ESSENTIAL SERVICES COMMISSION

WATER PERFORMANCE REPORT

PERFORMANCE OF URBAN WATER AND SEWERAGE BUSINESSES 2009-10

DECEMBER 2010

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CHAIRPERSON'S INTRODUCTION

At a recent water industry conference I took a straw poll that indicated that 90 per cent of water business representatives rated their business's overall performance as excellent or above average, a result that is mathematically highly improbable.

This reinforced for me the need for objective, transparent and accessible reporting on business performance. This year's report represents the first step to making our performance reporting better meet the needs of the reader — be they a customer, a board member or a manager in a water authority, or a media commentator.

This year's report represents the Commission's first step in changing its performance reporting to better meet the changing needs of the community

The Commission is committed to preparing performance reports that provide reliable and consistent information that can be used to inform community discussion, identify shifts in performance outcomes and invite comparison between businesses.

I am therefore pleased that the release of this year's report is nearly five months earlier than the 2008-09 performance report.

Our report for 2009-10 comprises a suite of performance reporting documents to make the information more accessible to different audiences. Published documents now include a summary for each business, an industry summary, a detailed performance report and data spreadsheets with all reported information (for those who wish to interrogate the data further).

In conjunction with the performance report we have released an online estimator allowing consumers to estimate their current household bills.

While changes to the performance report in 2009-10 represent a first step, we will continue to enhance our performance reporting over time. We will question what we measure and report on, how performance reporting can support innovation in the water industry and what further commentary we can make in relation to individual water authorities and the industry as a whole.

Open and transparent scrutiny via public performance reporting is one of the most important ways in which the community can be informed about value for money. I welcome any feedback readers may want to offer on the improvements we have made in this year's annual performance report for the urban water and sewerage businesses.

Dr Ron Ben-David
Chairperson

EXECUTIVE SUMMARY

This is the sixth 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, 3 metropolitan retailers and Melbourne Water for the 12 months to June 2010.

The aim of this report is to stimulate 'competition by comparison' among the urban water businesses and inform customers about the level of service they receive.

Household bills

Average annual household bills in 2009-10 were higher than 2008-09 in real terms for all water businesses. The household bills for owner-occupiers ranged from $597 to $1049, with the lowest average water bills reported by the metropolitan businesses.

For tenants who are not billed fixed charges, average household bills ranged between $91 and $333 in 2009-10.

Household consumption

Average annual household consumption per household across Victoria fell from 157 kL in 2008-09 to 152 kL in 2009-10. Increases in consumption were evident for Lower Murray Water, GWMWater and Central Highlands Water where water restrictions were eased.

Dealing with hardship

The rate of domestic instalment plans across all water businesses increased slightly from 5.6 per 100 customers in 2008-09 to 5.7 in 2009-10.

In 2009-10 3236 domestic customers (including 555 on concession) had their water supply restricted for non-payment of water bills. This represented an increase of 203 customers from 2008-09.

Legal actions against domestic customers decreased from 939 in 2008-09 to 684 in 2009-10.

Customer complaints

In 2009-10, Energy and Water Ombudsman Victoria received 1449 complaints and 151 enquiries in relation to the metropolitan and regional urban businesses, compared to 1215 complaints and 137 enquiries in 2008-09.

Businesses reported to the Commission that they received a total of 13 545 complaints, representing a 6.0 per cent increase from 2008-09. This equates to a rate of 0.58 complaints per 100 customers across the state.

Network reliability

Overall reliability measured by the customer minutes off supply improved from 31 minutes in 2008-09 to 28 minutes in 2009-10.

The rate of bursts and leaks for water mains fell from 44 per 100 km in 2008-09 to 36 in 2009-10. This improvement is due in part to increased rainfall and a milder summer than for previous years, resulting in reduced soil movement and less pipe damage.

The rate of sewer blockages decreased from 26.0 blockages per 100km of sewer main in 2008-09 to 24.8 in 2009-10. As with water mains the reduction is likely due to less soil movement due to climatic conditions.

Most businesses contained all (or almost all) sewer spills within 5 hours, with the industry average performance being 99.9 per cent. Twelve businesses contained 100 per cent of sewer spills within five hours.

Water quality

All urban water businesses delivered water to customers that met *E. coli* requirements set out in the *Safe Drinking Water Regulations (2005)*.

All urban water businesses, with the exception of GWMWater (98.6%), delivered water that met the turbidity requirements set out in the *Safe Drinking Water Regulations*.

Water quality complaints have trended down over time from 0.37 complaints per 100 customers in 2005-06 to a rate of 0.29 in 2009-10.

Environmental performance

The total volume of sewage treated in Victorian 2009-10 was 416 593 ML. This marks a rise in annual total sewer volume, after four years of decline, of 3.9 per cent (400 968 ML in 2008-09).

Across Victoria 28.8 per cent of all effluent was recycled in 2009-10, a reduction on the 30.6 per cent recorded in 2008-09. This percentage fall was uniform across regional Victoria and metropolitan Melbourne (34.1 from 35.9 in the former, 27.1 from 28.9 in the latter).

Total net CO_2-e emissions reported by the Victorian urban water businesses in 2009-10 was 822 200 equivalent tonnes, a reduction on the 862 200 tonnes reported in 2008-09.

Major projects

Water businesses also undertook a significant amount of capital works during 2009-10 with expenditure of $1.74 billion during the year.

Twenty-nine major projects had been identified for completion in 2009-10 — these were either initially scheduled for this year in the last price review, or delayed from 2008-09. Only six of these 29 projects were completed in 2009-10, with a further six substantially completed. The remaining 17 projects either continue into next year or have been deferred.

The Commission remains concerned with these delays to major projects, especially where the project's funding has been incorporated into current pricing or where customers are awaiting the improved services these projects will deliver.

1 WHY WE DO THIS

1.1 The Commission's role

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

The Commission's public monitoring and reporting role 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 businesses to improve their own performance over time
- allow comparisons to be made between businesses and thereby facilitate competition by comparison which can encourage businesses to further improve their performance relative to others, and
- inform the decision making processes of regulated businesses, regulatory agencies and Government.

The Commission also reports on the performance of the energy retail businesses in Victoria. Experience gained through reporting across both the energy and water sectors suggests that public disclosure and reporting of performance can be a strong driver for performance improvement.

This is the Commission's sixth annual report on the performance of all of the Victorian urban water businesses, which commenced for the 2004-05 period. Performance reporting from 1995 through to 2004 was undertaken 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, GWMWater, Lower Murray Water, North East Water, South Gippsland Water, Wannon Water, Western Water and Westernport Water and
- Melbourne Water — the supplier of bulk water and sewerage services to the metropolitan retailers (and a number of regional water businesses).

The Commission is required to monitor and publicly report on the water sector

This report covers the businesses' performance over the 2009-10 financial year across key performance indicators developed in consultation with the businesses and a range of other stakeholders. The data provided by the businesses has been independently audited to provide assurance that it is accurate and reliable. The businesses have also been provided with an opportunity to comment on the reasons for their performance.

1.2 The scope of this report

This report focuses on indicators in a number of key performance areas including:

- **affordability** — including the size of household bills, consumption levels, and the management of non-payment of bills and customers facing hardship
- **customer responsiveness and service** — including customer complaints and call centre performance
- **network reliability and efficiency** — providing information on 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 discharge compliance with Environment Protection Authority (EPA) licences for sewage treatment plants, levels of effluent and biosolid reuse and recycling and greenhouse gas emissions
- **historical performance** — including comparisons for all indicators and businesses with previous year's data.

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 not responsible for regulating or driving performance in the areas of water conservation, the environment and water quality. For example, the Environment Protection Authority is responsible for regulation of environmental standards and the Department of Health is responsible for drinking water quality standards.

The customer service code is published on the Commission's website

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

- A Customer Service Code that imposes a consistent overarching framework for the delivery of services to both metropolitan and regional urban customers. The Code sets out service obligations for key matters including connection and service provision, charges, handling of complaints and disputes, billing, payment of bills, collection of outstanding bills, actions for non-payment, quality of supply, reliability of supply, disconnection, meters, works and maintenance, information and administrative arrangements for guaranteed service levels.

- 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 faced by each business and allows customers to express their preferences for the level of service for which they are prepared to pay. These service targets provide an important reference point for monitoring the businesses' performance over the regulatory period.

- A requirement that each business maintain a Customer Charter that informs customers about the services that it offers, the respective rights and responsibilities of the business and its customers, and the service standards that 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 on a regular basis and by responding to and following up on issues or concerns raised by customers or other stakeholders about compliance matters.

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 provided by the businesses explaining their performance, and

- the findings of regulatory audits on the reliability of the performance indicator data reported by the businesses.

The Commission undertakes regulatory audits to ensure the integrity of the reported performance data

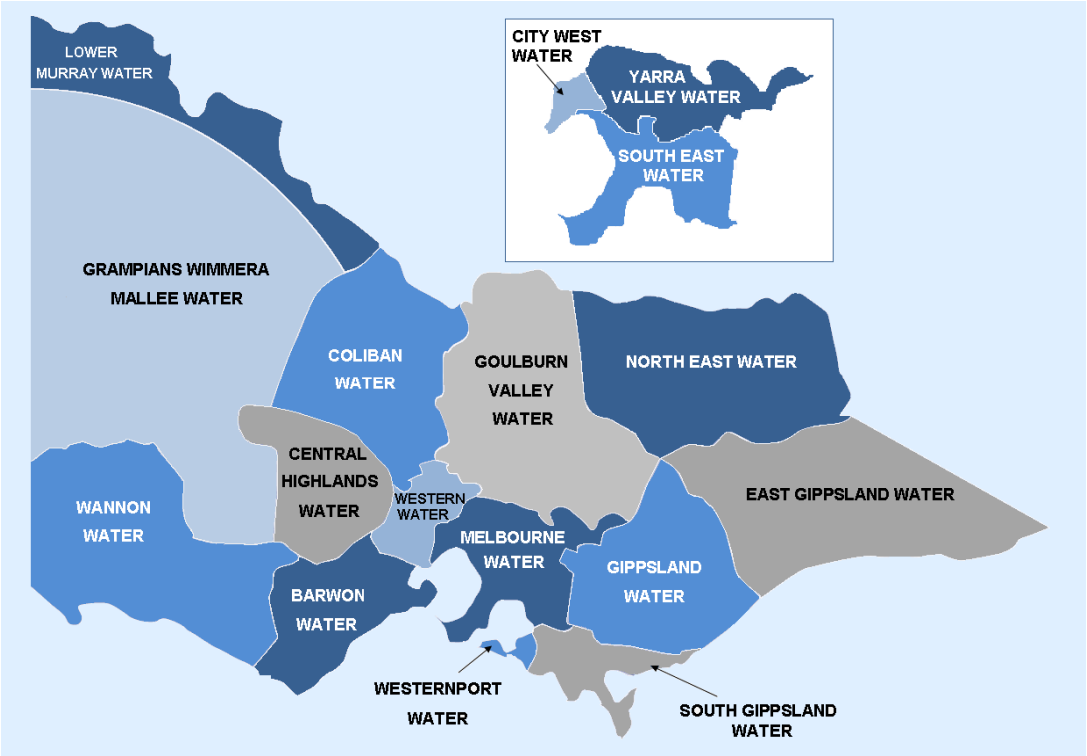
2 OVERVIEW OF THE WATER INDUSTRY

The Victorian water businesses are diverse in terms of size, the services they provide and the environments in which they operate. The Commission takes this diversity into account in developing its regulatory approach.

The three key components of the water sector that 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, GWMWater, Lower Murray Water, North East Water, South Gippsland Water, Wannon Water, Western Water, Westernport Water, and
- the rural water sector comprising Goulburn Murray Water and Southern Rural Water. GWMWater and Lower Murray Water provide rural water services in addition to urban water services.

Figure 1.1 Victorian water businesses 2009-10



2.1 Metropolitan businesses

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

- harvesting, storage and treatment of raw water supplies
- transmission of bulk water supplies
- the operation of the bulk sewerage service and treatment of the majority of sewage, and
- 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 over 1.6 million customers. This represents over 70 per cent of the state's population and accounts for around 10 per cent of total 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 complaints. The retailers also bill metropolitan customers for drainage services on behalf of Melbourne Water and parks charges for Parks Victoria.
- 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.

Victoria's 16 urban water businesses serviced 2.1 million customers using 43 500 km of water mains and 34 800 km of sewer main.

Table 2.1 Metropolitan water businesses — overview

	Water customers	*Sewerage Customers*	*Length of water main (km)*	*Length of sewer main (km)*
City West	356 845	353 411	4 431	3 909
South East	647 375	613 099	8 748	8 282
Yarra Valley	681 409	629 779	9 391	8 887
Melbourne Water	na	na	1 276	335

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 and their customers are generally dispersed across broader geographical regions. Water use in regional urban areas accounts for about 9 per cent of total 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

	Water customers	*Sewerage customers*	*Length of water main (km)*	*Length of sewer main (km)*
Barwon	134 118	120 613	3 614	2 303
Central Highlands	60 470	50 823	2 325	1 236
Coliban	67 034	57 917	2 137	1 763
East Gippsland	21 095	17 589	888	593
Gippsland	62 417	53 492	2 030	1 549
Goulburn Valley	52 929	46 378	1 739	1 194
GWMWater	30 951	24 930	1 034	641
Lower Murray	31 134	26 767	903	627
North East	45 468	39 864	1 643	1 078
South Gippsland	18 272	15 331	686	404
Wannon	40 074	33 746	1 767	884
Western	51 567	45 527	1 741	1 086
Westernport	14 808	13 438	382	363

3 AFFORDABILITY

3.1 Background

Affordability of water, sewerage and other related services is a key indicator of performance for customers. The affordability of water and sewerage services 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 State Government
- whether businesses use restrictions for non-payment or take legal action against customers who are experiencing payment difficulties.

The Commission is responsible for approving urban water and sewerage, rural water and other prescribed prices. In June 2008 the Commission approved prices for regional and rural businesses for a five year regulatory period from 2008-09 to 2012-13 and metropolitan prices for 2008-09 for the three metropolitan retailers and Melbourne. The Commission approved prices in June 2009 for the remaining four years of the regulatory period from 2009-10 to 2012-13.

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

The Commission's customer service code includes specified standards and conditions for payments, collections and actions for non-payment, with which the Victorian urban water businesses must comply.

This section reports the:

- impact of price changes on households between 1 July 2009 and 30 June 2010
- number of customers on instalment payment plans
- number of customers receiving government assistance through concession payments and the Utility Relief Grants Scheme operated by the State Government
- number of restrictions and legal actions for non-payment and the average debt levels at the time such action is taken and
- number of hardship grants applied for and awarded by water businesses.

3.2 Prices and charges

Analysis of water price movements provides an important perspective on trends in the affordability of water and sewerage services. Increasingly, customers are being given greater control over the size of their water bill through pricing structures that collect more revenue from water (and sometimes sewage) usage charges.

