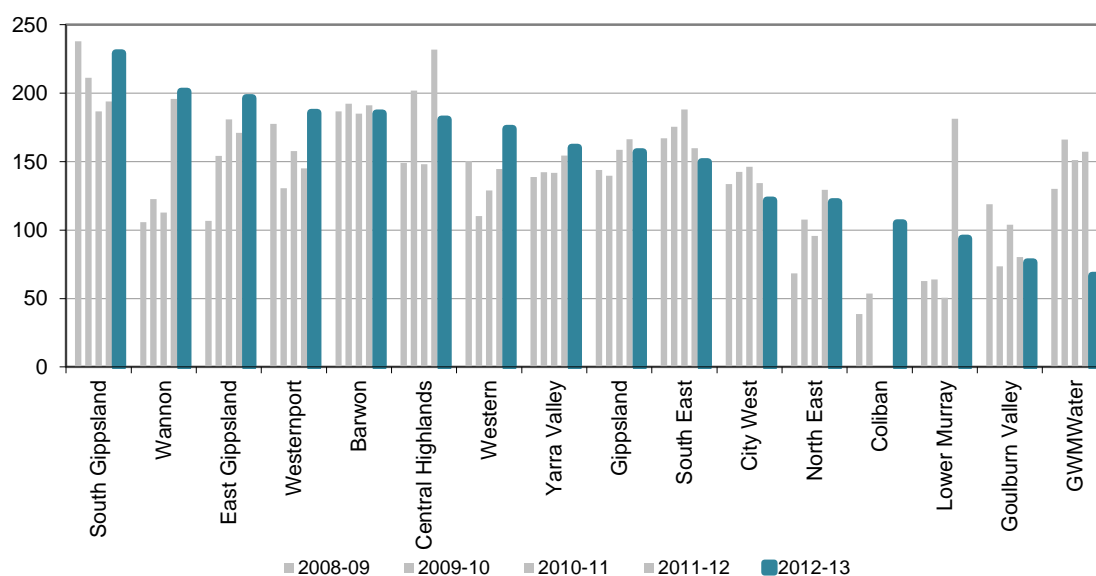
By contrast, the following businesses increased the average duration for planned interruptions:

- East Gippsland Water — Average duration rose from 171 minutes in 2011-12 to 196 minutes in 2012-13. The increased incidence and duration of planned

interruptions to carry out its maintenance plans accompanied a decrease in the average duration of unplanned interruptions.

- Westernport Water — Average duration rose 41 minutes in 2012-13, because the business installed new air valves (as part of a preventative maintenance program) and lowered water mains for road construction.
- South Gippsland Water — Average duration rose by 35 minutes in 2012-13, caused by its ongoing pipe replacement program.

**FIGURE 5.3 AVERAGE DURATION OF PLANNED INTERRUPTIONS**  
(minutes)



## UNPLANNED INTERRUPTIONS

Unplanned interruptions generally involve water supply infrastructure failures (such as pipeline bursts, equipment or instrument failures) that require shutting down the water supply to conduct emergency repairs. The duration can be greatly affected by factors including the size and location of the pipeline, access to the worksite, the availability of work crews to attend, and the nature of the repair required.

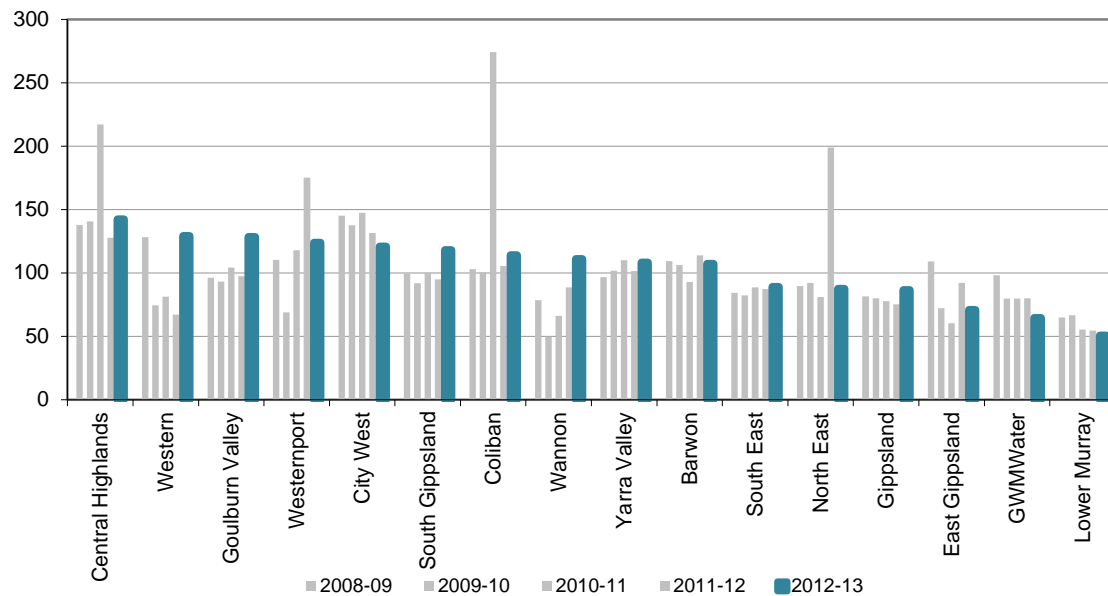
In 2012-13, the average duration for unplanned interruptions across the state remained steady (104 minutes compared with 103 minutes in 2011-12). Lower Murray Water recorded the shortest average duration (51 minutes), while Central Highlands Water reported the longest average duration (142 minutes) (figure 5.4).

Of the metropolitan businesses, City West Water improved its average duration for unplanned interruptions in 2012-13, continuing a trend of improvement over the past five years. By contrast, South East Water's and Yarra Valley Water's results deteriorated slightly.

Six regional businesses improved their performance but performance deteriorated for the other seven. Notable results for the regional businesses included:

- North East Water returned to its historical trend, following a poor year in 2011-12 when the business experienced water main failures in Yarrowonga and Myrtleford (including an overnight outage in Myrtleford).
- Western Water's unplanned interruptions increased from 67 minutes to 129 minutes (up 93 per cent). It attributed the rise to five major bursts that affected a large number of properties and that were difficult to restore.
- Wannon Water — which had a low number of unplanned interruptions in 2012-13 — attributed a sharp rise in the average duration of those interruptions to a single 9 hour burst that occurred at night in a remote town. Without this outlier, its average duration of unplanned interruptions was consistent with previous years.

**FIGURE 5.4 AVERAGE DURATION OF UNPLANNED INTERRUPTIONS**  
(minutes)



## 5.6 OVERALL RELIABILITY

Overall reliability of a water supply network is measured by customer minutes off supply (the product of average customer interruption frequency and average interruption duration). Businesses can improve overall reliability by reducing the frequency of interruptions, reducing the number of customers affected with each interruption event or by reducing the duration of interruptions. Businesses are likely to pursue a combination of these approaches to improve reliability.

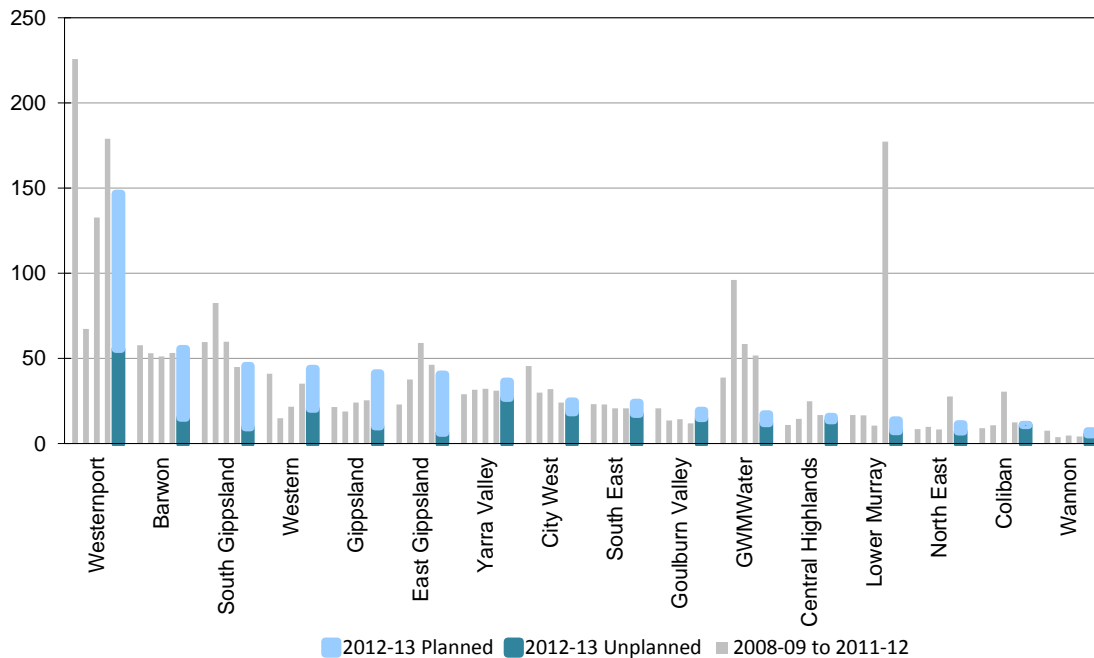
In 2012-13, the average customer minutes off supply across the state remained steady, at 30 minutes. Figure 5.5 shows the average customer minutes off supply for each business. Wannon Water reported the lowest average customer time off supply (7 minutes), and has consistently been the lowest for the past five years. Conversely Westernport Water reported the highest (147 minutes) for the fourth time in the past five years. According to Westernport Water, its result reflected the nature of its network

(where a burst or a leak affects a significant proportion of its customers), and its preventative maintenance plan.

Performance declined for all three metropolitan businesses in 2012-13, whereas performance improved for seven of the 13 regional businesses. Lower Murray Water restored its previous good performance, after concluding its air scouring program in 2011-12. Similarly, GWMWater’s good result reflected completing its air scouring program. By contrast, Gippsland Water’s performance deteriorated, with customer minutes off supply rising from 26 minutes in 2011-12 to 41 minutes in 2012-13. According to Gippsland Water, this result reflected its extensive air scouring program and increased asset failures mentioned in section 5.3.

Most businesses’ results varied considerably over the past five years. Of the metropolitan businesses, City West Water improved, while South East Water and Yarra Valley recorded small declines in performance. Seven regional businesses improved their performance over the past five years, with GWMWater, Lower Murray Water and North East Water experiencing the largest percentage reductions.

**FIGURE 5.5 AVERAGE CUSTOMER MINUTES OFF SUPPLY**  
(minutes)



## 5.7 CUSTOMERS EXPERIENCING AN INTERRUPTION

This measure examines the number of customers who experienced a particular number of interruptions in a year. Many of the performance indicators concentrate on average performance, but this measure can identify customers who received poor service with a higher number of interruptions.

GWMWater has not reported this data since 2009-10, because its current asset management system cannot capture multiple interruptions for a given customer. Despite assurances that this issue would be addressed, the Commission is disappointed to note this has not occurred to date.