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. Not all businesses have a usage based charge for 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, to provide additional incentives for customers to reduce their discretionary water use. The water businesses charging an inclining block tariff structure in 2009-10 were City West Water, South East Water, Yarra Valley Water, Central Highlands Water, Coliban Water, Lower Murray Water, Wannon Water, Western Water and Westernport Water. All other urban water service providers have flat variable water usage charges.

3.3 Average annual household consumption

A greater emphasis by businesses on usage based charges means that trends in consumption are increasingly important in calculating average bills and assessing affordability. Consumption patterns differ throughout the State for a number of reasons including climate, demographics and water restrictions.

Average annual household consumption across Victoria fell from 157 kL in 2008-09 to 152 kL in 2009-10[1]. Consumption has fallen over the last five years due to water restrictions affecting much of the population, in 2005-06 average household consumption was 204 kL.

Generally, average household consumption was higher in regional Victoria, at 180 kL per household (down from 184 kL in 2008-09), than metropolitan Melbourne where average household consumption was 142 kL (down from 147 kL).

Average household consumption ranged from 71 kL for Westernport Water's region with a large seasonal population, to 411 kL in Lower Murray Water's region in the north west of the State (figure 3.1). Average consumption in Melbourne was consistent across the three businesses, with 140 kL for City West Water customers, 141 kL for South East Water and 144 kL for Yarra Valley Water.

GWMWater and Lower Murray Water saw average household consumption increase from 2008-09 levels by 13 per cent and 8 percent respectively. Central Highlands Water experienced a minor increase of 1 per cent on 2008-09 levels. All other businesses observed a decline in consumption.

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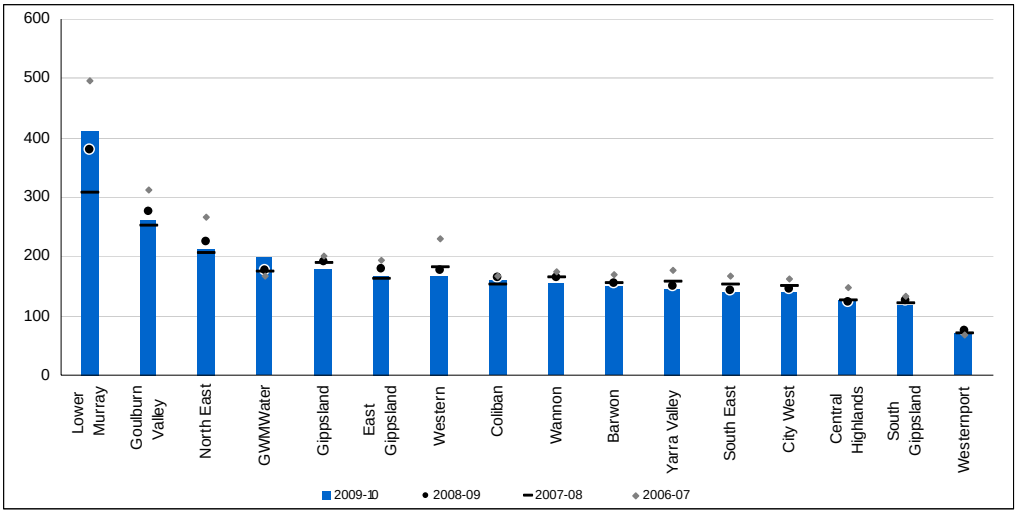
[1] The Commission reports on annual household consumption and not litres per person per day as used by metropolitan Target 155 program.

GWMWater and Lower Murray Water both identified the ability for customers to use more water due to significant easing of water restrictions as the major factor increasing household consumption in 2009-10. GWMWater eased restrictions from stage 4 to stage 1 in October 2009 due to the benefits of the Grampians Wimmera Mallee Pipeline and a recovery in storage levels. Lower Murray Water was able to ease restrictions in November 2009 from stage 3 to stage 1. The Commission has noted that Central Highlands Water also eased restrictions from stage 4 (with exemptions) to stage 3 in January 2010.

Figure 3.1 Average annual household consumption
(kL per household)



3.4 Average household bills

The average household bills for water and sewerage services shown in figure 3.2 have been calculated using the average consumption shown in figure 3.1 and include both the fixed and variable water and sewerage charges. Metropolitan customers are also billed drainage charges on behalf of Melbourne Water, and parks charges on behalf of the Minister for Water. In regions with multiple pricing zones, the prices in the largest town have been used to calculate the average household bill for the business.

Overall the average household bills in 2009-10 were higher than 2008-09 in real terms. The average household bill ranged from $597 to $1049, with:

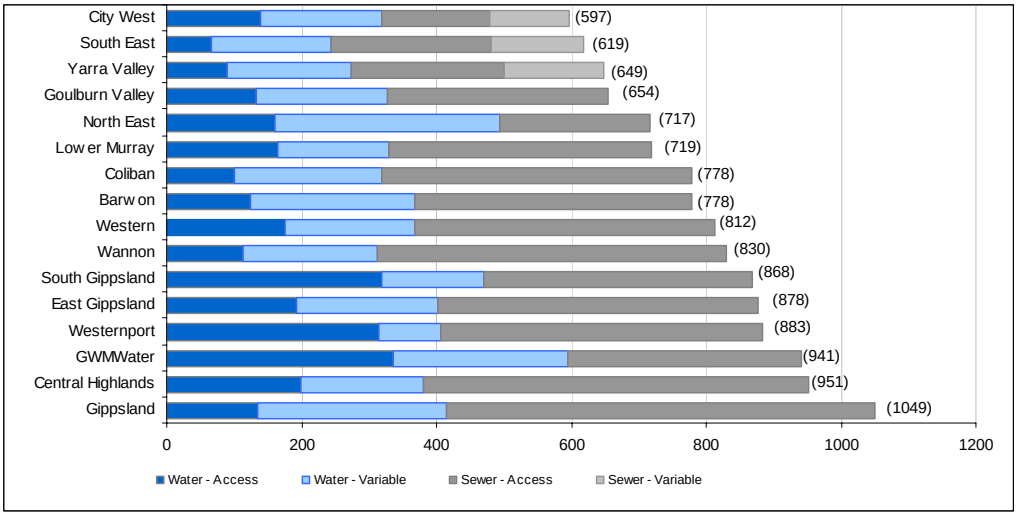
- the lowest average water bills were reported by the metropolitan businesses, with the lowest being City West Water ($597). Of the regional authorities, Goulburn Valley Water ($654) was lowest.

- the highest average water bills were Gippsland Water ($1049), Central Highlands Water ($951) and GWMWater ($941).

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

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

Figure 3.2 Average household bills, 2009-10
($, nominal)



Note: Where businesses have multiple pricing zones, the average household bill is calculated using the prices in the largest town. The average household bill for GWMWater is based on bills in Horsham, South Gippsland Water's on Inerloch 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. In the two years prior to the Commission decision on prices for the five years commencing 1 July 2008, many businesses' average household bills were decreasing or relatively stable.

Tenants do not pay service, or fixed charges and are only responsible for the usage, or variable, component of the bill. For average household bills ranged between $91 (Westernport Water) and $333 (North East Water) in 2009-10. For tenants in general, average household bills have increased by a greater percentage than owner-occupiers due to larger increases in the variable component of water charges.

Adjustment to Coliban Water's pricing

In 2009-10 the Commission considered an application from Coliban Water for an adjustment to its prices based on uncertain or unforeseen events. The Commission released a determination released in June 2010 for price adjustments for the period from 1 July 2010 to 30 June 2013. These adjustments assisted Coliban Water's ability to deliver water related services to its customers by stabilising its financial position.

Table 3.1 Average household bills for 2006-07 to 2009-10

	2006-07	*2007-08*	*2008-09*	*2009-10*
City West	449	436	527	597
South East	453	438	520	619
Yarra Valley	488	461	553	649
Barwon	583	591	692	778
Central Highlands	680	690	881	951
Coliban	534	541	662	778
East Gippsland	644	651	805	878
Gippsland	619	643	847	1 049
Goulburn Valley	512	501	600	654
GWMWater	693	710	852	941
Lower Murray	595	536	658	719
North East	606	573	623	717
South Gippsland	727	740	824	868
Wannon	650	682	743	830
Western	713	665	759	812
Westernport	691	718	816	883

Note: Average household bills are in that year's dollars, and calculated using that year's consumption levels.

Pricing trends 2010-11 to 2012-13

For the remainder of the regulatory period, price increases for the majority of regional urban customers will be at or below 5 per cent excluding CPI adjustments. Wannon Water will increase prices by 9 per cent, Barwon Water and East Gippsland Water by 7 per cent, and Goulburn Valley Water are scheduled to increase prices by 6 per cent, all excluding CPI adjustments.

The price increases for the remainder of the regulatory period for metropolitan businesses will be highest in 2011-12 with 10 per cent for City West Water and South East Water, and 11 per cent for Yarra Valley. In 2012-13, prices will increase by 7 per cent, 8 per cent and 9 per cent for South East Water, City West Water and Yarra Valley Water.

Average household bills for 2010-11 to 2012-13

$ 2010-11

	Average consumption 2009-10 (kL/household)	*2010-11 ($)*	*2011-12 ($)*	*2012-13 ($)*
City West	140	690	759	823
South East	141	736	808	864
Yarra Valley	144	777	865	935
Barwon	150	857	917	981
Central Highlands	126	1 009	1 040	1 072
Coliban	160	910	925	945
East Gippsland	167	963	1 027	1 095
Goulburn Valley	261	715	760	808
Gippsland	179	1 126	1 175	1 225
GWMWater	200	999	1 046	1 092
Lower Murray	411	749	758	768
North East	213	828	850	865
South Gippsland	119	913	934	956
Wannon	154	933	1 020	1 113
Western	166	877	920	967
Westernport	71	931	955	978

Note: As presented in Figure 3.2, the average household bill is calculated using the prices in the largest town where there are multiple pricing zones. Forecast average household bills are stated in 2010-11 dollars, and will need to be updated annually to include CPI adjustments.

3.5 Payment difficulties

The urban water businesses are required to assist customers who have 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 redirection of the bill to another person for payment
- offering to extend the due date for some or all of an amount owed
- appropriately referring customers to government funded assistance programs (including the Utility Relief Grant Scheme) or to an independent financial counsellor
- observing minimum periods of notice before applying supply restrictions or pursuing legal action to recover outstanding debts and
- not restricting water supply of a customer or pursuing legal action unless having first taken 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.

Hardship GSL

The Commission recently completed a review of the Customer Service Code. The review included the introduction of a hardship guaranteed service level (GSL) that was flagged during the 2009 price review for Melbourne metropolitan water businesses.

The review's final decision determined the GSL as: *Restricting the water supply of, or taking legal action against, a residential customer prior to taking reasonable endeavours (as defined by the Essential Services Commission) to contact the customer and provide information about help that is available if the customer is experiencing difficulties paying.*

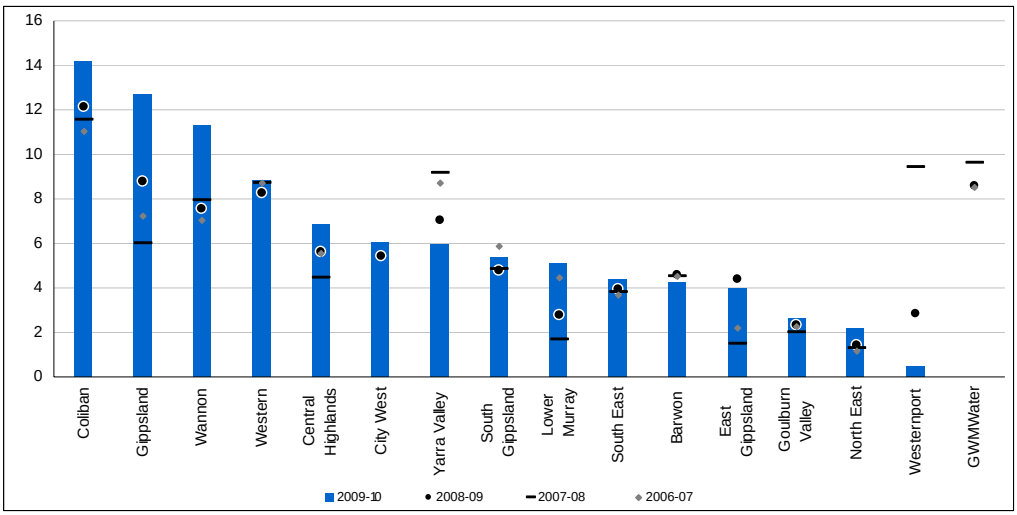
In January 2011, the hardship GSL will be implemented for City West Water, South East Water, Yarra Valley Water, Coliban Water, East Gippsland Water, Gippsland Water, Goulburn Valley Water, North East Water and Westernport Water. Subject to an assessment after one year of operation, the Commission expects to extend the GSL to all urban water businesses.

Customers with instalment plans

Instalment plans help to address affordability issues by providing customers experiencing financial difficulties the flexibility to manage their bill payments.

In 2009-10, the use of instalment plans for domestic customers ranged from 0.4 per 100 customers for Westernport Water to 14.2 per 100 customers for Coliban Water (figure 3.3). Most water businesses have reported increasing rates of instalment plans over the last 5 years. The overall rate of domestic instalment plans increased from 5.6 per 100 customers in 2008-09 to 5.7 in 2009-10.

Figure 3.3 Domestic customers with instalment plans
(per 100 customers)



Note: GWMWater did not report any customers with instalment plans in 2009-10 due to a temporary inability to offer and report on the number of instalment plans due to a change to its customer billing system. The ability to offer instalment plans has since been reinstated.

The range of non-domestic customers using instalment plans was smaller than for domestic customers. The use of instalment plans by Wannon Water (8.2 per 100 customers) and Coliban Water (7.3) was notably higher than other water businesses. Coliban Water considered that they have a high degree of flexibility regarding instalment plans and actively suggest instalment plans where customers have missed an account payment.

Lower Murray Water recorded the largest increase in the number of instalment plans, rising from 0.5 per 100 non-domestic customers in 2008-09 to 2.1 per 100 non-domestic customers in 2009-10. Westernport Water also recorded a noticeable decrease from 5.0 per 100 non-domestic customers in 2008-09 to 0.1 in 2009-10.

Utility Relief Grants Scheme

The Department of Human Services administers the Utility Relief Grants Scheme (URGS), which provides one-off financial contributions towards a customer's bill where payment difficulties are experienced. The URGS is generally used when the customer experiences a short-term financial crisis. This differs from assistance provided by the water businesses to customers who experience ongoing financial hardship through their hardship programs (see section 3.7 for further discussion).

The number of URGS grants noticeably increased from 1 634 in 2008-09 to 2 453 in 2009-10. Taking into account a 40 000 increase in the customer base, the number of grants per 1000 customers increased from 0.8 per 1000 customers in 2008-09 to 1.16 in 2009-10.

Central Highlands Water, Gippsland Water and Wannon Water had the highest rates of the URGS uptake by customers for the period with 4.17, 4.10 and 5.41 per 1000 customers respectively.

The average grant amount in 2009-10 of $353 increased by $20 relative to 2008-09. The average value of grants ranged from $255 for North East Water to $434 for Western Water. Yarra Valley Water had the highest number of customers given grants, with a total of $162 577 paid between the 526 customers.

Table 3.2 Average amount of Utility Relief Grants 2009-10 ($)

	Approved	*Grants paid ($)*	*Average amount grant paid ($)*	*Grants per 1000 customers*
City West	335	130 116	388	1.04
South East	462	161 540	350	0.78
Yarra Valley	526	162 557	309	0.83
Barwon	126	36 210	287	1.02
Central Highlands	230	82 089	357	4.17
Coliban	25	8 653	346	0.41
East Gippsland	27	9 586	355	1.48
Gippsland	233	91 342	392	4.10
Goulburn Valley	79	26 730	338	1.69
GWMWater	16	6 540	409	0.61
Lower Murray	8	3 174	397	0.29
North East	42	10 717	255	1.04
South Gippsland	19	6 739	355	1.25
Wannon	183	68 072	372	5.41
Western	104	45 126	434	2.18
Westernport	38	16 295	429	2.77
Total	**2453**	**865 487**	**353**	**1.16**

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 2009-10, the Government contributed a total of $112 million in concession payments toward water bills (table 3.3). This was an increase of $7 million compared to 2008-09.

Table 3.3 Concession payments 2009-10

Water business	*Payments ($)*
City West	13 865 498
South East	29 773 119
Yarra Valley	35 494 974
Barwon	7 438 896
Central Highlands	3 184 278
Coliban	3 509 325
East Gippsland	1 127 331
Gippsland	3 152 764
Goulburn Valley	3 091 117
GWMWater	1 542 895
Lower Murray	1 469 742
North East	2 891 668
South Gippsland	952 588
Wannon	2 288 714
Western	2 162 438
Westernport	453 450
Total	**112 398 798**

Source: Department of Human Services

3.6 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 and that a series of steps be undertaken before restriction of supply can occur. In 2009-10, the scope for businesses to restrict customers or take legal action was limited to where the outstanding amount was less than $120 (or the customer has failed to pay consecutive bills in full over a 12 month period). A revised code released on 15 October 2010, increased the minimum amount outstanding to $200.

Most businesses apply restrictions or take legal action only after all assistance possible has been provided to customers and where the level of outstanding debt is quite high and the cost of recovering that debt is less than the debt itself.

Restrictions applied for non-payment of bill

In addition to reporting data on the number of customers restricted for non-payment of their water bills, the businesses have reported restrictions data disaggregated on a concession/non-concession basis for domestic customers and the average level of outstanding debt for which restrictions have been applied.

In 2009-10, a total of 3 236 domestic customers (including 555 domestic customers on concession) and 70 non-domestic customers had their water supply restricted for non-payment of water bills. This was an increase of 203 domestic customers from 2008-09 which can be largely attributed to the increases reported by South East Water and Westernport Water, with 174 and 114 additional restrictions respectively.

Goulburn Valley Water continues to have the highest proportion of domestic and non-domestic restrictions of any business, with 1.40 per 100 domestic customers (figure 3.4) and 0.59 per 100 non-domestic customers.

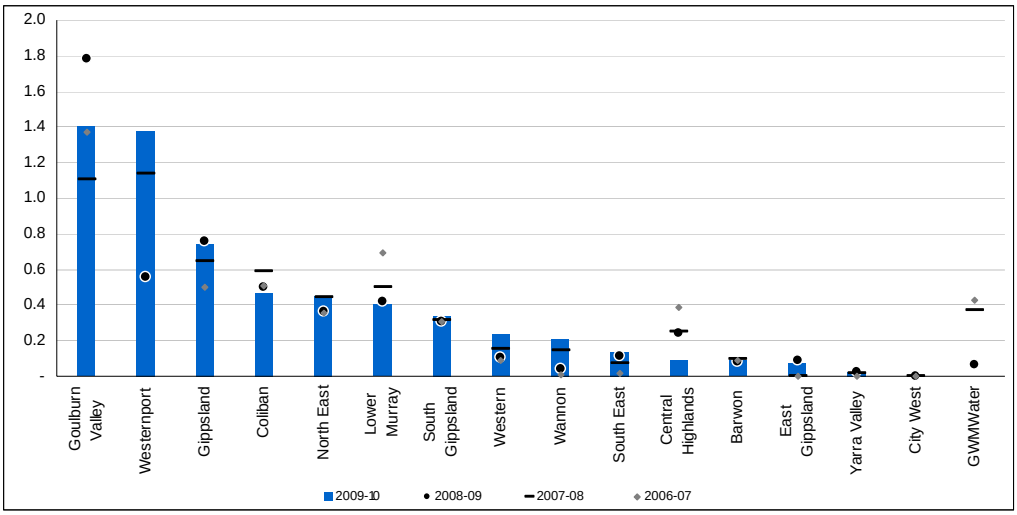
South East Water advised the increased number of restrictions for non-payment reflects a stronger focus on this action as a mechanism to engage with their longer term debtors after several attempts to obtain payments have failed. South East Water reports that this approach has been successful in registering customers into various assistance programs and/or making agreed payment arrangements for their outstanding debt.

Westernport Water advised the Commission that it applies restriction devices as part of their debt management processes. Many of the properties serviced by Westernport Water that are placed on restriction belong to their non-permanent residents who do not address the non-payment of the account and the fitting of the restrictor until they next visit their property.

Goulburn Valley Water continues to review its processes for customers experiencing financial hardship and revised its collections processes during 2009-10 with a focus on more proactive customer contact methods. This resulted in a reduction in this indicator from 2008-09, and a further review of collections processes will see these numbers reduce further in 2010-11.

City West Water did not restrict any domestic customers for non-payment in 2009-10.

Figure 3.4 **Domestic restrictions for non-payment of bills**
(per 100 customers)



Note: GWMWater did not report any restrictions due to a change to its customer billing system.

Restriction duration (domestic)

As part of the Commission's performance reporting framework, businesses are required to identify how long customers who are restricted for non-payment remain on restrictions. Specifically, they are required to report the number of domestic customers whose water supply is restored within three days of being restricted, as well as the number of domestic customers with restrictions still in place after 14 days. Where a high proportion of customers remain on restrictions for long periods of time it may suggest that 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.

The majority of the businesses restored water supply within three days for between 42 per cent and 69 per cent of the restricted customers. Westernport Water reported rate of restoration substantially below this range with 26 per cent, and also reported the highest rate of restrictions not being restored within 14 days with 71 per cent. GWMWater reported that all restrictions were being restored within 14 days, a reduction from 24 per cent in 2008-09.

Legal actions for non-payment of bills

Overall, legal action was taken against 794 customers across Victoria in 2009-10 for the non-payment of water bills — 248 less than the previous year. In total 684 domestic (617 non-concession customers and 67 concession customers) and 110 non-domestic customers had legal action taken against them.

Western Water recorded an increase in legal action for non-payment of bills (figure 3.5). For domestic customers the rate increased from 0.01 to 0.06 per 100 customers from 2008-09 to 2009-10. For non-domestic the rate increased from 0.03 in 2008-09 to 0.21 per 100 customers in 2009-10. However, this is still a relatively low rate of legal action for non-payment compared to

the highest, Goulburn Valley Water, which recorded a rate of legal action for non-payment of 0.25 and 0.26 per 100 domestic and non-domestic customers respectively.

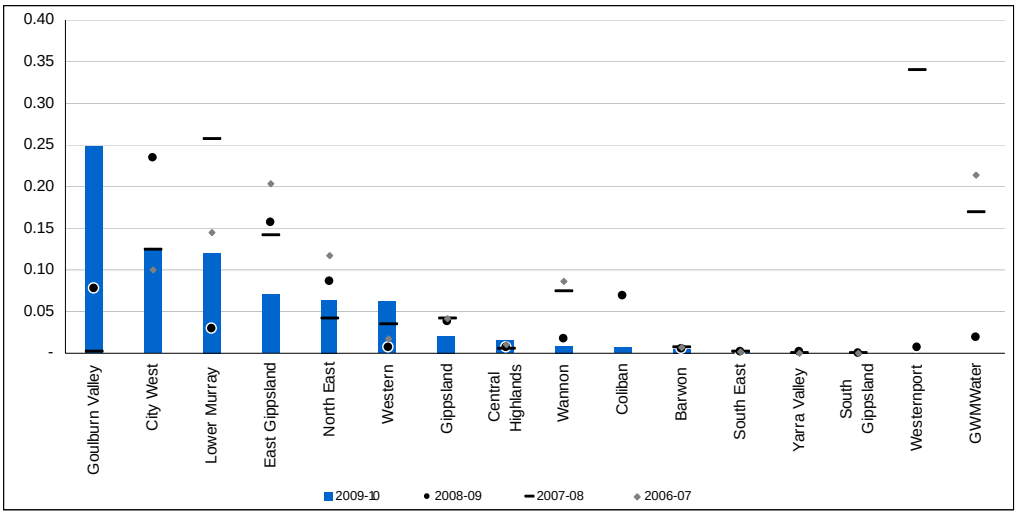
Comments from Goulburn Valley Water advised that its increased number of legal actions was a result of attempts to engage with long term debtors meeting the definition of legal action (as a result of a small cost having been passed onto the customer).

Through a greater focus on identifying customers experiencing hardship, Western Water advised that it was now better able to identify cases of non payment where legal action is necessary.

GWMWater's introduction of the new customer billing system was credited as the reason why no legal actions were taken in 2009-10.

Average debt levels when supply was restricted ranged from $215 for North East Water to $1245 for Western Water. The average debt at the time of legal action being taken was substantially higher than the $120 minimum and ranging from $654 for Goulburn Valley Water to $5351 for Wannon Water.

Figure 3.5 Domestic legal actions
(per 100 customers)



Note: GWMWater did not report any legal actions against customers due to a change to its customer billing system. Westernport Water did not take legal action this financial year due to a requirement to change service providers undertaking legal actions.

3.7 Hardship grants (domestic)

The Customer Service Code requires all water businesses serving urban customers to have policies in place as of 1 July 2005 to assist domestic 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 water business according to an agreed flexible payment plan or other payment schedule and

- offer information about the water business's dispute resolution policy and the Energy and Water Ombudsman (Victoria) or other relevant dispute resolution forum.

In total, water businesses approved 11 244 hardship grants in 2009-10 up from 10 931 in the previous year. Yarra Valley Water again had the most extensive hardship grant scheme accounting for 85 per cent of the total number of grants approved at an average value of $72 (figure 3.7).

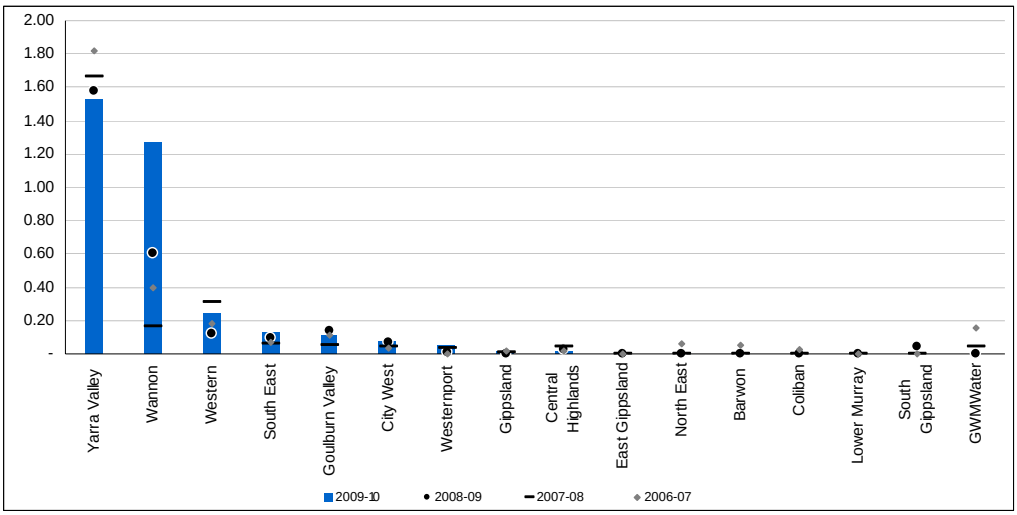
Gippsland Water reported the highest average value of hardship grants (figure 3.7) at $719. Wannon Water reported the largest decrease in the value of hardship grants from $631 in 2008-09 to $210 in 2009-10, a fall of $421. Despite the value of hardship debt falling for Wannon Water, the overall number of hardship grants increased from 200 in 2008-09 to 428 in 2009-10.

Four businesses (Barwon Water, Coliban Water, Lower Murray Water and South Gippsland Water) did not provide any hardship grants to customers.

Coliban Water commented that it does not generally write off customer debt altogether, using application of instalment plans and/or referral to the URGS for customers in hardship. South Gippsland Water considers that it monitors customers' debt levels and utilises debt management tools — including instalment plans, rebates, utility relief grants, interest exemptions, high usage grants, and restriction of supply — at an early stage to avoid debt levels escalating.

Barwon Water advised that it has developed a hardship grant scheme which came into effect in late 2009-10, with benefits not flowing to customers until after 1 July 2010.

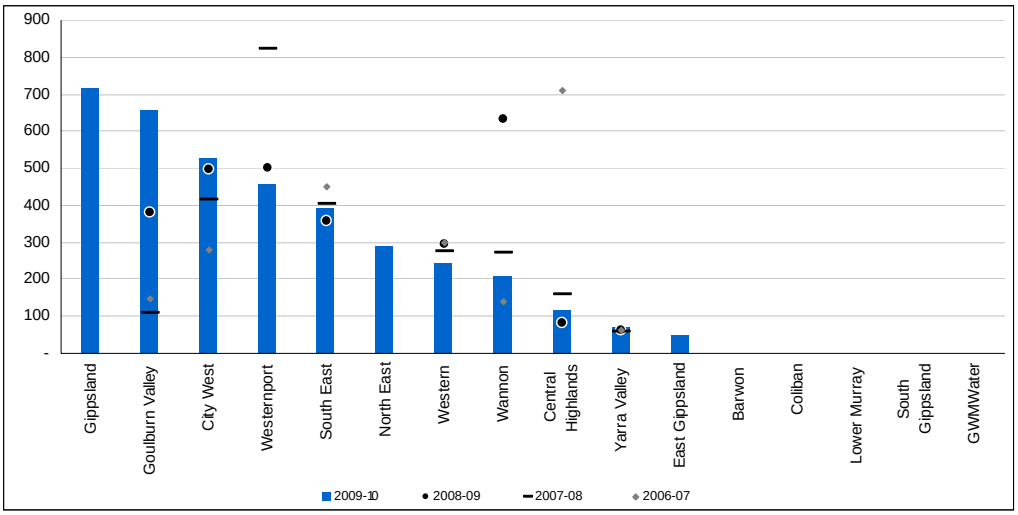
Figure 3.6 Hardship grants approved
(per 100 customers)



Note: GWMWater was not able to identify customers that required hardship grants due to a change to its customer billing system.