Five of the 14 businesses collating this data in 2012-13 reported fewer than 10 per cent of customers incurred one or more unplanned water supply interruptions. Wannon Water reported the lowest interruption rate (4.4 per cent) while Westernport Water and Yarra Valley Water reported the highest rates (26.5 per cent and 19.1 per cent respectively).

In terms of multiple interruptions (two or more unplanned interruptions), Wannon Water reported the smallest percentage (0.1 per cent of customers) while Westernport Water reported the highest (8.3 per cent) followed by South Gippsland Water (5.0 per cent).

Businesses also reported the restoration times for unplanned and planned customer interruptions. These measures look at how promptly a water business restores supply once it shuts down a water main. The majority of unplanned water supply interruptions are restored within five hours, ranging from 95 per cent at Westernport Water up to 100 per cent at Lower Murray Water and South Gippsland Water.

## 5.8 SEWERAGE SERVICE RELIABILITY

This section reports information about the reliability of sewerage services from two perspectives — the performance of the businesses' assets and the impacts on customers. Sewerage reliability is influenced by:

- frequency of service failure (as indicated by sewer blockages per 100 kilometres of main and the number of blockages experienced by customers)
- responsiveness to service failure (as indicated by sewer spills contained within five hours)
- containment of sewage within the system (as indicated by the number of sewage spills, in particular spills onto customers' properties).

Customers in Victoria rarely lose access to sewerage services. Blockages or other faults usually result in sewage spills rather than incapacity to dispose of sewage. The exception is when blockages occur in the pipe connecting a customer's property to the sewerage system. The impact of these interruptions, while great on the individual customer affected, is minor in an overall network context because it is confined to that customer. By contrast, a single water supply interruption will typically result in a loss of service to about 50 properties.

## 5.9 FREQUENCY OF SEWER BLOCKAGES

A sewer blockage is a partial or total obstruction of a sewer main that impedes sewage flow. This includes all trunk and reticulation main blockages, but excludes blockages in the service connection branch and property drain.

A sewer blockage may lead to a sewage spill because it reduces the capacity of the sewer to handle the volume of sewage, particularly at times of high rainfall. Asset management practices affect the performance of the sewerage network, but a range of external factors can contribute to sewer blockages, particularly hot liquid fats solidifying as they cool and tree roots intruding into the sewers.

The overall rate of sewer main blockages across the state increased slightly in 2012-13, with 19 sewer blockages per 100 kilometres of sewer main, up from 18 in



2011-12. Figure 5.6 shows the sewer blockage rate for each business. East Gippsland Water had the lowest rate of sewer blockages (3.6 blockages per 100 kilometres of sewer main), following steady improvement over the past five years (a reduction of 79 per cent from 2008-09 to 2012-13). North East Water recorded the biggest percentage improvement in 2012-13 (down to 5.7 blockages per 100 kilometres of sewer main from 9.1 in 2011-12), continuing its steady improvement across the five year period.

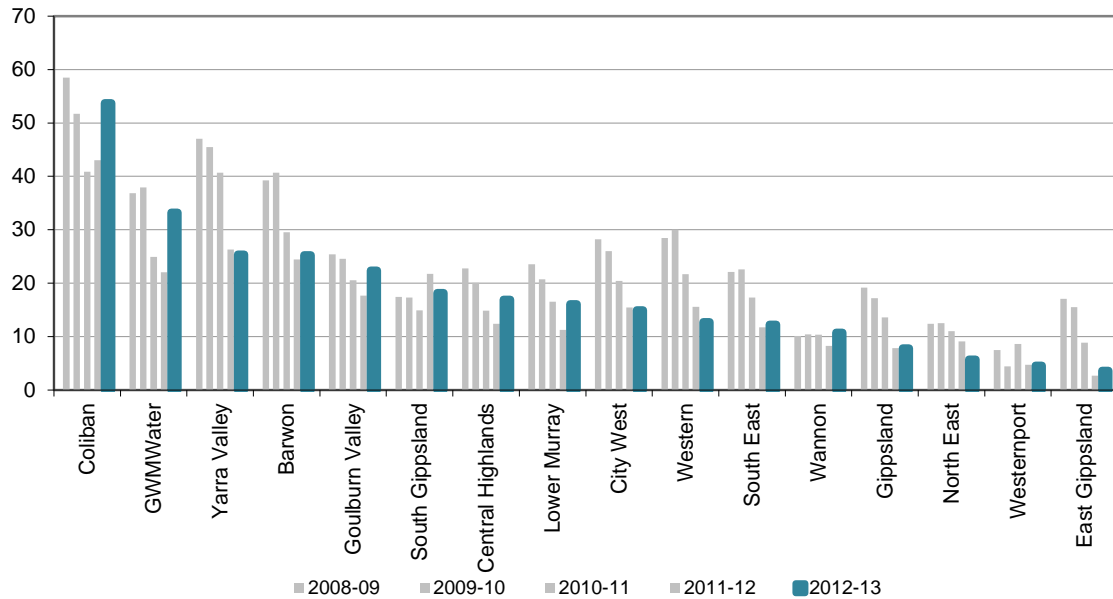
Coliban Water and GWMWater recorded the highest sewer blockage rates in 2012-13 (53.7 blockages and 33.2 blockages per 100 kilometres of sewer main respectively). These businesses also reported the largest increases over the year (both up by 11 blockages per 100 kilometres of sewer main).

Coliban Water's ageing, shallow gravity sewers in Bendigo have led to historically higher blockage rates than other businesses. High rainfall and flooding events alleviated the problem in recent years, but its sewer blockage rate rose again in 2012-13 with the return to dry conditions. The business has planned works to improve sewer reliability.

Like Coliban Water, GWMWater's sewer blockage rate fell during wet conditions, but returned to its usual rates with dry conditions in 2012-13. The business is reviewing its asset maintenance programs to identify high risk areas.

Over the longer term, the rate of blockages fell significantly over the past five years (down from 32 blockages in 2008-09). Fourteen of the 16 water businesses improved their performance between 2008-09 and 2012-13; five reported their lowest ever sewer blockage rate in 2012-13. The metropolitan businesses improved their results by over 45 per cent over the period, while East Gippsland Water, Gippsland Water, North East Water and Westernport Water more than halved their rates of sewer blockages. South Gippsland Water and Wannon Water were the only businesses that did not improve over the period.

**FIGURE 5.6 SEWER BLOCKAGES**  
(per 100 kilometres of sewer main)



### CUSTOMERS AFFECTED BY SEWER BLOCKAGES

Businesses also reported the number of customers affected by sewer blockages caused by a system fault, identifying where a customer experienced multiple sewer blockages during the year. This parameter can be very subjective, because it is difficult to determine how many customers were actually affected by a particular sewer blockage, unlike water where precise numbers are known. A sewer blockage may result in a sewer spill at a low point in the system, without necessarily leading to a loss of service for all upstream customers. This is because customers upstream of the blockage and spill location might still be able to discharge into the sewer.

The Commission’s indicator review changed reporting requirements for 2012-13. Businesses are now only required to report the number of customers experiencing three or more sewer blockages in the year.

Most businesses reported very low numbers of customers experiencing three or more sewer blockages per year. The exceptions were North East Water (42 customers or 0.1 per cent) and Yarra Valley Water (27 customers or 0.004 per cent).

GWMWater and Westernport Water did not report on multiple sewer blockages due to the limitations of their current asset management systems

## 5.10 CONTAINMENT OF SEWER SPILLS

Reticulation and branch sewage spills are a failure to contain sewage within the sewerage system. This measure excludes spills from emergency relief structures and at sewer pump stations, and spills due to blockages in house connection branches. The severity of spills is broken into two priority levels.

A priority one spill refers to a spill that causes:

- a public health concern
- significant damage to property
- a discharge to a sensitive receiving environment, or
- a discharge from a sewer pipe that is 300 millimetres (or greater) in diameter, or the flow is greater than 800 litres per minute.

A priority two spill refers to any minor failure to contain sewage within the sewerage system and any spill affecting several users that results in:

- minor property damage, or
- a discharge outside a building that does not pose a health risk.

### PRIORITY ONE AND TWO SPILLS

In 2012-13:

- Fourteen of the 16 water businesses reported three or less priority one sewer spills per 100 kilometres of sewer main, and 10 reported one or less spill. Historically, nine businesses had less than one priority one spill per 100 kilometres of sewer

main for five years running, with only Coliban Water and South Gippsland Water averaging more than five for the same period (figure 5.7).

- Coliban Water again reported considerably more priority one spills than other businesses, which it attributed to a high number of blockages caused by the age and condition of its sewer network. Coliban Water's number of priority one spills rose in 2012-13, up to 18.9 per 100 kilometres from 13.3 in 2011-12. Its priority two spill rate also increased from 12.0 to 16.0 in 2012-13, its highest result for the five year period.
- Yarra Valley Water again reported the highest rate of priority two spills (17.8 per 100 kilometres of sewer main, similar to its 17.3 in 2011-12). However, this improved significantly since 2008-09, when it had 32.5 spills per 100 kilometres.
- East Gippsland Water, Gippsland Water and North East Water all reported zero priority one sewer spills, while Lower Murray Water and Westernport Water both reported a single spill.

Some businesses classify their spills differently. South Gippsland Water, for example, considers all sewer spills have a potential public health concern, and therefore classifies all sewer spills as priority one.

## **CONTAINING SPILLS**

Reporting the percentage of spills that are fully contained within five hours reflects the timeliness with which businesses contain sewer spills from branch and reticulation sewers.

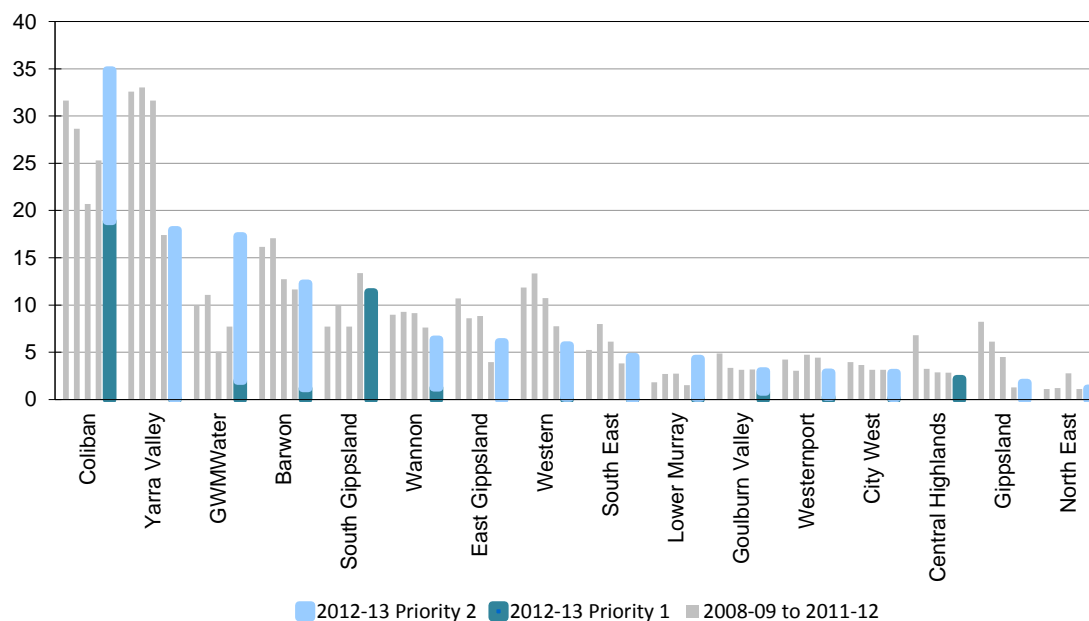
In 2012-13, 10 businesses contained 100 per cent of sewer spills within five hours, down from 12 businesses last year. The remaining six businesses were:

- Yarra Valley Water — 99.8 per cent, up from 98.4 per cent in 2011-12
- Coliban Water — 99.5 per cent, down from 100 per cent in 2011-12)
- GWMWater — 98.3 per cent, up from 98.0 per cent
- Goulburn Valley Water — 97.3 per cent, down from 100 per cent in 2011-12
- Gippsland Water — up significantly to 96.4 per cent from 60 per cent in 2011-12
- South Gippsland Water — 93.8 per cent, down from 100 per cent in 2011-12.