Figure 3.7 Average value of hardship grants

($, nominal)



Note: GWMWater was not able to identify customers that required hardship grants due to a change to its customer billing system.

4 CUSTOMER RESPONSIVENESS AND SERVICE

4.1 Why we assess customer responsiveness and service

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

The Commission's Customer service code places obligations on businesses regarding customer responsiveness and service, including having policies, practices and procedures for handling customers' complaints and disputes and to provide certain information to customers on request. Auditing of compliance with the code is undertaken in conjunction with performance report audits.

4.2 Responsiveness of water business call centres

In 2009-10, Victoria's water businesses received a total of 2.19 million phone calls, 80 per cent of which were calls to account enquiry lines.

Call centre performance is measured in terms of the:

- time taken for calls to be answered by 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. Those businesses without separate fault and emergency numbers are required to record all calls against account lines — businesses are Coliban Water, East Gippsland Water, Lower Murray Water, South Gippsland Water, Wannon Water and Western Water. This can make direct comparisons between all businesses difficult.

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, for example City West Water with the longest connect time uses an IVR while Wannon Water with the shortest connect time has external calls answered by an operator.

Across the Victorian water industry the average time to connect to an operator was 33.2 seconds in 2009-10, only 2 seconds longer than 2008-09 but lower than the two years prior. The majority of businesses reported (figure 4.1) connect times within 4 seconds of those reported in 2008-09. Notable variations from 2008-09 were reported by GWMWater (a 15 second increase),

Yarra Valley Water (a 12 second increase) and Lower Murray Water (13 second decrease).

A high number of phone calls arising from rural customers converting to the Wimmera Mallee Pipeline and customer account inquiries following the changeover to the new billing system were identified by GWMWater as the reasons for its higher call connect time.

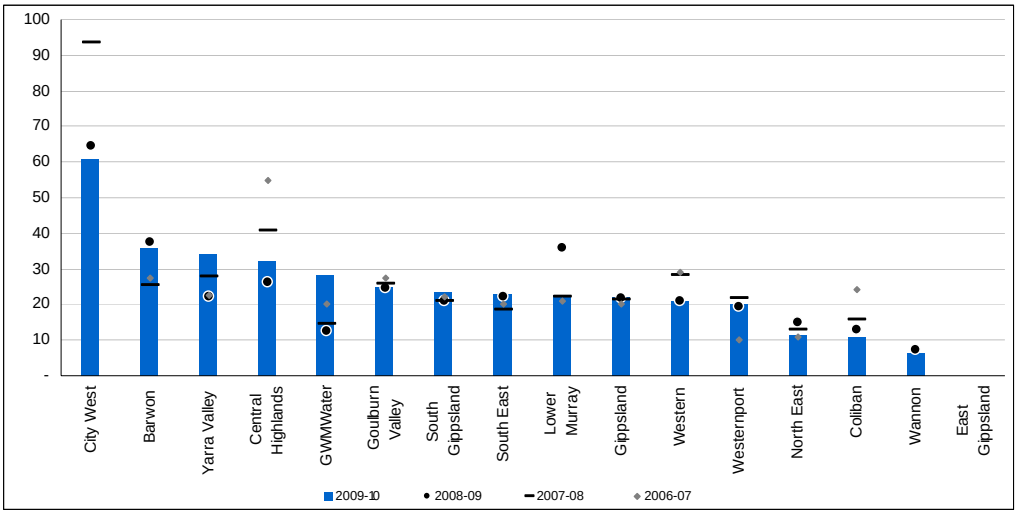
Yarra Valley Water advised that its increased call time was a result of an extra level of options added to its interactive voice response system allowing calls to be routed to staff trained to handle particular queries.

Lower Murray Water commented that increased operator connect times in 2008-09 resulted from an increase in incoming call traffic following the merger with the former First Mildura Irrigation Trust in August 2008. The improved result in 2009-10 was an outcome of resourcing adjustments and the advertising of new numbers.

Of the 10 businesses with a separate emergency fault line, all reported connection times of 34 seconds or less.

Figure 4.1 Average time taken to connect to an operator – account and fault lines

(seconds)



Note: East Gippsland Water connects calls directly to an operator and therefore did not provide this data.

The percentage of calls are answered within 30 seconds

While the average time taken for calls to be connected to an operator measures the overall responsiveness of a business's call centre, it does not capture the frequency with which calls are answered promptly. The percentage of calls answered within 30 seconds is important as it more accurately reflects the incidence of poor waiting times.

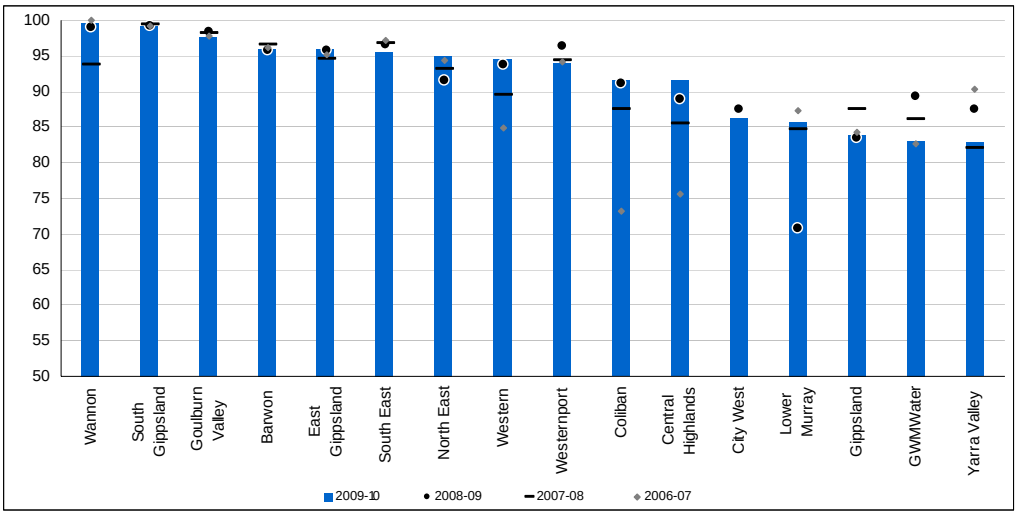
Eleven businesses reported a percentage of calls answered within 30 seconds of greater than 90 percent (figure 4.2), with Wannon Water alone reporting 100 per cent of calls answered within 30 seconds.

Yarra Valley Water and GWMWater both had the lowest percentage of calls answered within 30 seconds (83 per cent), followed by Gippsland Water (84 per cent). GWMWater also recorded the largest decline in the percentage of calls answered within 30 seconds, falling from 89 per cent in 2008-09 to 83 per cent.

Yarra Valley Water identified a transition to a new customer information system resulting in temporary disruptions to call centre operations reduced its performance. As with call connect times, GWMWater commented that increased numbers of phone calls by rural customers converting to the Wimmera Mallee Pipeline and customer account inquiries following the changeover to the new billing system, adversely impacted GWMWater's ability to connect within 30 seconds.

The greatest improvement was from Lower Murray Water, increasing the percentage of calls answered within 30 seconds from 71 to 86 per cent. As with call connect times Lower Murray Water commented that its 2008-09 performance was adversely affected by an increased number of phone calls following its merger with the First Mildura Irrigation Trust in August 2008. It considers that its improvement in 2009-10 was due to it adjusting resources and advertising new contact phone numbers.

Figure 4.2 Calls answered within 30 seconds - account and fault lines (per cent)



4.3 Benchmarking of call centres

Customer Service Benchmarking Australia (CSBA) was commissioned to benchmark the water businesses' call centre performance in 2009-10 against Australian water and energy sector averages. CSBA assesses a business's performance from calls to their account lines using the 'mystery caller' technique, which can result in different figures than that reported by businesses.

In reporting to the Commission, CSBA discloses performance in terms of sector averages (metropolitan retail and regional urban) and where individual businesses are among the top performers in a particular category. During 2009-10, CSBA made 1 512 calls to regional urban businesses and 315 calls to the metropolitan retailers.

Call centre connect times

CSBA's 'mystery caller' survey for the metropolitan water businesses reported a connect time for metropolitan businesses of 59 seconds in 2009-10, the same connect time as 2008-09. South East Water had the shortest connect time averaging 22 seconds per call and led the category in all four quarters.

Connect time for the regional water businesses was shortest among all the sectors surveyed, with an average of 34 seconds — notably five seconds slower than last year. North East Water was again the best performing regional urban business with an 11 second connect time. Wannon Water, Coliban Water and Gippsland Water also achieved the best quarterly results for this category.

The average connect time for the Australian water sector was 39 seconds (36 seconds in 2008-09), while the average response time for all utilities in Australia increased to 60 seconds (55 seconds in both 2007-08 and 2008-09).

Calls answered within 30 seconds

CSBA's benchmarking report reported that metropolitan retailers answered 82 per cent of calls within 30 seconds in 2009-10, up from 58 per cent in 2008-09 and 25 per cent in 2007-08. South East Water performed best answering 84 per cent of all calls within 30 seconds and led the category in the last three quarters.

Regional urban businesses performed slightly better than the metropolitan retailers, answering 89 per cent of all calls within 30 seconds. This result compares with 72 per cent in 2008-09 and 58 per cent in 2007-08. North East Water was the best performer, answering 100 per cent of calls within 30 seconds during the year.

In comparison, the percentage of calls answered within 30 seconds for the Australian water sector was 85 per cent (66 per cent in 2008-09 and 48 per cent in 2007-08).The percentage of calls answered within 30 seconds for the Australian utility sector was 76 per cent (52 per cent in 2008-09 and 33 per cent in 2007-08).

Greeting quality

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

Greeting quality has remained relatively constant over the four years to 2009-10. The metropolitan retailers achieved an overall greeting quality score of 91 per cent in 2009-10, similar to the 90 per cent achieved in the preceding two years. City West Water achieved the best results with 93 per cent over the year, achieving the best quarterly results two times. South East Water was also a strong performer in this category, achieving high quarterly results during the year.

The regional urban businesses achieved an overall greeting quality score of 90 per cent, a slight increase from the 2008-09 results. Wannon Water was the best performed regional urban water business on greeting quality with a score of 95 per cent over the year and achieving the best quarterly results two times.

The overall greeting quality score for the Australian water sector was 90 per cent (89 per cent in both 2008-09 and 2007-08). The overall greeting quality score for the Australian utility sector was 91 per cent (89 per cent in 2008-09, 90 per cent in 2007-08).

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 easygoing; and disinterested and curt.

The metropolitan retailers achieved best practice agent manner 74 per cent of the time in 2009-10. Although there has been a slight improvement from last year's score of 73 per cent, results have declined since 2007-08 (77 per cent). Each of the three retailers achieved the best quarterly results for best practice agent manner at various stages in 2009-10.

The regional urban businesses achieved best practice agent manner for 75 per cent of calls in 2009-10, with results staying relatively steady from 2008-09 (75 per cent) and 2007-08 (77 per cent). GWMWater was the best performing regional urban business for best practice agent manner in 2009-10 (91 per cent), achieving the best performance for the third consecutive year. Coliban Water and Wannon Water also achieved the best quarterly results of the regional urban businesses during the year.

The overall best practice agent manner score for the Australian water sector was 73 per cent, decreasing slightly from 75 per cent in 2008-09 and 76 per cent in 2007-08. The overall score for the Australian utility sector was also 73 per cent (75 per cent in 2008-09 and 76 per cent in 2007-08).

Both sectors 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 96 per cent in this category, maintaining the same score for the past two years. The regional urban businesses achieved a score of 95 per cent (95 per cent in both 2008-09 and 2007-08). These results were comparable to 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 2009-10, call centre staff of the metropolitan retailers:

- fully probed the caller's needs 77 per cent of the time (compared to 70 per cent in both 2008-09 and 2007-08)
- demonstrated good product knowledge 84 per cent of the time (compared to 86 per cent in 2008-09 and 82 per cent in 2007-08)
- provided a clear outcome to an enquiry 86 per cent of the time (up from 84 per cent in 2008-09 and 81 per cent in 2007-08)

- were courteous and helpful 88 per cent of the time (down from 91 per cent in 2008-09 and 90 per cent in 2007-08)

South East Water was the best performed in all enquiry handling skill categories and achieved best quarterly results in the majority of cases.

In 2009-10, call centre staff of the regional urban businesses:

- fully probed the caller's needs 74 per cent of the time (up from 71 per cent in both 2008-09 and 2007-08)
- demonstrated good product knowledge 88 per cent of the time (up from 83 per cent in 2008-09 and 81 per cent in 2007-08)
- provided a clear outcome to an enquiry 89 per cent of the time (up from 82 per cent in 2008-09 and 81 per cent in 2007-08)
- were courteous and helpful 91 per cent of the time (compared to 90 per cent in 2008-09 and 91 per cent in 2007-08)

Barwon Water, Wannon Water, East Gippsland Water and GWMWater were the best performed regional urban businesses for enquiry handling.

4.4 Complaints

Customer complaints provide an important indication of overall customer satisfaction 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) for further investigation.

Total number of complaints

The performance reporting framework requires businesses to report the number of customer complaints for water quality, water supply reliability, sewerage service quality and reliability, affordability, billing, pressure, sewage odour and 'other' complaints. A complaint is registered if a customer registers dissatisfaction in a complaint category.

Businesses are also required to categorise the types of water quality complaints they receive — namely colour, taste and odour, blue water and 'other'. Water quality complaints are discussed in more detail in section 6.3.

In 2009-10 businesses received a total of 13 545 complaints, representing a 6.0 per cent increase from 2008-09. This equates to a frequency of 0.58 complaints per 100 customers across the State.

South East Water reported the lowest number of complaints per 100 customers, at 0.26, closely followed by North East Water and Western Water. South East Water pointed to its customer management systems as a reason for its low level of complaints

GWMWater's complaint rate increased by 104 per cent from 2008-09 to report the highest rate with 2.28 complaints per 100 customers. The cause of the significant increase was an increase in billing complaints from a rate of 0.3 in 2008-09 to 1.4 in 2009-10 resulting from the transition to a new customer billing system. Increases in water taste and odour complaints in Horsham were also identified by GWMWater.

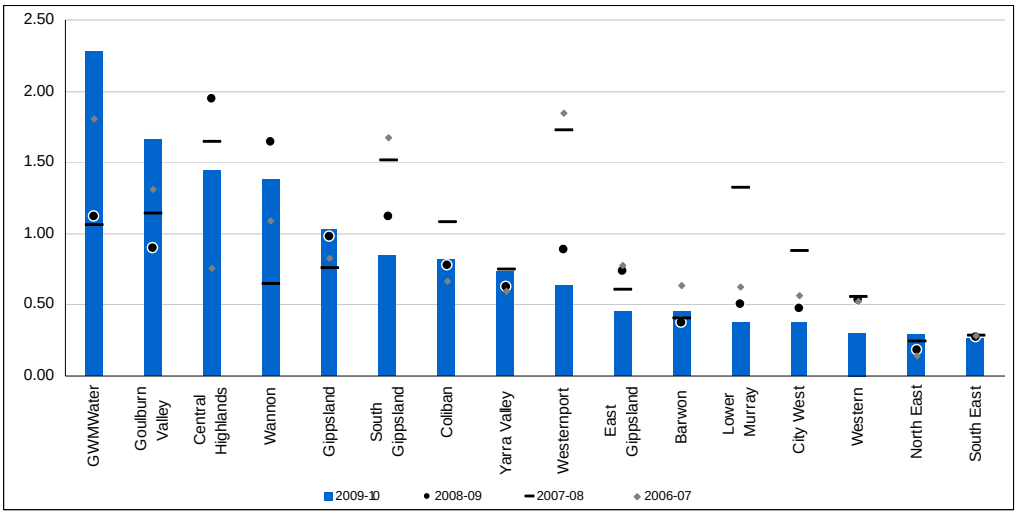
Goulburn Valley Water's increased total complaints were due to substantial increases in supply reliability and water quality complaints. The failure of a high lift pump in Numurkah resulting in residents having no supply or low pressure for an hour in February 2010 was identified as the cause of the increase in supply reliability complaints. The business identified that the water quality complaints increased due to an incident at Broadford where elevated iron and manganese levels in the raw water were not removed by the water treatment plant.

Central Highlands Water reported the greatest improvement in complaints, decreasing from 1.94 complaints per 100 customers in 2008-09 to 1.44 complaints in 2009-10, although this still represents the third highest rate. Central Highlands Water commented that the improvement was due to the 2008-09 result being high because of a significant water quality event in one system. The Commission notes that the 2009-10 result is lower than the 1.64 complaints per 100 customers reported in 2007-08.

A large improvement was also made by East Gippsland Water (0.73 to 0.46 complaints). East Gippsland Water considers that improvements to infrastructure through its maintenance program and pipe cleaning activities resulted in reductions in complaints.

The complaint types received by the water businesses in order of frequency were water quality (49.6 per cent), billing (12.9 per cent), pressure (12.0 per cent), sewer odour (5.4 per cent), affordability (4.7 per cent), water service reliability (3.9 per cent) and sewer service reliability (1.4 per cent). Other complaints not included in these categories comprised 10.25 per cent of total complaints.

Figure 4.3 Complaints received by water businesses (per 100 customers)



4.5 Complaints received by the Energy and Water Ombudsman (Victoria)

Since 2001, the Energy and Water Ombudsman (Victoria) (EWOV) has been responsible for investigating complaints relating to water businesses. Its role is to facilitate the resolution of complaints and disputes between consumers and the providers of electricity, gas and water services in Victoria.

EWOV records complaints under four separate categories: referred to the water business; referred to higher level contact at the water business; referred elsewhere; and received for full investigation. It also records the number of enquiries it receives. Information on the number of enquires and complaints received by EWOV in relation to each business is set out in table 4.1.

In 2009-10, EWOV received 1 449 complaints and 151 enquiries in relation to the metropolitan and regional urban businesses, compared to 1 215 complaints and 137 enquiries in 2008-09.

In terms of the number of complaints relative to sector share, City West Water had the highest frequency of complaints referred to EWOV among the metropolitan retailers, with 34 per cent despite servicing only 21 per cent of the total. South East Water once again had the smallest frequency of complaints to EWOV among metropolitan retailers, with 29 per cent of metropolitan complaints while servicing 38 per cent of metropolitan customers.

For the regional businesses, Westernport Water had the highest frequency of complaints referred to EWOV with 6 per cent of all regional complaints while only servicing 2 per cent of the regional population. This was followed by Gippsland Water (14 per cent of regional complaints and a 10 per cent sector share). Barwon Water experienced the smallest frequency of customer complaints to EWOV, with only 16 per cent of all regional complaints while servicing 21 per cent of regional customers. This was followed by North East Water (4 per cent of regional complaints, 7 per cent sector share). The proportion of complaints to EWOV for other businesses were generally in line with their sector share.

Table 4.1 EWOV cases

Water Businesses	Total Cases				Total Enquiries	Total Complaints		2009-10 Complaints				Sector Share
	2009-10	%	2008-09	%		2009-10	%	referred to water business	referred to higher-level contact at water business	received for investigation	referred elsewhere and other complaints	
Melbourne Water	53		59		3	50		15	15	12	8	-
City West Water	354	35	314	36	44	310	34	136	95	44	35	21
South East Water	298	29	240	28	31	267	29	98	104	41	24	38
Yarra Valley Water	369	36	318	36	28	341	37	117	146	55	23	40
Total – Metro retailers	1 021	100	872	100	103	918	100	351	345	140	82	100
Barwon Water	88	17	81	19	9	79	16	40	18	16	5	21
Central Highlands Water	50	10	32	8	2	48	10	16	19	6	7	10
Coliban Water	55	10	26	6	4	51	11	13	22	9	7	11
East Gippsland Water	14	3	17	4	1	13	3	3	5	2	3	3
Gippsland Water	70	13	33	8	1	69	14	26	29	8	6	10
Goulburn Valley Water	54	10	41	10	9	45	9	22	12	6	5	8
GWMWater	20	4	13	3	0	20	4	6	7	6	1	5
Lower Murray Water	15	3	13	3	1	14	3	8	2	3	1	5
North East Water	21	4	24	6	4	17	4	8	5	3	1	7
South Gippsland Water	16	3	13	3	1	15	3	8	3	3	1	3
Wannon Water	44	8	47	11	6	38	8	7	19	8	4	6
Western Water	48	9	50	12	4	44	9	16	18	3	7	8
Westernport Water	31	6	31	7	3	28	6	13	10	2	3	2
Total - Regional	526	100	421	100	45	481	100	186	169	75	51	100
Total – Victoria	1 600		1 352		151	1 449		552	529	227	141	

Source: EWOV annual report 2009-10

5 NETWORK RELIABILITY

5.1 Water supply reliability

This section reports information related to water supply reliability from two perspectives — the performance of the businesses' assets and the impact on customers. Reliability is determined primarily by:

- the frequency of interruptions (as indicated 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) and
- the level of losses in the water supply system (as indicated by the volume of water that does not get metered as reaching customers due to leaking pipes or under-recording water meters).

5.2 Water supply interruptions

A water supply interruption is an event that causes a total loss of water supply to one or more customers. These may be due to planned maintenance activities, or unplanned resulting from pipeline failures. The frequency at which interruptions occur across different networks is compared by measuring the number of water supply interruptions per 100 kilometres of water main.

While soil type, geography and the assets age and material will result in regional variations in interruption rates for water mains, a business's asset management program also has a significant impact on supply reliability in the medium to long term.

In 2009-10 the total rate of planned and unplanned water supply interruptions ranged from 8.1 (Wannon Water) to 67.4 (Yarra Valley Water) per 100 kilometres of water main (figure 5.1). Across the state an interruption rate of 38.9 was reported, lower than the 42.4 reported in 2008-09 and continuing a downward trend.

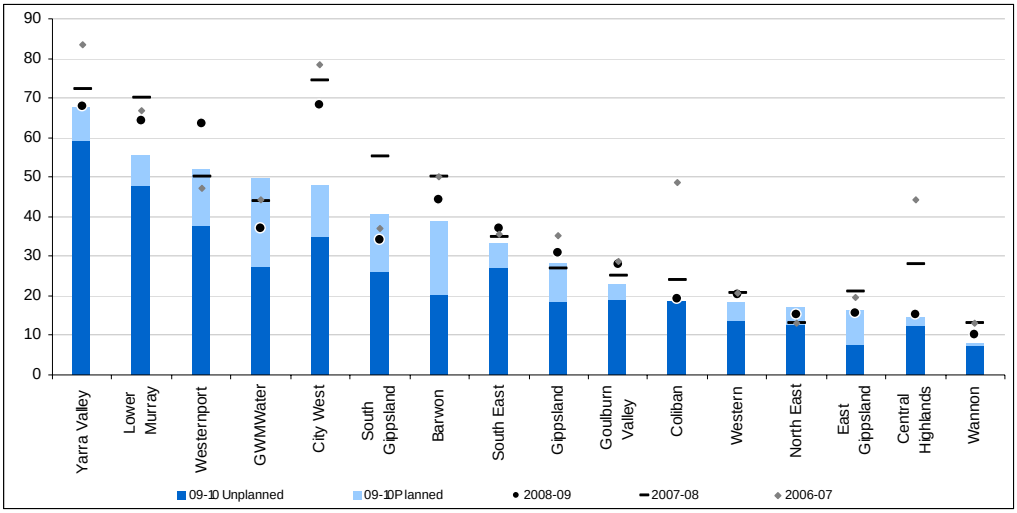
City West Water had the largest reduction in rate of interruptions with its 48.0 in 2009-10 representing a 30 per cent decrease from the 68.2 in 2008-09. This can also be contrasted with the 78.3 in 2006-07 and 74.4 in 2007-08. Figure 5.1 also indicates that Lower Murray Water and Barwon Water interruption rates in 2009-10 represent a substantial decrease to the three previous years.

All three businesses reported that reduced ground movement due to the increased rainfall and in the case of Lower Murray Water eased water restrictions reduced the rate of interruptions. This trend is more broadly evident over the industry with a majority of businesses (12 of 16) reporting a reduced rate of interruptions and 14 businesses reporting lower rates of bursts and leaks per

100 km of water main in 2009-10. City West Water and Barwon Water also considered that increases in the renewals expenditure also assisted in reducing the rate of interruptions.

GWMWater's interruption rate of 49.8 in 2009-10 was the highest of the four years shown in figure 5.1. The businesses commented that its performance has been adversely affected by an increase in planned interruptions to undertake air scouring to improve water quality performance.

Figure 5.1 Water supply interruptions
(per 100 kilometres of water main)



5.3 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 number of customers. For example an event that causes 50 customers to lose supply is recorded as one water supply interruption and 50 customer interruptions.

The state frequency of planned and unplanned customer interruptions (figure 5.2) in 2009-10 was 0.25 interruptions per 100 customers. The state interruption frequency has generally trended down over the last four years from the 0.30 reported in 2006-07.

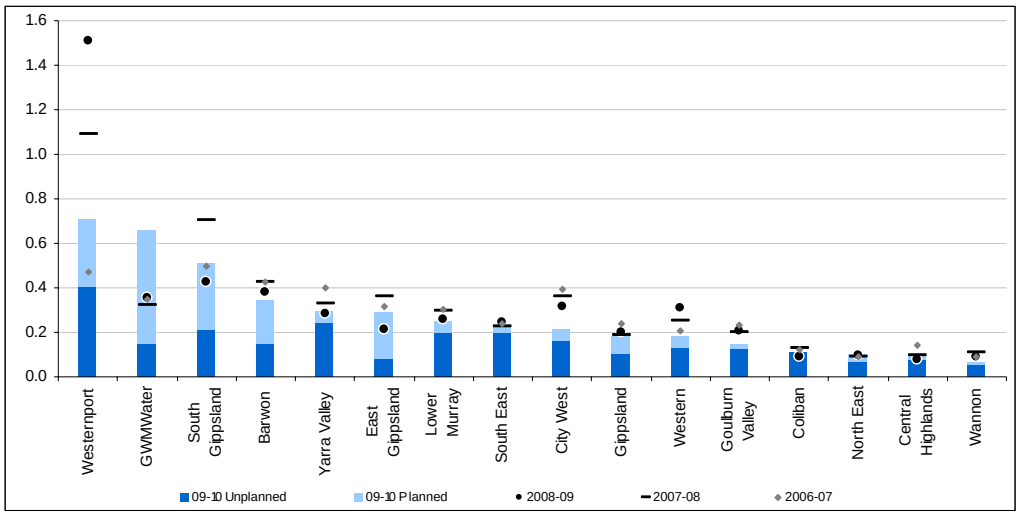
Westernport Water continued to report the highest frequency of customer interruptions (0.71 per customer). This represents a major improvement from 2007-08 (1.09 per customer) and 2008-09 (1.51 per customer). The improvement is evident in both the frequencies of planned and unplanned customer interruptions. Westernport Water advised that its extensive air-scour program results in both planned and unplanned interruptions due to the reporting of small leaks from stop taps and valves.

GWMWater reported a substantial increase in overall interruptions due to a large rise in the frequency of planned interruptions, identified by the business as a result of increased air scouring to improve water quality. Its frequency for planned interruptions of 0.51 per customer in

2009-10 can be contrasted against a range of 0.12 to 0.14 in the previous four years.

Overall eleven businesses reported a planned customer interruption rate of less than 0.1 in 2009-10 — all of these businesses also reported a rate of less than 0.1 in 2008-09.

Figure 5.2 Customer interruption frequency
(interruptions per customer)



The timing of customer interruptions, as well as the frequency will have an impact on the inconvenience caused to customers. Customer interruptions during peak hours of water use are those which occur between the hours of 5am to 9am and 5pm to 11pm.

In 2009-10, both Coliban Water and Goulburn Valley Water reported no customer interruptions during peak hours. A further eight businesses reported peak hour customer interruption rates of less than 0.01 per customer. Westernport Water reported the highest frequency of 0.04, a large improvement from the 0.14 in 2008-09 and 0.30 in 2007-08.

5.4 Average duration of interruptions

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

While the frequency with which interruptions occur may be influenced by matters outside the control of water businesses, it is possible for businesses to establish practices and procedures to ensure the timely restoration of supply when an interruption does occur.

In 2009-10, the state average duration of planned water supply interruptions (figure 5.3) was 161 minutes, an increase from 155 minutes in 2008-09 but lower than the 170 minutes reported in 2007-08. Performance ranged from 54 minutes (Coliban Water) to 211 minutes (South Gippsland Water).