However, the actual number of spills not contained within five hours is quite small for most of these businesses: ranging from one spill of 28 for Gippsland Water to three spills of 48 for South Gippsland Water. Yarra Valley Water's and Coliban Water's results of close to 100 per cent were good for two businesses with a high number of spills.

Historically, water businesses responded quickly to contain sewer spills. Over the past five years, 99.5 per cent of sewer spills were contained within five hours.

**FIGURE 5.7 SEWER SPILLS FROM RETICULATION AND BRANCH SEWERS**  
(per 100 kilometres of sewer main)



## 5.11 SEWER SPILLS — CUSTOMER PROPERTIES AND THE ENVIRONMENT

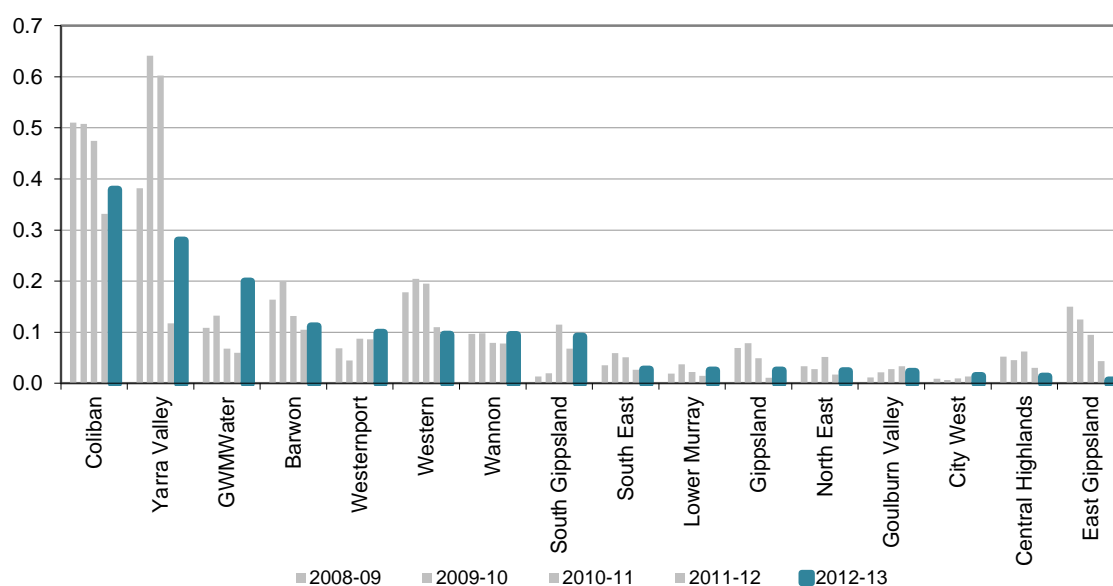
Another measure of sewerage reliability is the number of sewer spills caused by a fault in the water business's systems that allowed sewage to discharge onto a customer's property.

City West Water, Central Highlands Water and East Gippsland Water reported the lowest spills to customers' properties, with 0.01 spills per 100 customers in 2012-13. By contrast, Coliban Water reported the highest rate at 0.38 (figure 5.8). This result was consistent with Coliban Water's higher rate of sewer blockages and spills than the other businesses.

Across the state, the overall rate of sewer spills to customer property increased from 0.07 spills per 100 customers in 2011-12 to 0.12 spills per 100 customers in 2012-13. This was mainly driven by Yarra Valley Water's increase from 783 customers affected in 2011-12 (or 0.12 spills per 100 customers) to 1900 customers affected in 2012-13 (or 0.28 spills per 100 customers). However, this was still better than its performance in 2008-09 and 2010-11.

GWMWater also recorded a significant jump in its rate of sewer spills to customer property, from 0.06 spills per 100 customers in 2011-12 to 0.20 in 2012-13 (or from 15 to 50 spills). The reasons for this are outlined in section 5.9.

**FIGURE 5.8 SEWER SPILLS TO CUSTOMER PROPERTY**  
(per 100 customers)



# 6 DRINKING WATER QUALITY

## 6.1 BACKGROUND

Safe, good quality drinking water is essential for community health and wellbeing. One of the core functions of the urban water businesses is delivering water that is safe and pleasant to drink.

In Victoria, the governance framework for supplying safe drinking water is set out in the *Safe Drinking Water Act 2003* and the *Safe Drinking Water Regulations 2005*, both administered by the Department of Health.

This chapter reports on compliance with some key parameters that indicate drinking water quality, namely:

- microbiological activity
- turbidity
- customer complaints due to water quality.

Some reticulated water supplies in regional Victoria deliver nonpotable water and do not need to meet drinking water standards. These supplies are not included in the indicators.

## 6.2 WATER QUALITY

The microbiological quality of drinking water is measured in terms of the number of *Escherichia coli* (*E. coli*) bacteria per 100 millilitres of drinking water. The presence of *E. coli* means water may be contaminated with faecal material. These organisms should not be present in drinking water.

In 2012-13 all but one of the 16 urban water businesses met the Safe Drinking Water Regulations requirement for all water supply zones. That is, at least 98 per cent of all samples of drinking water collected for a water supply zone in any 12 month period contained no *E. coli*.

Coliban Water reported 99.8 per cent of customers received drinking water that complied with the *E. coli* standard. However, *E. coli* was detected in the Laanecoorie water supply network at Tarnagulla, which the business attributed to chlorine demand and long detention time in the network. Coliban Water proposed water quality initiatives in its Water Plan for the third regulatory period (1 July 2013 to 30 June 2018) to address such issues.

Turbidity in water is caused by the presence of fine suspended particles of clay and silt, algae and other microscopic organisms. It is measured in Nephelometric Turbidity Units (NTU). High turbidity levels can result in water having a 'muddy' or 'milky' appearance.

The Safe Drinking Water Regulations require at least 95 per cent of samples collected for a drinking water supply zone in a 12 month period be below 5.0 NTU. In 2012-13, for the fourth consecutive year, all urban water businesses except GWMWater delivered water that complied with the Regulations.

Very fine silt was washed into GWMWater's reservoirs during extreme rain events in 2010-11 and the January 2011 flooding, significantly affecting GWMWater's turbidity levels in 2010-11 and subsequent years. Two years on from these events, water supplies were still affected but improving. GWMWater reported 98.3 per cent of customers received water that meets the turbidity standard in 2012-13, up from 98.0 per cent in 2011-12 and 89 per cent in 2010-11. The affected customers were in towns that do not receive full water treatment, only disinfection. GWMWater improved the treatment methods in several towns, and some towns were reclassified as regulated (nonpotable) water rather than drinking water (which means they do not have to comply with the drinking water standard). It proposed capital improvements for five towns to bring them up to drinking water standards, and it will keep reviewing and optimising operations to manage water quality issues and towns without full drinking water treatment processes.



## 6.3 WATER QUALITY COMPLAINTS

From a public health perspective, microbiological water quality is the most important indicator. However, colour, taste and odour are important to customers' perceptions. The number of water quality complaints is a measure of customer satisfaction with these aesthetic qualities. This can vary considerably from year to year for a water business; specific one-off type events can produce a large number of complaints, significantly affecting the business's performance for the year.

Most water businesses reported variations of 15 per cent or more in their overall rate of water quality complaints for 2012-13 (figure 6.1). The water quality complaint rate for all Victorian water customers was 0.29 complaints per 100 customers in 2012-13, up slightly from 0.27 recorded in 2011-12.

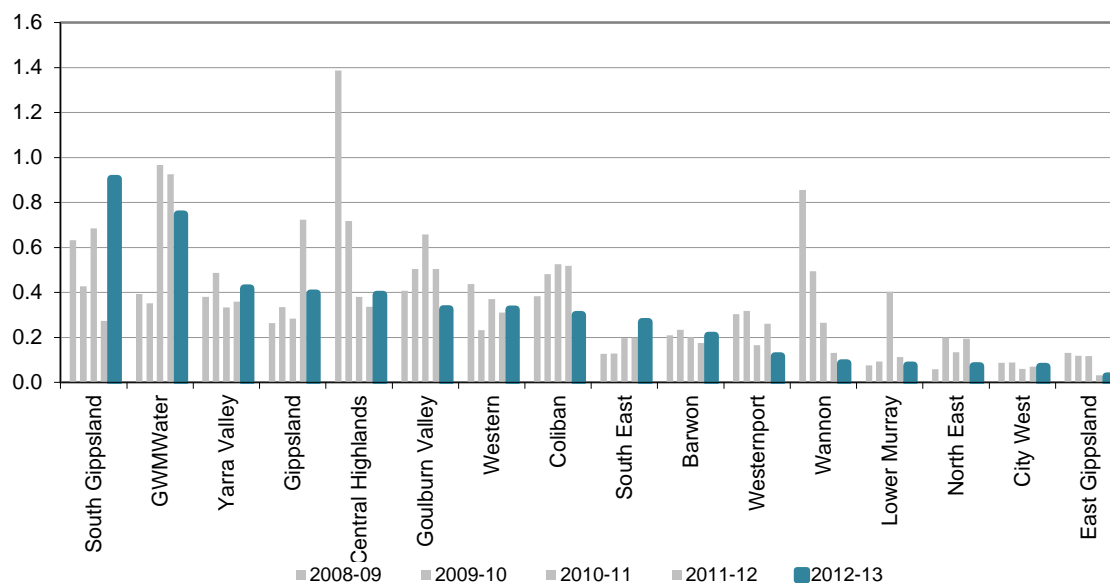
South Gippsland Water and GWMWater reported the highest rates of water quality complaints at 0.90 and 0.75 per 100 customers respectively. GWMWater's performance continues to improve as the effects of the January 2011 floods diminish; its complaint rate fell from 0.97 in 2010-11 and 0.93 in 2011-12.

By contrast, South Gippsland Water's performance deteriorated significantly, compared with last year's result of 0.27 complaints per 100 customers (which was consistent with the state average). Complaints related to water colour more than tripled this year, and taste/odour and other complaints also more than doubled. South Gippsland Water attributed this year's increase to two main events — a blue-green algal outbreak at Lance Creek, and an incident in Korumburra that scoured the water mains, releasing manganese.