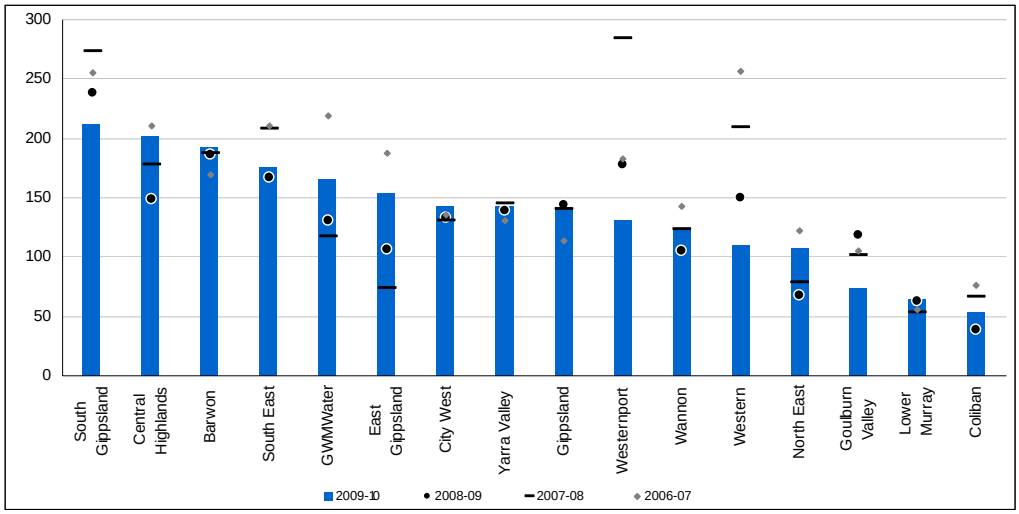
Businesses reporting substantial decreases in planned interruption duration relative to 2008-09 included Goulburn Valley Water (38 per cent), Western Water (27 per cent) and Westernport Water (27 per cent). Goulburn Valley Water and Westernport water both identified that they had changed the procedures for contractors undertaking planned interruptions. This has resulted in substantial reductions in the duration of the shutdowns. Western Water noted that with significant growth in customer numbers, planned interruptions are increasing and that process refinement is a priority to minimise shutdown durations.

North East Water and East Gippsland Water reported large increases in the average duration of planned interruptions, increasing by 58 per cent and 45 per cent respectively.

North East Water identified that the increase was due to two significant interruptions — one in Wodonga affecting 105 customers for a 5 hour period and another in Bright affecting 40 customers for 6.75 hours. Both interruptions required significant repair works with limited alternate options available to complete the required repair activities. North East Water commented that they are investigating and improving their ability to minimise shutdown areas within the water reticulation at appropriate strategic locations.

East Gippsland Water commented that increases in the average duration of planned interruptions is due to increased proactive maintenance and pipe cleaning activities to improve water quality and reliability and to reduce complaints.

Figure 5.3 Average duration of planned interruptions (minutes)

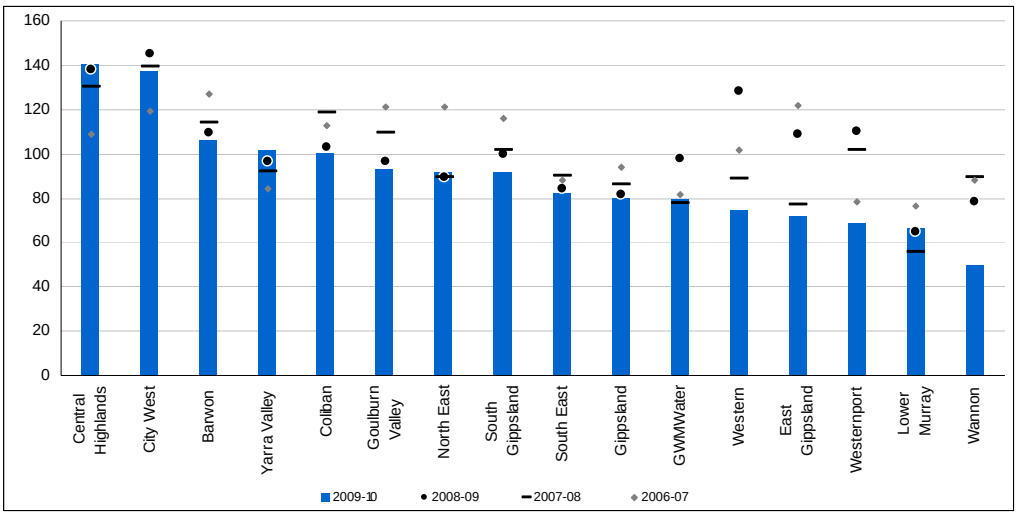


For unplanned interruptions the state average of 98 minutes in 2009-10 was a reduction from the 103 minutes in 2008-09 and 102 minutes in 2007-08 across all businesses. Average durations ranged from 50 minutes (Wannon Water) to 140 minutes (Central Highlands Water) (figure 5.4).

Western Water and Westernport Water also reported large decreases in the average duration of unplanned interruptions, with falls of 42 per cent and 38 per cent respectively. Increases in average duration were minor.

Westernport Water commented that improved resourcing and field crew management had a positive result by reducing the duration of interruptions. Western Water noted that an increased focus on interruptions across the business — with every outage being reported, and a review of issues when an extended outage time or GSL breach occurs — had resulted in a reduction in interruption duration.

Figure 5.4 Average duration of unplanned interruptions
(minutes)



5.5 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). Therefore, businesses can seek to improve overall reliability through a number of strategies such as reducing the frequency of interruptions, reducing the number of customers affected with each interruption event or by targeting the duration of interruptions. In seeking to improve reliability, businesses are likely to pursue a combination of these approaches.

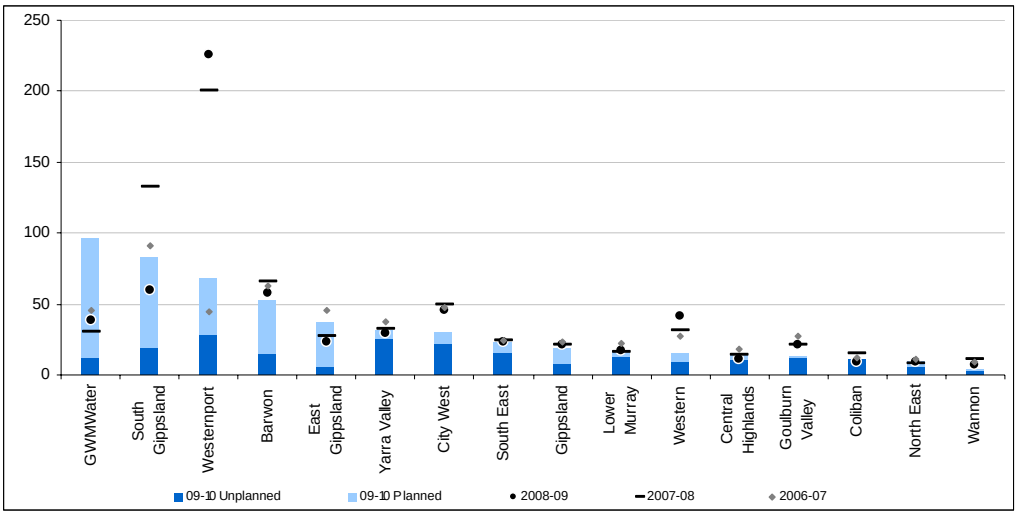
In 2009-10 the average customer minutes off supply for water supply interruptions (figure 5.5) ranged from 4 minutes (Wannon Water) to 96 minutes (GWMWater). The average for all suppliers was around 34 minutes between 2005-06 to 2007-08, falling to 31 minutes in 2008-09 and 28 minutes in 2009-10.

GWMWater's 2009-10 result represented a 147 per cent increase relative to the 39 minutes reported in 2008-09. The increase was due to longer planned interruptions, averaging 84 minutes in 2009-10 compared to 17 minutes in 2008-09, while its unplanned interruptions fell from 22 minutes in 2008-09 to 12 minutes in 2009-10. GWMWater advised that its performance was affected by the accelerated program of air scouring to improve water quality outcomes.

Westernport Water reported a 70 per cent decrease in minutes off supply from 226 minutes in 2008-09 to 67 minutes in 2009-10, with improvements in results for both planned and unplanned

interruptions. Reasons for the improvement are discussed in section 5.4.

Figure 5.5 Average customer minutes off supply
(minutes off supply)



5.6 Customers experiencing an interruption

This measure looks at the number of customers who experienced a particular number of interruptions in a year. While many of the performance indicators concentrate on average performance, this measure can identify customers who have received poor service with a higher number of interruptions.

Six of the 16 businesses reported less than 10 per cent of customers experiencing one or more unplanned interruptions in 2009-10. Wannon Water (4.7 per cent) and North East Water (5.1 per cent) had the lowest interruption rates. Businesses with a substantially higher interruption rate were Westernport Water (40.5 per cent) and South Gippsland Water (21.4 per cent). South Gippsland Water also reported the highest rate for multiple interruptions of 8.9 per cent.

Businesses also report the restoration times for unplanned and planned customer interruptions. These measures look at the promptness of a water business in restoring supply once it shuts down a water main.

The majority of unplanned water supply interruptions are restored within 3 hours. Nine businesses reported over 90 per cent of unplanned interruptions restored within 3 hours, with City West Water the lowest at 72 per cent. All businesses reported at least 95 per cent of unplanned interruptions restored within five hours, and over 98 per cent within 12 hours. Eleven of the 16 businesses restored all unplanned interruptions within 12 hours.

5.7 Sewerage service reliability

This section reports information related to 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) and
- containment of sewage within the system (as indicated by the proportion of sewage spilt during transportation).

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 context because it is confined to that customer. In contrast, a single water supply interruption will typically result in a loss of service to about fifty properties.

An appropriate measure of overall reliability of the sewerage system is the percentage of sewage collected which is contained within the system (that is, it is not released to the environment prior to treatment).

5.8 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 due to the reduced capacity of the sewer to handle the volume of sewage, particularly at times of high rainfall. A business's asset management practices will have considerable bearing on the performance of the sewer, however 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. Extended dry weather conditions over recent years have resulted in more tree roots entering the sewers in search of water. Also, as soil surrounding the pipes dries out, it can shrink and move, causing pipes to break.

In 2009-10 the average rate of sewer blockages (figure 5.7) was 24.8 blockages per 100 kilometres of sewer main, compared to 26.0 in 2008-09 and 25.8 in 2007-08, with performance ranging from 4.4 to 51.7 blockages per 100 kilometres. Generally the number of sewer blockages reported was similar to previous years, with most water businesses showing improvements in performance and only six showing a slight increase in blockages.

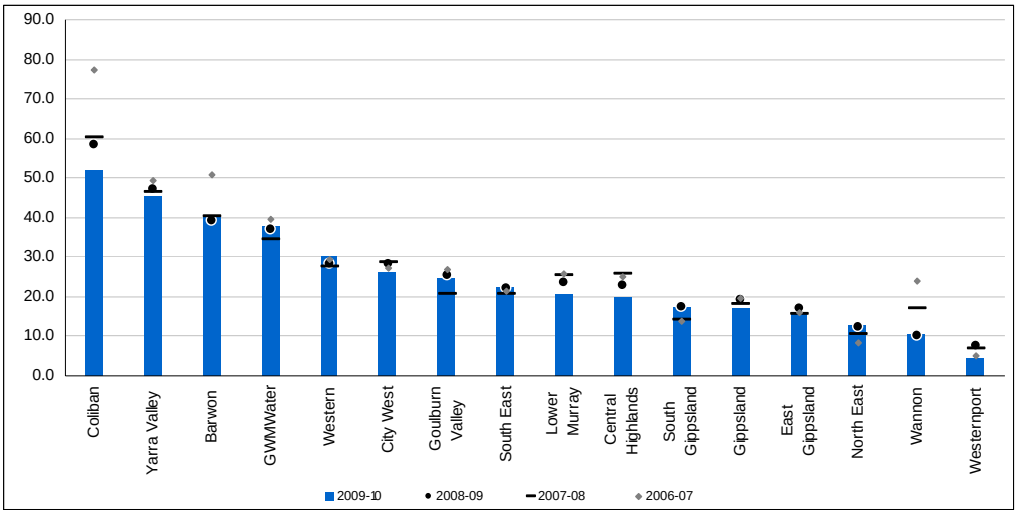
The businesses with the lowest rate of sewer blockages were the same as last year – Westernport Water (4.4 blockages per 100 kilometres) and Wannon Water (10.4).

Likewise, the two highest sewer blockages rates were again reported by Coliban Water with 51.7 blockages per 100 kilometres, followed by Yarra Valley Water (45.5).

Coliban Water experiences a high number of blockages due to the age, condition and material of sewer pipes. The number of blockages has continued to decrease over recent years (down from 93.8 in 2005-06) due to an active blockage reduction program, and improvements were again achieved in 2009-10. Coliban Water, Wannon Water and Lower Murray Water are the only businesses to make significant reductions in this area over the past five years.

Yarra Valley Water has a high number of blockages due to lots of trees and aging infrastructure which results in lots of tree root intrusion, particularly over the recent dry years. With a very large sewerage network, it is considered too costly to embark on a major replacement program, and Yarra Valley Water has opted to instead focus on rapid response to blockages and repair as required.

Figure 5.6 Sewer blockages
(per 100 kilometres of sewer main)



5.9 Customers experiencing sewer blockages

This measure looks at the number of customers experiencing a sewer blockage caused by a fault in the business's system. In 2009-10:

- the businesses with the lowest percentage of customers who experienced one or more blockages were Wannon Water (0.03 per cent) and Westernport Water (0.11 per cent).
- the businesses with the highest percentage of customers who experienced one or more blockages were GWM Water (1.74 per cent), Yarra Valley Water (1.65 per cent), City West Water (1.13 per cent) and Central Highlands Water (1.11 per cent).

Table 5.2 shows the percentage of customers who experienced one or more sewer blockages in 2009-10. The information shows that for most businesses, fewer than 1 per cent of customers experienced sewer blockages or interruptions because of faults in the business's sewer system. Multiple blockages were rarely experienced, with only two businesses exceeding 0.1 per cent, and most businesses 0.05 per cent or less.

GWM Water's figure of 435 customers experiencing a blockage was considerably higher than previous years, where they have been consistently less than 50, due to a change in how they count and report on these blockage incidents. The figure for 2008-09 should have been 359 (1.44 per cent) – the figure of 2 (0.01 per cent) supplied by GWMWater was actually the number experiencing more than one blockage. GWMWater advise that their new data collection systems do not currently allow for reporting on customers who receive multiple interruptions to their service, and they are working to address this for next year's report.

Table 5.2 Customers experiencing sewer blockages
(Actual Customers and per cent)

Blockages	*1*	*2*	*3*	*>3*
City West	3 709 (1.05%)	274 (0.08%)	4 (0.00%)	0 (0.00%)
South East	1 352 (0.22%)	52 (0.01%)	2 (0.00%)	0 (0.00%)
Yarra Valley	9 467 (1.50%)	823 (0.13%)	104 (0.02%)	18 (0.00%)
Barwon	675 (0.56%)	26 (0.02%)	2 (0.00%)	1 (0.00%)
Central Highlands	527 (1.04%)	35 (0.07%)	0 (0.00%)	0 (0.00%)
Coliban	540 (0.93%)	55 (0.09%)	6 (0.01%)	0 (0.00%)
East Gippsland	100 (0.57%)	3 (0.02%)	0 (0.00%)	0 (0.00%)
Gippsland	218 (0.41%)	26 (0.05%)	0 (0.00%)	0 (0.00%)
Goulburn Valley	310 (0.67%)	24 (0.05%)	0 (0.00%)	0 (0.00%)
GWMWater	435 (1.74%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
Lower Murray	112 (0.42%)	10 (0.04%)	1 (0.00%)	1 (0.00%)
North East	99 (0.25%)	0 (0.00%)	0 (0.00%)	0 (0.00%)
South Gippsland	76 (0.50%)	2 (0.01%)	0 (0.00%)	0 (0.00%)
Wannon	9 (0.03%)	1 (0.00%)	0 (0.00%)	0 (0.00%)
Western	291 (0.64%)	22 (0.05%)	2 (0.00%)	1 (0.00%)
Westernport	15 (0.11%)	0 (0.00%)	0 (0.00%)	0 (0.00%)

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 which 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 mm (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 which results in minor property damage or results in a discharge outside a building which does not pose a health risk.

In 2009-10 (figure 5.7):

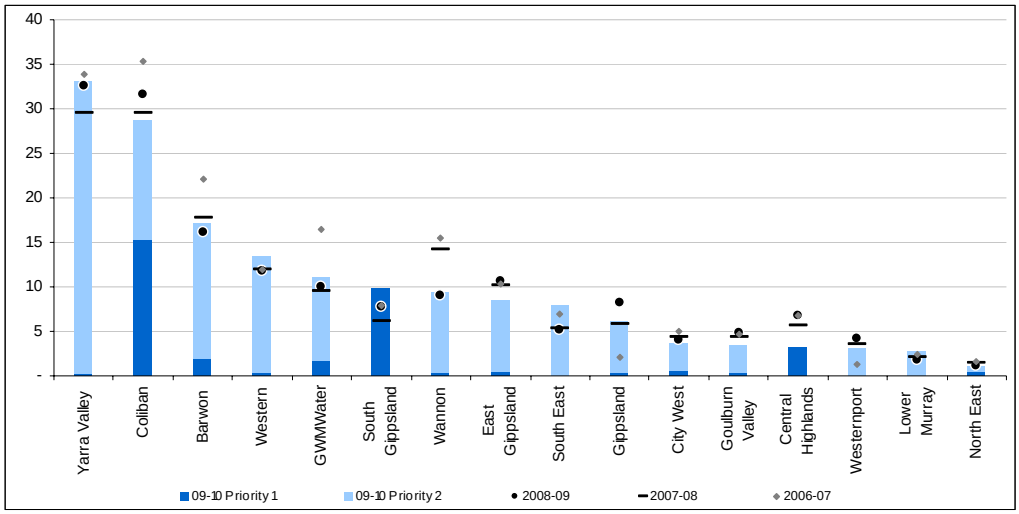
- eight of the sixteen water businesses reported five or less priority one sewer spills, with two businesses, Lower Murray Water and Westernport Water, reporting zero spills.

- Coliban Water continues to have a considerably greater number of priority one spills than other businesses, although this year was down to 15.3 per 100 kilometres compared to 25.7 in 2008-09, attributed to a high number of blockages due to the age, condition and material of sewer points.

- Yarra Valley Water again reported a much greater number of priority two spills than other businesses with an average of 32.8 per 100 kilometres, very similar to the 32.5 reported for the 2008-09 period, and for previous years.

It is worth noting that businesses may classify their spills in different ways. South Gippsland Water, for example, takes the view that all sewer spills have a potential public health concern, and have therefore classified all of their sewer spills as priority 1.

Figure 5.7 Sewer spills from reticulation and branch sewers (per 100km)



Following a sewer spill the timeliness which businesses contain sewer spills from branch and reticulation sewers is measured by reporting the percentage of spills that are fully contained within five hours.

In 2009-10, eleven businesses contained 100 per cent of sewer spills within five hours, with two others over 99 per cent. Those businesses that did not achieve 100 per cent still performed very well, as the shortfall was very small in number: for Westernport Water only 1 out of 11 total spills was not contained in 5 hours, North East Water was 1 of 13, Western Water 1 of 145, Barwon Water 1 of 393 and Goulburn Valley Water 2 of 40.

Overall, water businesses are responding quickly to contain sewer spills, with only 6 out of over 5000 sewer spills not contained within 5 hours.

5.11 Sewer spills – customer properties and the environment

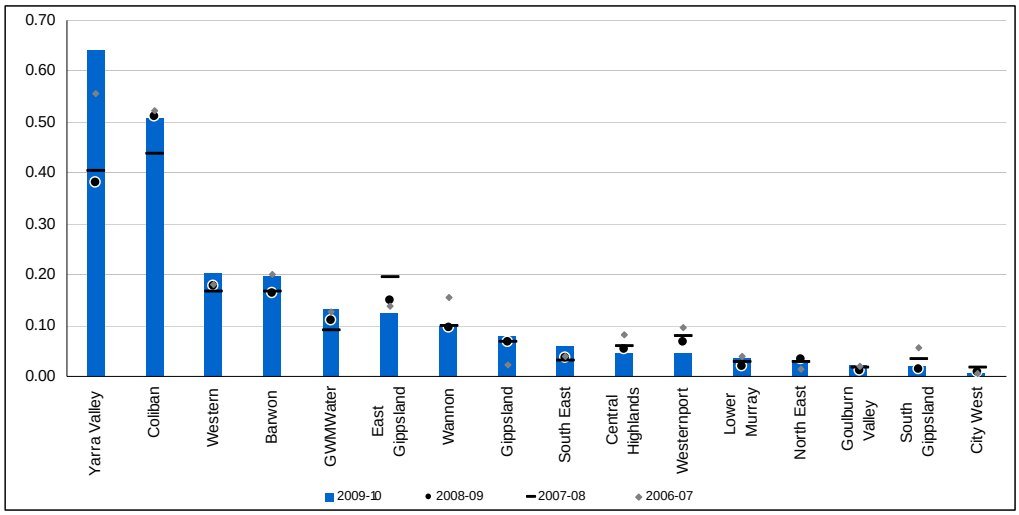
Seven businesses reported rates of sewer spills to customers properties of 0.05 or less per 100 customers, with the lowest again being reported by City West Water with less than 0.01 per 100 customers (figure 5.8).

The highest rates of spills to customers' properties were reported by Yarra Valley Water (0.64 per 100 customers) and Coliban Water (0.51).

Yarra Valley Water's rate increased by almost 70 per cent on the previous year, despite having a similar number of sewer blockages and spills, and 100 per cent of spills being contained within five hours. Yarra Valley Water indicated they were concerned by this increase and are investigating its causes. The initial view is that it is a consequence of the change to a wetter weather pattern since autumn 2009. Previous dry weather meant lower flows and resulted in fewer spills, but also increased tree root intrusion into sewers. The wetter weather has increased flows which, compounded by blockages created by root intrusion, has led to more spills to customers property.

Coliban Water experiences a high number of blockages due to the age, condition and material of sewer pipes. The number of blockages has decreased over recent years due to an active blockage reduction program but the number of spills to customers' property remains quite steady.

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 the supply of 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 the urban water businesses' compliance with some key parameters that indicate drinking water quality, namely:

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

It should be noted that some reticulated water supplies in regional Victoria do not need to be meet drinking water standards. These supplies are not included in the indicators.

6.2 Microbiological water quality

The micro-biogical quality of drinking water is measured in terms of the number of *Escherichia coli (E. coli)* per 100 millilitres of drinking water. The presence of *E. coli* means that water may be contaminated with faecal material. These organisms should not be present in drinking water. During 2009-10 all urban water businesses met the *Safe Drinking Water Regulations* limit of at least 98% of all samples of drinking water collected in any 12 month period contain no *E. coli* per 100 millilitres of drinking water.

There has been a continual reduction in the number of water businesses reporting that they did not meet the drinking water standards in this regard since 2005-06.

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

During 2009-10 all urban water businesses with the exception of GWMWater delivered water that met the turbidity levels set in the *Safe Drinking Water Regulations*. GWMWater reported that 98.6% of customers received drinking water that met the turbidity requirements.

Over the period 2005-06 to 2009-10 GWMWater has steadily improved the percentage of customers that receiving water that meets the turbidity limits.

GWMWater advised that turbidity is a significant water quality issue for urban centres supplied with water sourced from the Murray River system and delivered by the Northern Mallee Pipeline. Towns most affected by this issue include Manangatang, Ultima, Nullawil and Lalbert.

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 with the number of water quality complaints being a measure of customer satisfaction with these aesthetic qualities. Rates of overall water complaints have been maintained or reduced for most water businesses over the years as shown in figure 6.1.

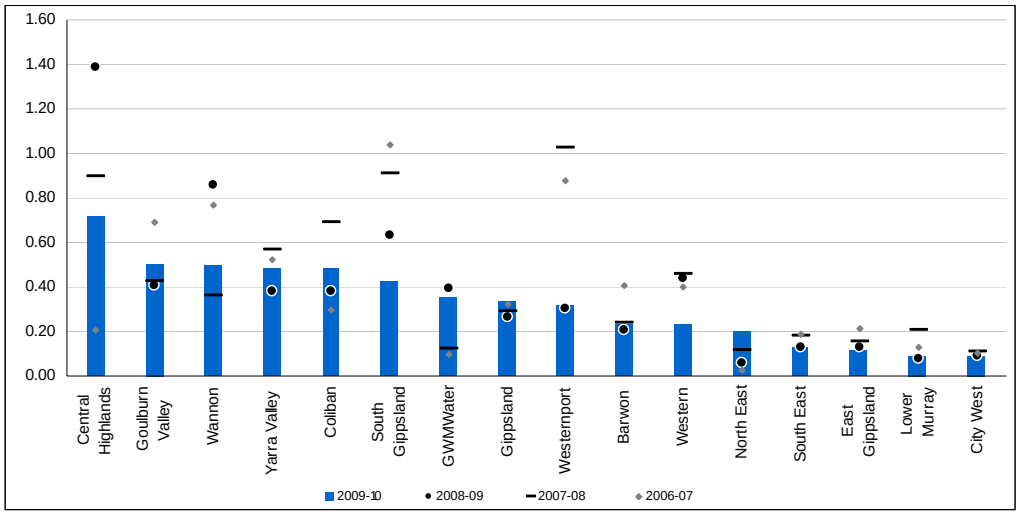
Overall Victorian water customers made 0.29 water quality complaints per 100 customers in 2009-10, with the rate of complaints trending lower over the last five years, down from 0.37 in 2005-06.

In 2009-10 Central Highlands Water reported the highest rate of water quality complaints at 0.72 per 100 customers. This is a substantial reduction from the 2008-09 figure of 1.39, primarily due to colour complaints falling from 0.99 in 2008-09 to 0.53 in 2009-10. However colour complaints are still higher than the three years prior to 2008-09.

Central Highlands Water advised that the majority of water quality complaints in 2009-10 came about due to the easing of water restrictions. This created peak flow rates that agitated sediments which had settled in the water mains over several years.

South Gippsland Water, Wannon Water and Western Water also reported substantial reductions in water quality complaints compared to previous years. South Gippsland Water commented that the reduction was due to higher quality source water resulting from increased storage levels, compared to alternative sources of supply such as river extraction and groundwater. Western Water reported that the reactive cleaning of some areas of the Melton system contributed to a reduction in dirty water events over the course of 2009-10.

Figure 6.1 Water quality complaints — all causes
(per 100 customers)



The majority of water businesses reported that colour was the main cause of complaint — the exceptions being Westernport Water, North East Water and GWMWater with taste/odour being the main form of complaint.

Blue water complaints resulting from copper corrosion were relatively rare, received only by South East Water, City West Water, Yarra Valley Water and Gippsland Water, at low rates of less than 0.01 complaints per 100 customers.

7 ENVIRONMENTAL

7.1 Background

This part of the report provides information on the businesses' environmental performance. It covers the areas of sewage treatment and compliance, the recycling of effluent, biosolid reuse and greenhouse gas emissions.

7.2 Sewage effluent treatment volumes

The Environmental 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 levels that sewage is treated to:

- 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 may remove other targeted contaminants of concern

The total volume of sewage treated in Victoria was 416 593 ML in 2009-10. This marks a rise in total sewer volumes, after four years of decline, of 3.9 per cent (400 968 ML in 2008-09) per annum.

The majority of sewage is treated to a secondary level, including all of Melbourne Water treatment accounting for 65.2 per cent (271 739 ML) of Victoria's total sewage. Excluding Melbourne Water 55 per cent of sewage is treated to a tertiary level.

The proportion of sewage treated to a tertiary level has been increasing over time and increased again in 2009-10 from 12.5 per cent to 13.4 per cent (9.9 per cent in 2007-8), primarily due to South East Water increasing relevant volumes from 6 165 ML to 10 043 ML.

Lower Murray Water, Gippsland Water and GWMWater were the only businesses to treat sewage to only a primary level in 2009-10.

7.3 Recycled water

The majority of sewage treatment plants operated by the water businesses are subject to the *State Environment Protection Policy and Waters of Victoria* schedules, which are developed and administered by the EPA. The schedules require that sewage treatment plant operators ensure that the sustainable reuse of wastewater and treatment sludge is maximised 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. Recycled water can also be used for beneficial environmental outcomes, such as wetlands, and on-site treatment plant uses external to the treatment process.

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

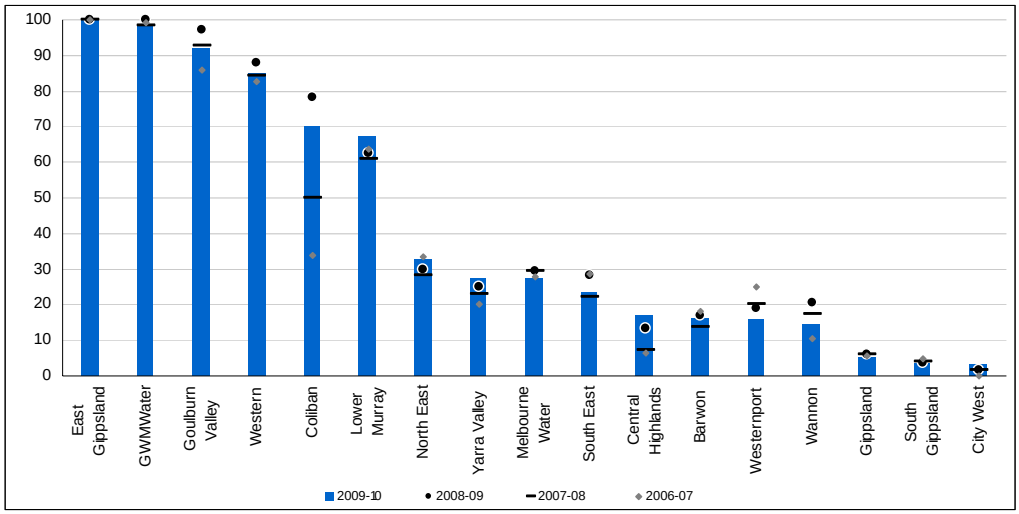
Across Victoria 28.8 per cent of all effluent was recycled in 2009-10, a reduction on the 30.6 per cent recorded in 2008-09. This percentage fall was uniform across regional Victoria and metropolitan Melbourne (34.1 from 35.9 in the former, 27.1 from 28.9 in the latter).