Complaints about water colour increased for both South East Water and Yarra Valley Water. Both businesses reported increased levels of sediment in their water supplies (stirred up during periods of higher flow velocity associated with bursts and increased demand), discolouring water. Maintenance and repair activity by Melbourne Water on major water supply pipelines also generated complaints about dirty water.

Gippsland Water recovered from a complaint rate spike in 2011-12 caused by two main events, while East Gippsland Water had the lowest rate with 0.03 complaints per 100 customers for the second consecutive year.

**FIGURE 6.1 WATER QUALITY COMPLAINTS — ALL CAUSES**  
(per 100 customers)



Note: Barwon Water's figures for the final quarter could not be confirmed by the auditor, due to reporting issues with the new billing and complaints system.

Colour was the main cause of water quality complaints for most businesses. The exceptions were Central Highlands Water, East Gippsland Water, Lower Murray Water, North East Water and Wannon Water, where taste/odour was the main cause.

Water quality complaint rates moved within a consistent range for most businesses over the past five years. Annual anomalies were readily related to specific events during that year. Wannon Water improved most consistently over the period; its 2012-13 water quality complaint rate was only 10 per cent of its 2008-09 rate. The business attributed its improved performance to:

- investing in water treatment plants
- improving operator competence through training programs and focus meetings
- more flushing and tank cleaning programs
- improving raw water quality following system augmentation.

Central Highland Water’s performance also improved significantly when it took Ballarat off bore water supply. Bore water was necessary during the height of the drought, but it produced many complaints for taste and odour.

# 7 ENVIRONMENTAL

## 7.1 BACKGROUND

This chapter covers sewage treatment and compliance, effluent recycling, biosolids reuse and greenhouse gas emissions.

## 7.2 SEWAGE EFFLUENT TREATMENT VOLUMES

A sewerage system receives waste water from various sources, including residential sewage, nonresidential sewage, trade waste and other sources such as inadvertent storm water. The nature of this combined sewage stream, and therefore the treatment required, can vary significantly due to these different sources, in particular the trade waste sources.

The Environment Protection Authority (EPA) regulates treated sewage effluent quality through discharge licences at sewage treatment plants. The level of sewage treatment required usually depends on the type of waterway into which the treated sewage is discharged. There are three defined levels of sewage treatment:

- primary treatment — generally to remove a substantial amount of suspended matter
- secondary treatment — to substantially reduce biological oxygen demand (BOD) and suspended solids
- tertiary treatment — to remove nutrients, further suspended solids and possibly targeted contaminants of concern.

Victoria treated 479 700 megalitres of sewage in 2012-13, down 1 per cent from 483 600 megalitres in 2011-12. Most businesses reported a decrease in volume; a 4 per cent fall in regional sewage volumes offset a 1 per cent rise in metropolitan

volumes. South Gippsland Water experienced the largest percentage reduction (down 16 per cent from previous years), followed by Gippsland Water and Westernport Water (both down 11 per cent). All recorded volumes similar to 2008-09 and 2009-10, which were drier years.

Four water businesses reported small increases in sewage volume this year — Melbourne Water (1 per cent), Western Water (3 per cent) and Barwon Water and GWMWater (both 4 per cent).

Melbourne Water treats about two thirds of the state's total sewage volume (92 per cent of Melbourne's total sewage volume) at its two Melbourne treatment plants. An upgrade of the Eastern Treatment Plant (ETP) was completed in December 2012 to treat effluent to a tertiary standard and increase the quality of recycled water. This upgrade added filtration, ozone and ultraviolet disinfection as well as retaining chlorination. All sewage at the ETP is now treated to a tertiary standard, accounting for about a third of Melbourne Water's sewage, and increasing the proportion of tertiary treated sewage in Victoria from 13 per cent in 2011-12 to 35 per cent in 2012-13.

Gippsland Water was still the only business to discharge sewage that has only received primary treatment, accounting for 2 per cent of total sewage treated in Victoria. About a third of Gippsland Water's 'sewage' is saline wastewater, received as a byproduct from the power industry. It is transported through the Saline Waste Outfall Pipeline (SWOP) for ocean discharge.

The remaining 63 per cent of the state's sewage is treated to a secondary level.

## 7.3 RECYCLED WATER

The majority of sewage treatment plants operated by the water businesses are subject to the State Environment Protection Policy (Waters of Victoria) schedules, which are developed and administered by the EPA. The schedules require sewage treatment plant operators to sustainably reuse wastewater and treatment sludge wherever practicable and environmentally beneficial.

Recycled water is generally used for activities such as turf farms, some industrial processes, dairy farms, recreational lands such as parks or golf courses, and irrigation.

Some businesses operate 'third pipe' recycled water supply systems to their customers, for non-potable uses such as garden watering and toilet flushing. Recycled water can also be used for beneficial environmental outcomes, such as wetlands, and onsite treatment plant uses external to the treatment process.

Figure 7.1 shows the proportion of treated effluent recycled by each business.

Table 7.1 shows the actual volumes reused for each business.

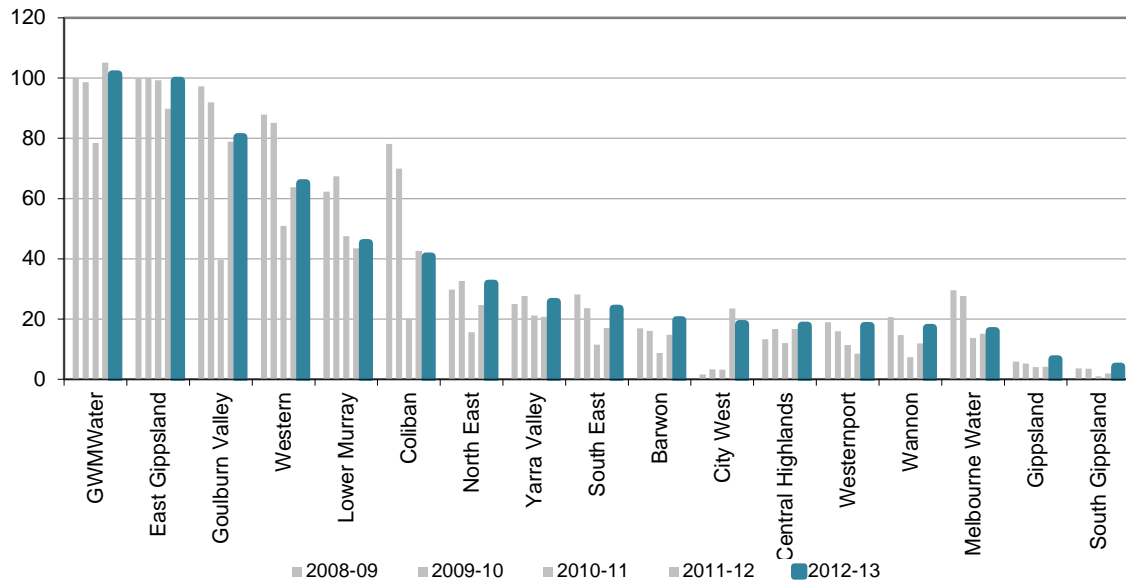
In 2012-13 the total volume of effluent reused across the state increased by 5 per cent to 91 400 megalitres, from 87 000 megalitres in 2011-12. This represents a reuse rate of 20 per cent of total available treated effluent, with the remainder discharged to the environment. In 2008-09, at the height of the drought, total reuse was 115 600 megalitres, representing 31 per cent of the available effluent.

Fifteen of the 17 water businesses increased their reuse volumes this year, with only City West Water (down 28 per cent) and Coliban Water (down 14 per cent) reporting decreases. Barwon Water recorded the largest volume increase, with customer demand for recycled water returning to average demand levels following a very low year in 2010-11. In addition, it brought its Northern Water Reclamation Plant on line during the year, and its new biosolids drying plant increased the demand for recycled water.

East Gippsland Water and GWMWater continued to reuse almost all of their treated effluent (99 per cent and 101 per cent respectively) while Goulburn Valley Water reused 80 per cent.

Agriculture accounts for the largest proportion of recycled effluent (37 per cent), although this dropped by a third for the metropolitan area this year. This was offset by a significant increase in the amount of recycled water Melbourne Water provided to the metropolitan retailers for distribution via their third pipe systems. This rise reflected both a recovery in demand following a low year in 2010-11, and more third pipe customers in new developments.

**FIGURE 7.1 PROPORTION OF EFFLUENT REUSED**  
(per cent)



**TABLE 7.1 VOLUME OF EFFLUENT REUSED**  
(megalitres)

	2009-10	2010-11	2011-12	2012-13	Change in 2012-13	Percentage Change
Melbourne Water	74 818	46 713	48 756	48 849	93	+0
City West	154	175	1 216	873	-343	-28
South East <sup>a</sup>	2 865	1 653	2 277	3 106	829	+36
Yarra Valley	2 639	2 425	2 319	2 687	369	+16
Barwon	3 017	1 997	3 483	4 790	1 307	+38
Central Highlands	1 504	1 410	1 628	1 971	343	+21
Coliban	5 483	1 781	3 893	3 346	-547	-14
East Gippsland	2 153	2 511	2 469	2 959	490	+20
Gippsland	1 171	1 113	1 128	1 651	523	+46
Goulburn Valley	6 649	4 021	6 824	7 344	520	+8
GWMWater	1 856	2 036	2 291	2 366	75	+3
Lower Murray	2 707	2 735	2 456	2 491	35	+1
North East	2 004	1 312	1 959	2 203	244	+12
South Gippsland	128	40	87	168	81	+93
Wannon	1 453	825	1 248	1 490	242	+19
Western	6 288	4 053	4 814	4 880	65	+1
Westernport	181	163	129	238	109	+85
<b>TOTAL</b>	<b>115 071</b>	<b>74 964</b>	<b>86 976</b>	<b>91 413</b>	<b>4 437</b>	<b>+5</b>

Note: The volume of effluent reused by South East Water reported in the 2011-12 report (4554 megalitres) was corrected for definitional changes, as was the 2011-12 total of 89 253 megalitres.

## 7.4 BIOSOLIDS REUSE

Organic sludge material, or biosolids, produced during the sewage treatment process is periodically removed from treatment plants and can be either stockpiled or disposed of. Disposal options include beneficial reuses such as organic rich fertiliser, or disposal as a non-reusable waste to landfill.

Under the reporting protocol, biosolids are produced when they are removed from the treatment process. It is therefore possible for a business to not produce any biosolids in



a given year, by not desludging any of the lagoons or tanks where the sludge accumulates. No businesses reported zero biosolids produced in 2012-13.

In any given year, a water business can accumulate (stockpile) biosolids without disposing of any; therefore, a zero reuse figure does not necessarily imply a business does not reuse its biosolids. Correspondingly, reuse percentages over 100 per cent indicate businesses used some stockpiled material from previous years. To help produce a clearer picture of the longer term biosolids management for the businesses, figure 7.2 includes a four year average reuse figure, along with the current year's reuse as a percentage of this year's biosolids production. Businesses are ranked according to the four year average figure.