The lower percentage of effluent reused is a reflection of the larger sewage volumes in 2009-10 and less demand due to a milder summer. The 115 070 ML reused in 2009-10 is only 500 ML less than in 2008-09 but 20 700 ML more than in 2005-06.

East Gippsland Water achieved 100 per cent effluent reuse for the sixth straight year and GWMWater also repeated a full reuse figure for the second year running. Goulburn Valley Water, Western Water and Coliban Water all returned lower results than last year.

Increased levels of recycling were reported by City West Water, Yarra Valley Water, Central Highlands Water, North East Water and Lower Murray Water with the most significant rise posted by the latter (67 per cent in 2009-10, up from 62 per cent in 2008-09). The major use of recycled water is for agricultural purposes (44 per cent) and only a small component is for urban and industrial use (5 per cent).

Figure 7.1 Proportion of effluent reused
(per cent)



7.4 Biosolid 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 various beneficial reuses, for example as organic-rich fertiliser, or disposal as a non-reusable waste to landfill.

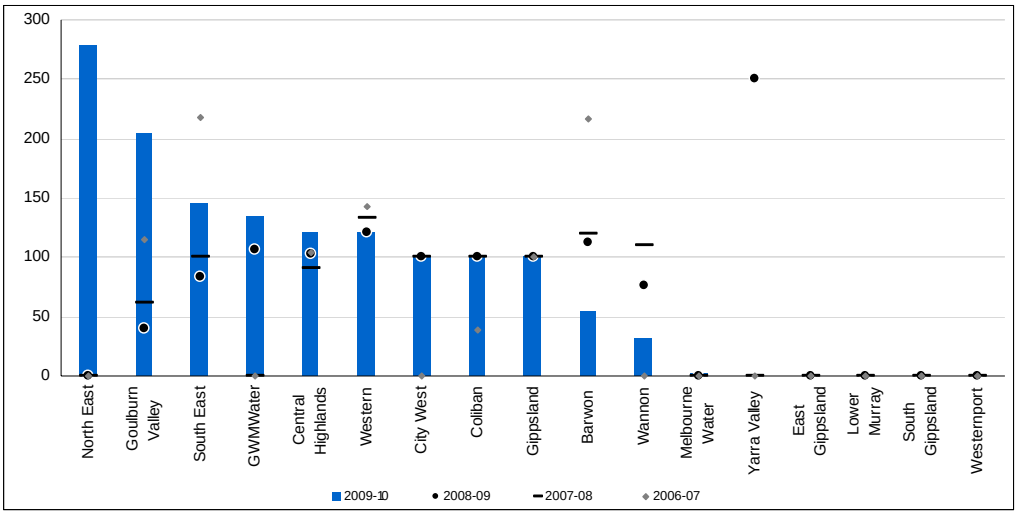
In any given year, a water business can accumulate (stockpile) biosolids without disposing of any, therefore a zero reuse figure does not directly imply that a business does not find reuse opportunities for its biosolids. Correspondingly, reuse percentages in excess of 100 per cent indicate that some of the stockpiled material from previous years has been utilized.

Overall, 40.0 per cent of biosolids were reused in 2009-10, as opposed to 23.6 per cent recorded in 2008-09 (figure 7.2).

The highest rate of biosolid recycling was reported by North East Water with 279 per cent reused followed by Goulburn Valley with 205 per cent. Seven other businesses also reported results of 100 per cent or over (City West Water, South East Water, Central Highlands Water, Coliban Water, Gippsland Water, GWM Water and Western Water), while five businesses did not report any reuse of biosolids.

Yarra Valley Water's fall from 250 per cent in 2008-09 to no reuse in 2009-10 indicates that they reused its stockpiled biosolids and have recommenced stockpiling for future reuse.

Figure 7.2 Proportion of biosolids reused
(per cent)



7.5 Greenhouse gas emissions

Table 7.1 shows the net greenhouse gas emissions produced by each of the businesses from 2006-07 to 2009-10 (these results are net of offsets). The calculations are based on the conversion factors issued by the Australian Greenhouse Office for the years 2005-06 to 2007-08. From 2008-09 greenhouse emissions are based on the framework of the National Greenhouse and Energy Reporting System (NGERS), with Melbourne Water reporting to the Department of Climate Change and Energy Efficiency (Cth).

Total net CO_2-e emissions reported by the Victorian urban water businesses for 2009-10 was 822 200 equivalent tonnes, an improvement on the 862 200 tonnes reported in 2008-09. Due to the nature and scale of its operations, Melbourne Water was again the largest net CO_2-e emitter accounting for almost 43 per cent of the total. Gippsland Water was the second largest, followed

by Barwon Water, Coliban Water and Central Highlands Water.

Overall emissions per customer for all businesses were 0.39 tonnes of CO_2-e. Metropolitan emissions per customer were 0.27 tonnes while regional businesses emitted 0.73 tonnes per customer.

Table 7.1 Historic net greenhouse gas emissions
(equivalent tonnes of CO2)

	2006-07	*2007-08*	*2008-09*	*2009-10*	*1 year per cent change*	*Per customer*
Melbourne Water	338 147	265 769	284 464	376 157	351 071	0.23
City West	8 077	6 905	3 432	5 318	2 388	0.01
South East	33 470	29 115	27 113	24 488	29 023	0.05
Yarra Valley	14 667	10 136	25 985	30 725	27 077	0.04
Barwon	56 286	58 100	54 094	52 485	52 348	0.42
Central Highlands	46 778	na	26 223	56 483	51 251	0.93
Coliban	40 763	31 053	44 898	49 905	51 396	0.85
East Gippsland	8 439	7 927	7 973	8 525	8 846	0.48
Gippsland	47 418	73 860	76 596	70 886	73 288	1.29
Goulburn Valley	42 909	35 586	29 983	32 707	29 742	0.64
GWMWater	14 401	16 078	14 844	13 434	19 031	0.73
Lower Murray	32 120	28 220	21 925	28 686	21 007	0.77
North East	63 893	32 722	24 473	32 922	36 587	0.91
South Gippsland	4 793	9 101	6 895	11 458	13 209	0.87
Wannon	na	41 997	37 848	39 025	30 734	0.91
Western	23 192	23 958	23 484	24 503	20 846	0.44
Westernport	4 661	4 510	4 872	4 490	4 317	0.31

Table 7.2 shows the contributions to CO_2-e emissions by each water business activity. Sewage treatment processes are the biggest contributor of greenhouse gas emissions, accounting for 62 per cent of the gross emissions. This is followed by water treatment processes, responsible for 32 per cent of the gross total.

Table 7.2 Sources of greenhouse gas emissions
(equivalent tonnes of CO2)

	Water	*Sewerage*	*Transport*	*Other*	*Offsets*	*Total* [a]
Melbourne Water	107 922	291 742	3 388	9 452	61 432	351 071
City West	301	7 950	1 359	2 128	9 351	2 388
South East	6 096	26 053	831	4 283	8 240	29 023
Yarra Valley	5 457	18 165	1 130	2 612	287	27 077
Barwon	14 029	34 285	1 335	2 699	0	52 348
Central Highlands	38 566	10 231	945	1 524	15	51 251
Coliban	30 926	18 872	1 050	548	0	51 396
East Gippsland	4 716	3 461	367	307	5	8 846
Gippsland	9 558	56 960	1 973	4 796	0	73 288
Goulburn Valley	13 895	14 930	1 117	466	666	29 742
GWMWater	10 798	7 111	1 447	959	1 285	19 031
Lower Murray	16 440	5 312	707	628	2 080	21 007
North East	7 619	27 459	860	971	322	36 587
South Gippsland	2 040	10 348	621	200	0	13 209
Wannon	12 946	18 053	864	459	1 588	30 734
Western	9 572	12 631	587	1 337	3 281	20 846
Westernport	1 665	2 187	233	232	0	4 317
Total	292 546	565 750	18 814	33 601	88 551	822 159

a Total CO_2-e emissions are net of offsets

8 STATUS OF MAJOR PROJECTS

Table 8.1 describes the projects that each business scheduled for completion in 2009-10, and whether or not the project has been completed. The table also lists projects that were to be completed in 2008-09, but were delayed for various reasons.

In total $1.74 billion dollars of capital expenditure was undertaken by the Victorian water industry. Capital expenditure on water was $952 million and sewerage $787 million.

Businesses are asked to provide an update on the status of the nominated projects to be incorporated into the 2010-11 urban performance report.

There were 29 major projects either identified by water businesses in the last price review to be completed 2009-10 or delayed from 2008-09. Of these projects six were completed fully in 2009-10, six are substantially completed and the remaining 17 projects were either delayed or reprioritised.

The Commission remains concerned with delays to major projects that have been incorporated into pricing based on original timelines or where consumers are waiting for improved service.

Table 8.1 Status of projects nominated for completion in 2009-10

Business	*Project Description*	*Comments*
Yarra Valley Water	• Epping-Craigieburn - Sections 2 and 3	Sections 2 and 3 are required to provide sewerage services to industrial development in the northern suburbs. Development of the area has been slower than expected causing delivery of assets to be delayed a year. Section 2 is 90 per cent complete and expected to be completed in December 2010. Section 3 is 85 per cent complete and expected to be completed in February 2011.
Melbourne Water	• Werribee Aqueduct: replacing sewer aqueduct that crosses the Werribee River	Project has achieved construction completion with demolition and site reinstatement yet to be completed. Scheduled completion date is Dec 2010
	• Eastern Treatment Plant: sludge processing refurbishment and upgrade	Due to ongoing commissioning problems and earlier issues associated with design suitability and constructability the project has been subject to further delays with completion now not expected until late December 2010
	• Sugarloaf pipeline	Completion of the project was reached ahead of schedule and under budget, in April 2010.
	• Eastern Treatment Plant: implement a new nitrification/denitrification process	Upgrade to the existing tanks (Stage 1) has been successfully completed with EPA Compliance requirements being met. Construction of the new tanks (Stage 2) was 90% completed when further structural issues were discovered and full rectification will now delay completion of the project into late 2011. This delay is not expected to impact on EPA Compliance.

Barwon Water	• Anglesea Borefield project	Commissioning of the project occurred in November 2009, and the ongoing works involve completion of the final production bore site and installation of monitoring infrastructure required in accordance with Bulk Entitlement. The drilling of this final bore site is due for completion in the first half of 2011.
Coliban Water	• Leitchville and Gunbower water treatment plant	These works have been delayed due to redesign work required following the loss of a major non-residential customer responsible for approx 50 per cent of total water demand in Leitchville. Tenders are being conducted for the works with completion due mid 2011 for Gunbower and early 2012 for Leitchville.
Central Highlands Water	• Ballarat & Creswick sewage treatment plant improvements	Project completed
East Gippsland Water	• Bogong Street and Capes Road high level system augmentation	Bogong Street & Capes Road pump station replacement (new pump station at Whiters Street Lakes Entrance) has been completed.
	• Delivery Tambo Bluff and Banksia Peninsula Sewerage scheme	Banksia Peninsula Scheme is now completed. Tambo Bluff scheme is still in progress, and is being managed by East Gippsland Shire Council with completion expected by June 2011.
Gippsland Water	• Gippsland Water Factory	Domestic waste stream has been operational from January 2010. The industrial wastewater process stream will be fully operational from January 2011. A Department of Health approval for transfer of recycled water to Australian Paper was granted in August 2010.
	• Gippsland Water Factory Micro hydro	Micro hydro was completed in March 2009.
	• Gippsland Water Factory Bio gas	Bio-gas will be fully operational from January 2011.
Goulburn Valley Water	• Alexandra Eildon pipeline	The construction works were completed in May 2010. The contractor has experienced difficulties in commissioning the pipeline and is still attempting to resolve these issues.
	• Bonnie Doon water treatment plant	The Bonnie Doon water treatment plant has been completed and was commissioned in February 2010
GWMWater	• Wimmera Mallee Pipeline	Wet weather has delayed the completion of final minor works on the project. All systems of the pipeline are considered to be fully operational. Minor works are expected to be completed by February 2011. The decommissioning of earthen domestic and stock channels is due for completion in June 2012.
	• Edenhope water supply security	The project has been contingent upon GWMWater locating an aquifer in close proximity that would yield water in sufficient quantities and within an acceptable quality standard. The aquifer assessment report will be formally received in early November 2011. Planning and design for other aspects of the project have been undertaken concurrently with the aquifer investigations.
Lower Murray Water	• Red Cliffs sewage treatment plant decommissioning	All of Red Cliffs waste water is now diverted to the Koorlong sewage treatment plant. The Red Cliffs sewage treatment plant is now off-line and made safe. Further decommissioning works in the form of demolition and removal of portions of plant to be undertaken in 2011.

	• Koorlong sewage treatment plant upgrade and augmentation	This project is nearing completion with the major contract now within the defects and liabilities period. The treatment portion of the process plant was commissioned in September 2010 producing Class C recycled water to a third party for irrigation. A small portion of works, being sludge handling is to be commissioned in March 2011.
North East Water	• New administrative office	North East Water acquired a parcel of land on Thomas Mitchell Drive Wodonga in 2009-10 as the nominated site for the construction of the regional head office. The project will be finished in 2012-13.
	• Beechworth sewage treatment plant upgrade	The project was initiated in response to high total nitrogen which exceeded the current EPA licence median limits. North East Water is working with the EPA to determine what the appropriate discharge limits will be. This will impact on the final solution and as a result the completion of this project will be delayed until the end of this water plan period.
South Gippsland Water	• Meeniyan Sewerage Scheme	Installation of reticulation sewers, central pumping station and rising main completed. Sewage treatment plant lagoons/wetlands construction is delayed due to continual wet weather saturating works site. The lagoons/wetlands will now be scheduled for completion by March 2011.
Wannon Water	• Hamilton Grampians Inter-Connecter Pipeline	Project completed
	• Wannon Water office building	Construction works nearing completion, project completion date 31 October 2010.
	• West Portland sewerage scheme.	Project on hold while VCAT considers objections to the Scheme. Construction works likely to be deferred to the 2011-12 construction season.
	• Port Campbell sewage treatment plant and recycling works	Detailed design stage underway. Stage 1 works to be completed in 2010-11 and Stage 2 works completed in 2011-12.
Western Water	• Merrimu Water Tank	This project is now scheduled for completion by April 2011. The Merrimu project formed part of a dual contract delivery strategy with another tank site at Rosslynne Reservoir. This caused a delay in commencement but will result in overall cost savings.
Westernport Water	• Bass River Augmentation	This project is postponed while consideration is given to an offer to take desal pipeline waste.
	• Bass River Pipeline extension to Ian Bartlett water treatment plant	This project is being considered in conjunction with the project to upgrade Candowie Reservoir. As such is likely to proceed between 2011-12 and 2012-13.