Total biosolids production was 117 400 tonnes, down from 138 100 tonnes in 2011-12, but almost double the 61 400 tonnes produced in 2010-11. Overall, businesses reused 52 200 tonnes of biosolids (or 44 per cent of the amount produced in 2012-13); this was more than double the figure of 25 300 tonnes reused in 2011-12. Goulburn Valley Water, Barwon Water and Central Highlands Water recorded the biggest increases in reuse, all reusing more than they produced in 2012-13 (and more than doubling reuse across the regional businesses):

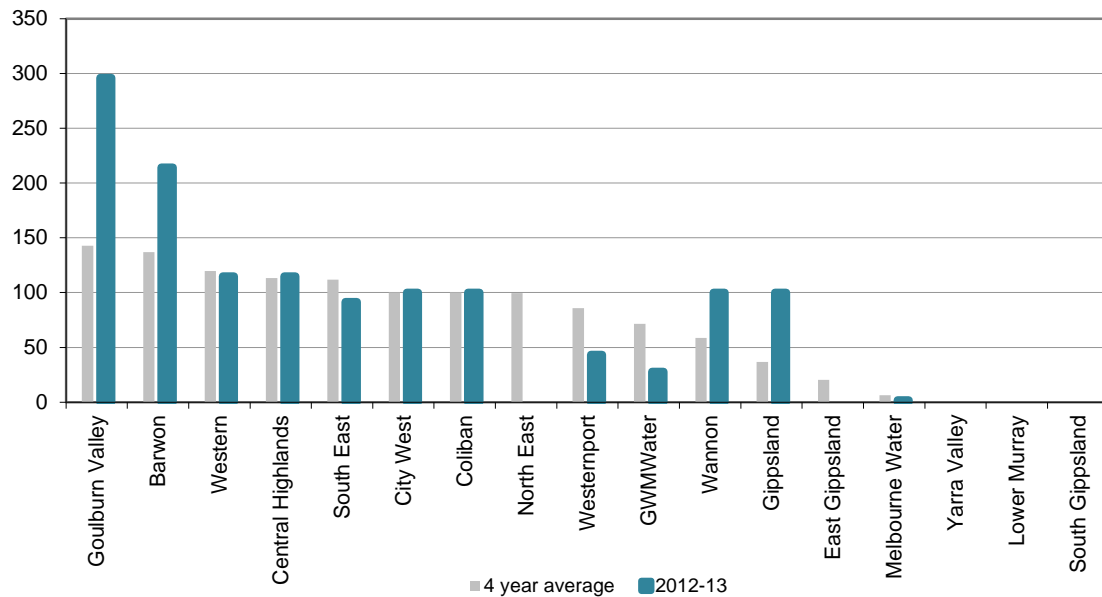
- Goulburn Valley Water effectively reused three years of biosolids production in 2012-13 (some 14 000 tonnes) as part of a project at Tatura, increasing biosolids reuse and clearing a backlog that accumulated over recent wet years.
- Barwon Water commissioned its new thermal drying biosolids plant at its Black Rock facility, which allowed it to start running down stockpiled biosolids. It processed 12 800 tonnes in 2012-13 (equivalent to two years of biosolids production).
- Central Highlands Water more than doubled its biosolids production (to 6000 tonnes) in 2012-13, by desludging the Ballarat South lagoon and by running down stockpiles.

One metropolitan business and seven regional businesses reused 100 per cent or more of their biosolids in 2012-13. Eight businesses have four year averages around 100 per cent or higher, suggesting these businesses fully reuse their generated biosolids, and run down some stockpiled material in several cases.

By contrast, Yarra Valley Water, East Gippsland Water, Lower Murray Water, North East Water and South Gippsland Water reported no biosolids reuse in 2012-13:

- North East Water's long term average shows full reuse of stockpiled biosolids.
- Yarra Valley Water is currently stockpiling material while investigating reuse opportunities for future development.
- East Gippsland Water has been beneficially reusing 100 per cent of its treated biosolids, but calculated sludge accumulating in treatment lagoons to report biosolids produced each year. Hence, the amount reused does not correlate with the reported amount produced. Ordinarily, biosolids would not be recorded as produced until they are removed from the lagoons for treatment.
- Lower Murray Water is stockpiling biosolids for three years before beneficial reuse (as required by the EPA). Its draft Biosolids Strategy for the EPA proposes an alternative treatment process for biosolids from the Koorlong Wastewater Treatment Plant so beneficial reuse may occur in less than three years.
- South Gippsland Water has been stockpiling at its biosolids management facility, which was recently upgraded to begin drying the biosolids this summer. The dried biosolids will then be stockpiled for three years before beneficial reuse (as required by the EPA).

**FIGURE 7.2 PROPORTION OF BIOSOLIDS REUSED**  
(per cent)



**Note:** The four year average refers to the proportions of biosolids reused between 2009-10 and 2012-13.

## 7.5 GREENHOUSE GAS EMISSIONS

Table 7.2 shows the net greenhouse gas emissions each business produced from 2009-10 to 2012-13 (after including any offsets the business claimed). The calculations for greenhouse gas emissions are based on the framework of the National Greenhouse and Energy Reporting Scheme (NGERS); Melbourne Water is the only business required to report to the Australian Government's Clean Energy Regulator.

Comparing different businesses' net carbon dioxide equivalent (CO<sub>2</sub>-e) emissions should be done cautiously given the differences in the nature of each operation, including:

- source of water
- gravity versus pumped networks
- geographical conditions (which influence pumping needs)

- the number of large customers and the extent of industry within the customer base
- the calculation method.

Similarly, variations in emissions per customer might reflect the differences between customer bases across businesses.

Net CO<sub>2</sub>-e emissions for Victorian urban water businesses were 765 300 tonnes in 2012-13, a 3 per cent decrease from 789 100 tonnes in 2011-12. The overall emissions per residential customer for all businesses in 2012-13 fell slightly to 0.34 tonnes from 0.36 tonnes in the previous two years. Metropolitan businesses increased slightly from 0.26 tonnes per residential customer in 2011-12 to 0.28 tonnes in 2012-13, while regional businesses averaged 0.52 tonnes per residential customer, down from the 0.63 tonnes reported in 2011-12.

With a relatively larger scale of operations, Melbourne Water remains the largest net CO<sub>2</sub>-e emitter and accounted for almost 50 per cent of the net total. The next largest was Goulburn Valley Water with 6 per cent of the total, closely followed by several other businesses. Goulburn Valley Water and North East Water had the highest level of emissions per customer with 0.96 tonnes and 0.93 tonnes respectively. Melbourne Water, City West Water and South East Water had the largest net emission increases over the year, while most of the remaining businesses maintained or lowered their emissions.

Barwon Water, Gippsland Water and Lower Murray Water reported the greatest reductions in net emissions:

- Barwon Water's new Black Rock thermal drying biosolids facility produces less emissions than the previous air drying process (which produced considerable methane emissions).
- Gippsland Water removed its emissions from biosolids and green waste composting activities from its greenhouse gas footprint this year because they are not reportable emissions for a water business under the national reporting framework.
- Lower Murray Water excluded emissions attributable to the rural component of its business. These emissions were previously included in the urban report, which double counted its national reporting.

**TABLE 7.2 HISTORIC NET GREENHOUSE GAS EMISSIONS**  
(equivalent tonnes of CO<sub>2</sub>)

	2009-10	2010-11	2011-12	2012-13	Percentage change	Per customer
Melbourne Water	351 071	371 760	361 288	378 785	+5	0.23
City West	2 388	-1 225	-1 651	9 841	-	0.03
South East	29 023	31 361	33 554	40 211	+20	0.06
Yarra Valley	27 077	29 041	28 361	29 512	+4	0.04
Barwon	52 348	57 170	56 422	37 960	-33	0.29
Central Highlands	51 251	18 782	14 797	14 567	-2	0.25
Coliban	51 396	32 674	33 126	33 017	-0	0.53
East Gippsland	8 846	8 687	8 378	8 442	+1	0.44
Gippsland	73 288	68 798	61 727	43 065	-30	0.72
Goulburn Valley	29 742	24 122	42 453	46 926	+11	0.96
GWMWater	19 031	15 590	10 778	11 966	+11	0.45
Lower Murray	21 007	22 820	34 922	11 166	-68	0.39
North East	36 587	35 671	38 432	39 637	+3	0.93
South Gippsland	13 209	12 560	8 154	7 550	-7	0.47
Wannon	30 734	28 578	33 753	30 714	-9	0.87
Western	20 846	21 620	17 287	15 644	-10	0.30
Westernport	4 317	4 344	7 315	6 259	-14	0.43
<b>TOTAL</b>	<b>822 160</b>	<b>782 354</b>	<b>789 096</b>	<b>765 262</b>	<b>-3</b>	<b>0.34</b>

**Note:** Emissions per customer for Melbourne Water is calculated using the total customers of City West Water, South East Water and Yarra Valley Water.

Table 7.3 shows the contributions to CO<sub>2</sub>-e emissions by each water business activity. Sewage treatment processes remain by far the biggest contributor of greenhouse gas emissions and accounted for 75 per cent of the gross emissions (that is, not including offsets) in 2012-13. This was followed by water treatment processes, responsible for 20 per cent of the gross total.

Three metropolitan and five regional businesses reported CO<sub>2</sub>-e emissions offsets for 2012-13. Reported offsets this year were well down on previous years, falling from 90 882 tonnes in 2011-12 to 21 891 tonnes in 2012-13. In particular, Melbourne Water reported only 508 tonnes of offsets this year, compared with 60 726 tonnes last year, and 79 275 in 2010-11. Melbourne Water did not surrender the offset credits from its own hydroelectric generation activities this year (as it did in previous years); nor did it surrender any other Renewable Energy Certificates it currently holds.

City West Water also reported a much lower offset figure this year, with only 2360 tonnes, compared with 14 608 tonnes in 2011-12 (which was higher than gross CO<sub>2</sub>-e emissions and resulted in a negative figure for net emissions last year. Following a change in policy, City West Water purchased Renewable Energy Certificates for its salt reduction plant energy requirements instead of carbon offsets to achieve its net zero greenhouse gas emissions target.

While the net emissions were down 3 per cent, actual gross emissions fell more than 10 per cent to 787 153 tonnes in 2012-13 from 879 978 in 2011-12. Melbourne Water recorded the largest fall in gross emissions (over 40 000 tonnes or about 10 per cent of the 2011-12 figure). However, this largely reflected changes in greenhouse emission accounting methodology under the NGERs framework. Barwon Water, Gippsland Water and Lower Murray Water also recorded significant falls (as described above).

**TABLE 7.3 SOURCES OF GREENHOUSE GAS EMISSIONS 2012-13**  
(equivalent tonnes of CO<sub>2</sub>)

	<b>Water</b>	<b>Sewerage</b>	<b>Transport</b>	<b>Other</b>	<b>Offsets</b>	<b>Total<sup>a</sup></b>
Melbourne Water	50 365	318 828	2 614	7 487	508	378 785
City West	274	8 668	1 265	1 994	2 360	9 841
South East	6 053	31 766	1 377	2 665	1 650	40 211
Yarra Valley	5 296	20 328	1 065	2 823	0	29 512
Barwon	5 400	28 690	1 438	2 433	0	37 960
Central Highlands	3 148	9 417	1 029	988	15	14 567
Coliban	6 802	24 470	946	799	0	33 017
East Gippsland	4 236	3 717	257	233	0	8 442
Gippsland	11 065	28 574	1 455	1 971	0	43 065
Goulburn Valley	15 429	30 889	1 177	73	642	46 926
GWMWater	6 301	5 843	1 181	644	2 004	11 966
Lower Murray	3 367	9 294	387	358	2 240	11 166
North East	9 243	28 389	890	1 115	0	39 637
South Gippsland	2 133	4 550	703	165	0	7 550
Wannon	13 808	15 371	832	703	0	30 714
Western	10 574	15 235	550	1 757	12 472	15 644
Westernport	1 832	3 779	216	432	0	6 259
<b>TOTAL</b>	<b>155 326</b>	<b>587 807</b>	<b>17 381</b>	<b>26 640</b>	<b>21 891</b>	<b>765 262</b>

<sup>a</sup> Total CO<sub>2</sub>-e emissions are net of offsets.

# 8 STATUS OF MAJOR PROJECTS

## 8.1 BACKGROUND

Table 8.3 describes the projects each business scheduled for completion in 2012-13, and their status. A large tick indicates the project was completed, while a small tick indicates the core elements were completed, effectively delivering the intended project outcome, but some residual work remained (for example, site restoration, or decommissioning redundant equipment). The table also lists projects that were to be completed before 2012-13, but were delayed for various reasons. The table includes original and new completion dates. Table 8.1 summarises the number of major projects for each business and their completion status.

As 2012-13 also marks the end of the second regulatory period (2008-09 to 2012-13), this year's report discusses capital expenditure across the period, and looks ahead to the third regulatory period (1 July 2013 to 30 June 2018). Table 8.2 summarises each business's achievements for the major capital projects listed in its price review determination for the second regulatory period.

## 8.2 CAPITAL EXPENDITURE IN 2012-13

In 2012-13, the Victorian urban water industry spent \$1.08 billion on capital works. Capital expenditure on water was \$545 million and on sewerage was \$534 million.

Water businesses identified 76 major projects to be completed in 2012-13, including those planned for completion in 2012-13 at the time of the last price review, and those delayed, rescheduled or outstanding from previous years. Businesses also included major projects that were not part of the price review decision; North East Water included two projects that were brought forward due to changing priorities — bringing the total to 78 projects. Over half (41) of these projects were completed when this



report was published. Of the remaining projects, 15 are underway but delayed; 17 were deferred into the third regulatory period or beyond; five were cancelled because needs or priorities changed, or could be met using a different approach.

Many of the project delays were caused by wet weather affecting construction. Some projects were also delayed by matters beyond the direct control of the water businesses, such as local government approvals or planning appeals. In some instances, businesses chose to defer a scheduled project when the circumstances driving the project changed, reprioritising resource allocation and avoiding unnecessary expenditure. Projects were also deferred if they were redefined or if the scope of works changed significantly.

For major projects in 2012-13:

- two businesses completed all the scheduled or previously overdue major projects on their lists
- 53 per cent of the listed projects were completed in 2012-13
- 19 per cent of the projects were delayed for various reasons, including:
  - wet weather impacts on construction
  - project scope and design issues
  - planning/permit requirements
- two businesses did not complete a major project this year — Lower Murray Water deferred both of its projects into the third regulatory period because demand was lower than planned; South Gippsland Water delayed two projects and deferred three into future regulatory periods
- Goulburn Valley Water previously completed all its scheduled major projects for the second regulatory period and had none due for 2012-13.

**TABLE 8.1 SUMMARY OF MAJOR PROJECTS 2012-13**

	<b>No. major projects (due and overdue)</b>	<b>Completed</b>	<b>Delayed</b>	<b>Deferred or ongoing into Water Plan 3</b>	<b>Suspended or cancelled</b>
Melbourne Water	2	2			
City West	4	1	1	2	
South East	3	2	1		
Yarra Valley	3	2		1	
Barwon	6	5	1		
Central Highlands	4	2	1	1	
Coliban	8	7	1		
East Gippsland	3	2		1	
Gippsland	5	2	1	2	
Goulburn Valley	0				
GWMWater	8	4	2	1	1
Lower Murray	3	1		2	
North East <sup>a</sup>	10	6	3		1
South Gippsland	5		2	3	
Wannon	6	3	2	1	
Western	1	1			
Westernport	7	1		3	3
<b>TOTAL</b>	<b>78</b>	<b>41</b>	<b>15</b>	<b>17</b>	<b>5</b>

<sup>a</sup> North East Water included two new projects that were not included in the 2008 Determination — these were brought forward due to changing priorities.

## 8.3 REGULATORY PERIOD 2 — MAJOR PROJECT OVERVIEW

Victoria's urban water businesses invested almost \$9.1 billion (\$2012-13) in capital expenditure across the five year regulatory period, 2008-09 to 2012-13. Total capital expenditure on water was \$4.1 billion and sewerage was \$3.8 billion, with \$0.4 billion on recycled water and \$0.7 billion on waterways and drainage by Melbourne Water.

Capital expenditure was considerably higher than historical levels across this period, reflecting the state's response to the prolonged 'Millennium Drought' and the severe water shortages experienced at the beginning of the regulatory period. Significant investment was necessary to augment existing water supplies and to secure alternative

water supplies where feasible. Actual and forecast capital expenditure across the three regulatory periods is shown in figure 8.1.

Each business's price determination for the second regulatory period listed the major capital projects it would undertake during the period, and the expected completion date. Customers' prices included recovering capital investment costs in accordance with this approved schedule. Therefore, water businesses must explain delays or alterations to these project schedules, because approved funds will flow in from pricing whether the expenditure was incurred or not.

Table 8.2 summarises each business's outcomes against its planned major capital projects over the period. The metropolitan business determinations were for four years, from 2009-10 to 2012-13.

**TABLE 8.2 SUMMARY OF MAJOR PROJECTS — REGULATORY PERIOD 2**  
(2008-09 to 2012-13)

	Major projects in RP2	Completed on time	Completed late	Underway rolled into RP3 period	Deferred to RP3 or beyond	Cancelled or suspended indefinitely
Melbourne Water	8	7	1			
City West	6	1	1	1	3	
South East	6	3	2	1		
Yarra Valley	5	2	2		1	
Barwon	7	5	1	1		
Central Highlands	6	4	1	1		
Coliban	10	5	4	1		
East Gippsland	5	2	2		1	
Gippsland	7	2	2	3		
Goulburn Valley	3	2	1			
GWMWater	12	4	4	3		1
Lower Murray	6		4		2	
North East	10	2	4	3		1
South Gippsland	7	1	1	2	3	
Wannon	10	5	2	2	1	
Western	4	2	2			
Westernport	8	1	1		3	3
<b>TOTAL</b>	<b>120</b>	<b>48</b>	<b>35</b>	<b>18</b>	<b>14</b>	<b>5</b>

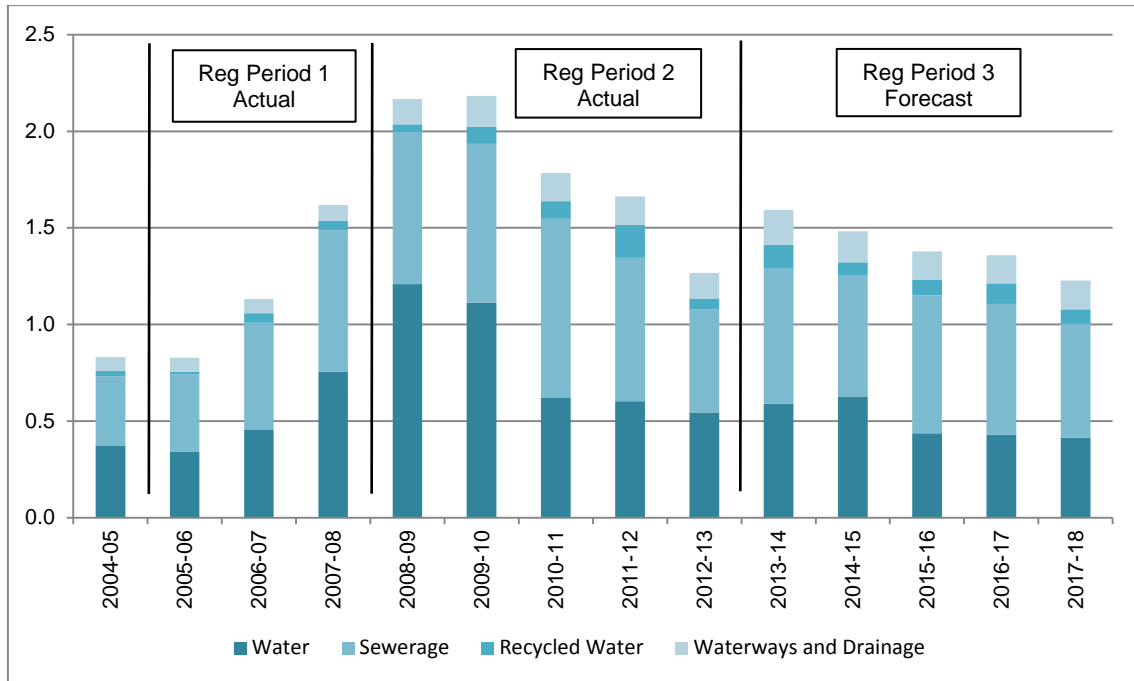
Of the 120 major projects scheduled for completion in the second regulatory period:

- 83 projects (69 per cent) were completed within the period — of these, only 48 (40 per cent) were completed on or ahead of schedule, with 35 (29 per cent) completed anywhere from one to four years late
- a further 18 projects commenced during the period, with works continuing into the third regulatory period
- 14 projects were deferred and rescheduled into the third regulatory period, or beyond
- five projects were considered no longer necessary and either cancelled or suspended indefinitely.

Only three businesses completed all of the scheduled projects within the period — Melbourne Water, Goulburn Valley Water and Western Water. Conversely, Westernport Water (2 of 8 projects), South Gippsland Water (2 of 7) and City West Water (2 of 6) had the lowest completion rates, with a number of projects delayed, deferred or cancelled.

Deferring or cancelling projects does not necessarily reflect poor project management, but may in fact show prudent investment decisions where priorities changed or the need for a particular project no longer exists. Water businesses may reinvest the available capital funds by bringing forward other pressing projects, or they may choose to return the unrequired funds to customers by lowering the approved prices.

**FIGURE 8.1 TOTAL CAPITAL EXPENDITURE**  
(\$billion, 2012-13)



## 8.4 REGULATORY PERIOD 3 — LOOKING AHEAD

The Commission recently completed the price review process for the third regulatory period, commencing July 2013 through to June 2018 for most businesses (some will have a shorter regulatory period). This included reviewing each business’s proposed capital expenditure forecast, assessing the prudence and efficiency of the various proposed major projects. Business cases were assessed, as was the proposed project timing to see if expenditure could be deferred into future regulatory periods.

Forecast capital expenditure for the third regulatory period is lower than that for the second regulatory period for almost all businesses. The Commission released its final decision in June 2013, including a schedule of major projects and completion dates in each business’s price determination (available on the Commission’s website at [www.esc.vig.gov.au](http://www.esc.vig.gov.au)). Businesses will again be stewarded against these schedules in

this annual performance report over the course of the third regulatory period, and this will be considered during the expenditure assessment process for the next Water Price Review.

**TABLE 8.3 STATUS OF PROJECTS NOMINATED FOR COMPLETION IN 2012-13**

<b>Project Description</b>	<b>Completion Date</b>	<b>Complete</b>	<b>Water business comments</b>
<b>Melbourne Water</b>			
Eastern Treatment Plant — implement a new nitrification/denitrification process	2009-10, delayed Completed: 2012-13	✓	The nitrification/denitrification process was implemented in the existing aeration basins at ETP in 2007. Additional aeration tanks were required to cater for load growth in the sewerage catchment. These additional tanks had defects that needed rectifying. The tanks are expected to be operational by the end of 2013.
Eastern Treatment Plant – Tertiary treatment	2012-13	✓	This project was completed on schedule at the end of 2012. All sewage at the ETP is now treated to tertiary level.
<b>City West Water</b>			
Derrimut interceptor sewer	2010-11, delayed Due: 2013-14		The project is forecast for completion in early 2014. The gravity section of the works was commissioned in 2011; the rising main was completed in late 2012. Pumping station works are scheduled to be commissioned in early 2014. The project was delayed by poor weather and by difficulties obtaining local government and third party approvals. Pumping station works were delayed further because City West Water directed the contractor to prioritise two other key operational projects it was delivering for City West Water at the same time. The project is expected to be delivered within budget.
West Werribee dual water supply scheme	2011-12, partially deferred Due: 2016-17		The project is expected to be operational in 2014. However full operation won't be achieved until 2016-17 because part of the works is coordinated with the Regional Rail Link project
Sayers Road to Dohertys Road — 1150mm water main	2011-12, delayed Completed: 2012-13	✓	The project was completed in March 2013. The project experienced delays in obtaining federal, state, local government approvals, along with other third party and property owner approvals.
West Werribee low level reservoir and Werribee West — 750mm inlet/outlet main	2011-12, partially deferred Due: 2016-17		The 'Werribee West — 750mm inlet/outlet main' project was incorporated into the West Werribee Low Level Reservoir project. The combined project will be significantly operational in 2014. However, it won't be fully operational until 2016-17 because part of the works is coordinated with the Regional Rail Link project.

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**TABLE 8.3 (CONT)**

Project Description	Completion Date	Complete	Water business comments
<b>South East Water</b>			
Upper Beaconsfield sewer backlog scheme	2011-12, delayed Completed: 2012-13	✓	This project was completed in 2012-13.
Mt Martha sewerage treatment plant upgrade	2012-13	✓	The project was completed in April 2013 and the plant was commissioned in September 2013, slightly ahead of program.
Sherbrooke sewer backlog scheme reticulation	2012-13, delayed Due: 2013-14		The Belgrave Heights stage of this project was completed in 2012-13. Reticulation construction is currently underway for the Belgrave/Selby stage, with a forecast completion in 2013-14.
<b>Yarra Valley Water</b>			
Epping–Craigieburn Sewerage Project — Section 1	2010-11, deferred to third and fourth regulatory periods		<p>This project (now called Epping Sewer Tunnel project) has been deferred to the third and fourth regulatory periods (the Commission’s Yarra Valley Water determination 1 July 2013 – 30 June 2018 specifies completion will be in 2020). This was possible because development rates in the Epping catchment (including the scope and timing of the new wholesale fruit and vegetable market and employment precinct around Cooper Street) were lower than expected. Full service requirements have been met for existing customers and the lower level of new customers in the area by using storage available in Epping Craigieburn Sections 2 and 3 to store flows during peak periods. A temporary sewage pumping station discharges this stored flow during off peak times to the existing sewer system. The deferral of capital projects, including the Epping Sewer Tunnel project, reduces the pressure on prices for all customers.</p> <p>Note: The Epping Branch Sewer Sections 2 and 3 project was delivered as two separate projects over the four years of the second regulatory period. The work was completed in early 2012-13.</p>
Wonga Park sewer backlog	2011-12, delayed Completed: 2012-13	✓	This project was completed in May 2013. This was 10 months behind schedule because it was unclear whether recycled water would be provided at the same time (using a common trench to reduce cost). Stakeholders raised the possibility of providing recycled water during consultation; it was resolved not to proceed, but the sewer works were delayed until it was decided. Excessive wet weather during 2011-12 further contributed to the delay. The scope of the project also expanded, when the City of Manningham requested an additional 11 lots (to bring the total to 631 lots).
Northern sewer project	2012-13	✓	The project was originally due to be completed in November 2012, but was commissioned early in March 2012. Only very minor restoration works were completed during 2012-13.

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**TABLE 8.3 (CONT)**

<b>Project Description</b>	<b>Completion Date</b>	<b>Complete</b>	<b>Water business comments</b>
<b>Barwon Water</b>			
Apollo Bay/Skenes Creek bulk water supply	2010-11, delayed Due: 2013-14		The project is currently under construction and is anticipated to be complete by early 2014.
Melbourne interconnector	2011-12, delayed Completed: 2012-13	✓	This project was completed on budget in December 2012.
Northern Water Reclamation Plant	2012-13	✓	This project was completed on budget and on time. It enables substitution of potable water with recycled water at the Geelong Refinery, reducing Geelong's potable water demand. It also delivers a key component of a strategy to address capacity constraints in the Geelong sewerage system.
Bellarine transfer main augmentation	2012-13	✓	This project is complete. It provides water supply capacity for significant development occurring at Armstrong Creek, Ocean Grove, Leopold and Clifton Springs.
BASIS billing system replacement	2012-13	✓	The project is complete and the new billing system went live in April 2013.
Leopold rising main No.1 replacement	2012-13	✓	The project is complete. It provides sewerage capacity to cater for the significant residential development occurring in Leopold and Clifton Springs.
<b>Central Highlands Water</b>			
Country Town Water and Sewerage Schemes	2010-11, delayed Completed: 2012-13	✓	The project to supply new sewerage services to the towns of Gordon, Smythesdale and Waubra was completed in early 2013.
Blackwood Sewerage	2010-11, deferred To be in WP4		Discussions about a cost effective solution for Blackwood are being undertaken with key stakeholders, including local Government, EPA Victoria, Department of Environment and Primary Industries and Department of Health. A revised solution is expected by late 2014. The price determination for the third regulatory period does not include a capital allowance for this project because the technical solution is not yet known. The project is likely to be completed during the fourth regulatory period.
Beaufort WWTP upgrade and reuse	2013-14	✓	The project to construct a new Wastewater Treatment Plant and Reuse facility in Beaufort was completed in early 2013.
Ballarat Sewer System Upgrade	2013-14, delayed Rolled into WP3 Due: 2015-16		This is an Inflow/Infiltration Reduction Project which commences during 2013-14 and will continue for three years to address issues with the Ballarat South Outfall Sewer network.

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**TABLE 8.3 (CONT)**

<b>Project Description</b>	<b>Completion Date</b>	<b>Complete</b>	<b>Water business comments</b>
<b>Coliban Water</b>			
Leitchville and Gunbower water treatment plant	2009-10, delayed Due: 2012-13 for Leitchville	✓	Construction and commissioning for the Leitchville and Gunbower WTPs is now complete. Both plants are operational. Minor works are required to rectify issues at Leitchville's Clear Water Storage Tank.
Recycled Water scheme	2011-12, delayed Completed: 2012-13	✓	Further recycled water augmentation occurred during 2012-13 in serviced areas around Bendigo.
Pipelines for potable supply — Bridgewater, Raywood, Sebastian and Goornong	2011-12, delayed Completed: 2012-13	✓	The potable water pipeline from Bendigo to Raywood/Sebastian is complete. Goornong's water quality improved without connecting to Bendigo's potable network.
Rural channel system configuration	2012-13, ongoing Rolled into WP3 Due: 2014-15		The Harcourt Rural Modernisation Project commenced in 2012-13, and continues into the third regulatory period, with works to be completed during 2014-15.
Sewer improvement strategy	2012-13	✓	The jetting and maintenance program improved the level of service to customers.
Sewer improvement strategy — Echuca trunk and reticulation mains	2012-13	✓	The jetting and maintenance program improved the level of service to customers.
Water augmentation for 2013 demand	2012-13	✓	Over the course of the second regulatory period Coliban Water purchased 20 gigalitres of permanent water entitlement.
Sewer pump stations	2012-13	✓	Upgrading several sewer pump stations in Echuca reduced the number of sewer spills.

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**TABLE 8.3 (CONT)**

<b>Project Description</b>	<b>Completion Date</b>	<b>Complete</b>	<b>Water business comments</b>
<b>East Gippsland Water</b>			
Mitchell River Water Supply Strategy Works	2012-13	✓	The \$20 million program was delivered on time and budget. The project delivered a new 20 megalitre/day water treatment plant, 800 megalitre water storage, and multiple pipe upgrades and storage covers. Customers in the Mitchell water district (81 per cent of customers) now have fully treated water, reducing the water quality risk and water shortage risk for East Gippsland Water.
Kalimna West Water Supply	2012-13	✓	This project was completed as part of the above Supply Strategy Works project.
Bairnsdale Wastewater Treatment Plant	2012-13, deferred Rolled into WP3 Due: 2015-16		The original project was deferred while a larger project scope was developed. The project (now included in the third regulatory period) is expected to be completed in 2015-16.
<b>Gippsland Water</b>			
Drouin Waste Water Treatment Plant Upgrade	2011-12, delayed Rolled into WP3 Due: 2015-16		Construction works for the initial trial were completed in 2011-12 with works delayed by extended wet weather. Provision was made in the third regulatory period for the project to be completed in 2015-16.
Loch Sport Sewer Project	2012-13, ongoing Rolled into WP3 Due: 2015-16		The project planning and design is complete and construction commenced in early 2013. All key construction contracts were in place as at October 2013 and the project is on target to be completed and ready for service in 2015-16 as scheduled, and as approved in the recent 2013 Price Review Final Decision for the third regulatory period.
Coongulla Waste System Project	2012-13	✓	The project was completed on schedule mid-2013 and the sewer district was declared serviced. The scheme has been operational since mid-2013 and around 50 per cent of the residents have connected to the scheme.
Glenmaggie Waste System Project	Post 2012-13	✓	Refer to comments for Coongulla Waste system project – these projects were combined from a project delivery perspective.
Warragul Moe Interconnection Project	Post 2012-13		Stage 1 of the construction works was completed during the second regulatory period. Stage 2 commenced in line with plan expectations. Gippsland Water expects to complete stage 2 construction works during the third regulatory period.

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**TABLE 8.3 (CONT)**

Project Description	Completion Date	Complete	Water business comments
<b>Goulburn Valley Water</b>			
Nil major projects			NOTE: Goulburn Valley Water had no major projects scheduled for completion in 2012-13, and no overdue projects carried over from previous years.
<b>GWMWater</b>			
St Arnaud Waste Water Treatment Plant upgrade	2010-11, delayed Completed: 2012-13	✓	The project to upgrade the treatment plant was completed in December 2012.
Edenhope water supply security	2009-10, delayed Completed: 2012-13	✓	Bores and interconnecting pipelines were completed in 2010-11. Some minor works at the water treatment plant were completed in 2012-13.
Stawell Waste Water Treatment Plant	2011-12, delayed Completed: 2012-13	✓	Refurbishment works on the treatment plant achieved practical completion in January 2013.
Dam safety works at Lake Lonsdale	2011-12, suspended Not currently required		Works at Lake Lonsdale were deferred following a detailed technical assessment that assessed these structures as being low risk. These works will only be advanced if the risk status changes for these structures.
Nhill Treated water supply	2012-13, delayed Due: 2013-14		This project is well advanced to be completed in early 2013-14.
Rupanyup Sewerage Scheme	2012-13 Rolled into WP3 Due: 2014-15		Project delivery options were reviewed in 2012-13, and the project was rolled over into the third regulatory period. Construction is to commence in 2013-14, for completion in 2014-15.
SCADA System Improvements	2012-13	✓	The system provides remote telemetry access to monitor and operate sites centrally through the operations management centre.
Jeparit treated water supply	2012-13, delayed Due: 2013-14		Project delivery options were reviewed in 2012-13. Construction is to commence in 2013-14 for completion by mid-2014.

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**TABLE 8.3 (CONT)**

<b>Project Description</b>	<b>Completion Date</b>	<b>Complete</b>	<b>Water business comments</b>
<b>Lower Murray Water</b>			
Kerang Waste Water Treatment Plant	2008-09, delayed Completed: 2012-13	✓	This project to line the treatment plant lagoons incurred initial delays for discussions and subsequent approval from EPA Victoria. The project then needed to proceed in two stages to allow the plant to remain operational while the work was done. The project was completed in June 2013.
Mildura Trunk Extension	2012-13, deferred Due: 2014-15		The project was deferred because demand was lower than planned. The project is now in design phase with expected completion in late 2014-15.
Relocation of 14th Street Tower	2012-13, deferred Due: 2018-19		The project was deferred because demand was lower than planned. The project is now due to start in 2017-18 with expected completion in 2018-19.
<b>North East Water</b>			
Bright/Porepunkah Off Stream Storage	2010-11, delayed Rolled into WP3 Due: 2013-14		This project was put on hold in January 2011, following the Minister’s request for a review of the site selection process. North East Water issued a report in February 2011 and the Minister decided in late September 2011 to allow the project to progress through to the planning stage. Contracts for the Bright Transfer Main and Off stream storage were awarded in June 2013 and September 2013 respectively and are now in the implementation stage. This project, now called 'Bright Off stream Storage', was rolled into the third regulatory period with expected completion in 2013-14.
Leneva Trunk Sewer	2010-11, deferred indefinitely		Project design plans were completed however construction work was deferred indefinitely because the Wodonga Council’s focus moved away from this currently undeveloped residential growth corridor to other areas. The expected completion date is therefore unknown.
Loombah Dam Improvements	2010-11, delayed Completed: 2012-13	✓	Construction of the spillway and associated works at Loombah Dam commenced in 2012. The project’s construction works were completed in June 2013.
Regional Headquarters	2009-10, delayed Completed: 2012-2013	✓	The Regional Headquarters construction contract was awarded in October 2012 with a projected construction period of 12 months. The project was completed in October 2013.
Beechworth Sewage Treatment Plant Upgrade	2009-10, delayed Completed: 2012-13	✓	Designs and approvals were completed for this project. Innovative fixed film technology was selected based upon value engineering principles. Construction commenced in late 2012 with final completion for the project in June 2013.

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**TABLE 8.3 (CONT)**

<b>Project Description</b>	<b>Completion Date</b>	<b>Complete</b>	<b>Water business comments</b>
North Wangaratta Reclaimed Water	2011-12, delayed Due: June 2014		A new winter storage is to be constructed in North Wangaratta to alleviate capacity limitations of the existing infrastructure. Designs and approvals were completed with a construction contract awarded in November 2012. Construction of 300 megalitre winter storage, pump line and pump station was completed in 4 <sup>th</sup> quarter 2012-13, essentially completing the core component of the project. The irrigation component is currently under construction and expected to be completed by June 2014.
Corryong Water Treatment Plant	2011-12, delayed Completed: 2012-13	✓	Construction of the water treatment plant commenced in March 2012. The project was completed in March 2013.
Bright/Porepunkah water treatment (Now known as the 'Bright water treatment plant' project)	2010-11, delayed Rolled into WP3 Due: 2015-16		This project incurred significant delays associated with the Bright Off stream Storage project delays. This project was renamed the Bright Water Treatment Plant Upgrade project and is included in the third regulatory period, with expected completion in 2017-18. The water treatment plant and clear water storage projects are now in their final stages of initial system definition and tracking to the new schedule. The project was brought forward, with anticipated completion in 2015-16.
Bundalong — Augment Water Supply	Brought forward Completed 2012-13	✓	This project was completed in February 2013. It was not included in the project schedule for the second regulatory period, but was brought forward as priorities changed.
Whitfield Water Quality Upgrade	Brought forward Completed 2012-13	✓	This project was completed in December 2012. It was not included in the project schedule for the second regulatory period, but was brought forward as priorities changed.
<b>South Gippsland Water</b>			
Coalition Creek Dams Risk	2008-09, deferred to WP4		South Gippsland Water had an external consultant assess all dam safety risks and related costs. A 10 year strategy was developed, with minor dam safety works and an increased monitoring regime put in place in the interim. This project depends on the outcome of the major Northern Towns Strategy project, and will be reassessed for the fourth regulatory period.
Wonthaggi Wastewater Strategy Works	2011-12, delayed Due: 2013-2014		Installation of probiotics low energy aeration system in the lead lagoon was completed in February 2011. South Gippsland Water will construct a sludge drying pan and purchase mechanical sludge removal equipment to effectively remove sludge from existing Wonthaggi Wastewater Treatment Plant lagoons. This part of the project incurred delays in acquiring Crown land for the new facilities in 2011-12, and was also delayed by wet weather throughout 2012-13. The project is now underway again, and is expected to be completed by June 2014.

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**TABLE 8.3 (CONT)**

<b>Project Description</b>	<b>Completion Date</b>	<b>Complete</b>	<b>Water business comments</b>
Agnes River Augmentation — Construction of Off Stream Storage (Replaced with Central Towns strategy)	2011-12, different solution adopted Deferred to WP3 Due: 2015-2016		In accordance with the Water Supply Demand Strategy, South Gippsland Water will link Fish Creek, Foster and Toora (Agnes River) water supply systems as part of the Central Towns Upgrades project. This new project is included in the third regulatory period, due for completion in 2015-16, and effectively negates the need for this existing project.
Poowong/Loch/Nyora Sewerage Scheme	2012-13, delayed Rolled into WP3 Due: 2017-18		This mandatory project has been in development over a number of years, as various solutions were investigated and costed. This is now South Gippsland Water's major capital project for the third regulatory period, with completion expected in 2017.
Battery Creek Dams Risk	2012-13 Deferred to WP4		South Gippsland Water had an external consultant assess all dam safety risks and related costs. A 10 year strategy was developed, with minor dam safety works and an increased monitoring regime put in place in the interim. This project depends on the outcome of the major Northern Towns Strategy project, and will be reassessed for the fourth regulatory period.
<b>Wannon Water</b>			
Upgrade Portland Water Reclamation Plant	2010-11, delayed Completed: 2012-13	✓	This project is complete. Construction and commissioning of the plant was completed in November 2013. Construction was initially delayed by permit issues, followed by wet weather impacts once construction started.
West Portland Sewerage Services	2008-09, delayed Due: January 2014		Construction of the project is currently suspended due to wet weather and will recommence when weather conditions permit.
Water Recycling at Warrnambool Water Reclamation Plant	2011-12, delayed Completed: 2012-13	✓	This project is complete. 200 megalitres per year of potable water has now been replaced with recycled water. This project originally depended on another project that was deferred for some years. The water recycling project was rescope and redesigned to account for the changed circumstances, delaying the project.
Dutton Way Sewerage and Water Services	2012-13, delayed Due: January 2014		Construction is nearing completion with an odour control system expected to be installed by 31 December 2013. Commissioning will occur after this. Initial delays were caused by hard rock encountered on the rising main installation and in obtaining cultural heritage approval.
Warrnambool Water Reclamation Plant Upgrade	2012-13 Deferred to WP4		A number of process improvements, as well as the Warrnambool Water Reclamation Plant Water Recycling project, described above, pushed back the need to upgrade the plant's capacity. This project was deferred to the fourth regulatory period.
Camperdown Water Mains Replacement	2012-13	✓	This project is complete.

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**TABLE 8.3 (CONT)**

<b>Project Description</b>	<b>Completion Date</b>	<b>Complete</b>	<b>Water business comments</b>
<b>Western Water</b>			
Bacchus Marsh Recycled Water Plant	2011-12, delayed Completed: 2012-13	✓	Works include new inlet works and a sludge treatment facility. This project was originally scheduled to align with population growth estimates in the Bacchus Marsh area during the second regulatory period. It was delayed when capital works were reprioritised to service growth across Western Water. It was completed in May 2013.
<b>Westernport Water</b>			
Bass River Augmentation	2009-10, suspended Not currently required		The 2011 update of the Water Supply and Demand Strategy, the Candowie upgrade project and the interconnection with the Metro Pool determined this project may not be required until post-2035.
Bass River Pipeline extension to Ian Bartlett Water Treatment Plant	2009-10 Deferred to WP4 or WP5		This project is to be reviewed after upgrading the Candowie Reservoir. It will be considered for the fourth or fifth regulatory periods.
Water quality improvement	2011-12, deferred Rolled into WP3 Due: 2015-16		A functional design for an ultra violet tertiary treatment addition to the Ian Bartlett Water Purification Plant is complete. This project was included in the third regulatory period, with completion due in 2015-16.
Cowes Basin Reactivation	2011-12, deleted Project cancelled		This project will not proceed. The Under-Channel pipeline secured an independent means of providing water to Phillip Island.
Cowes Waste Water Treatment Plant Stage 3 upgrade	2011-12 Amended and deferred to WP3 and into WP4 Due: post-2020		The required upgrades to the Cowes waste water treatment plant were reviewed during the second regulatory period. An updated strategy (Upgrade Strategy 2012 – 2021) was developed and used as the basis for the third regulatory period. The project works will continue into the fourth regulatory period, with expected completion beyond 2020.
Raising of Candowie Reservoir	2012-13	✓	This project was successfully completed in June 2013, effectively doubling the capacity of the reservoir and securing water supply to 2050.
Land purchases (Candowie catchment)	2012-13, deleted Project cancelled		Purchases in the Candowie catchment were not pursued. No land became opportunistically available. Separate land purchases directly around the Candowie Reservoir were purchased as part of the Raising of Candowie Reservoir project.



