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WATER PERFORMANCE REPORT

PERFORMANCE OF URBAN WATER AND SEWERAGE BUSINESSES 2007-08

MARCH 2009

An appropriate citation for this paper is:

Essential Services Commission 2009, *Performance of Urban Water and Sewerage Businesses 2007-08*, March.

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EXECUTIVE SUMMARY

This is the fourth annual report published by the Commission on the performance of all of the Victorian businesses that provide water, sewerage and related services to urban customers[1]. 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. The report incorporates data provided by the businesses for the 12 months to June 2008. This data has been independently verified as part of the Commission's audit framework that applies to the Victorian water sector.

The report covers the performance of the three metropolitan water retailers, the 13 regional urban water businesses and Melbourne Water. Specifically, it reports the performance of:

- the three metropolitan water retailers — City West Water, South East Water and Yarra Valley Water
- the 13 regional urban water businesses — 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, Westernport Water and Western Water and
- Melbourne Water — the supplier of bulk water and sewerage services to the metropolitan retailers (and a number of other regional urban water businesses).[2]

It is part of a series of annual reports comparing the monopoly services provided by companies operating in the Victorian water industry, the Victorian electricity industry, and the Victorian gas industry. Generally, these reports examine the quality and reliability of supply, affordability and customer service issues in these industries.

The report covers the following key areas in relation to performance reporting: affordability, customer responsiveness and service, network reliability and efficiency, drinking water quality, environmental performance, delivery of major projects and the results of regulatory audits.

The information provided allows judgements to be made about comparative service performance. It provides incentives for businesses to improve their performance

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1 The Commission has monitored and reported on the performance of the three metropolitan Melbourne water retailers since 1995.

2 Note that as a bulk supplier of water and sewerage services, not all measures reported on in this report are applicable to Melbourne Water.

relative to that of other businesses and also to improve their own performance over time. The report also provides information to customers about the services they are receiving.

Despite the difficult operating environment the performance outcomes for 2007-08 show that customers receive a relatively high level of service with most businesses maintaining or improving services from the previous year. Key performance issues were:

Affordability in 2007-08

In 2007-08 average household bills for water and sewerage services ranged from $436 to $740.

- The lowest average water bills were reported by City West Water ($436), South East Water ($438), Yarra Valley Water ($461) and Goulburn Valley Water ($501).
- The highest average water bills were South Gippsland Water ($740), Westernport Water ($718), GWMWater ($710) and Central Highlands Water ($690).

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.

In 2007-08 average household consumption ranged from 71 kL for Westernport Water's region with a large seasonal population, to 307 kL in Lower Murray Water's region in the north west of the State. State-wide, average household consumption reduced from 180 kL in 2006-07 to 160 kL in 2007-08 due to the impact of water restrictions.

Generally, average household consumption levels in 2007-08 are higher in regional Victoria, with 176 kL per household, than metropolitan Melbourne where average household consumption was 153 kL.

In 2007-08, a total of 2 667 domestic customers (including 563 domestic customers on concession) and 49 non-domestic customers had their water supply restricted for non-payment of water bills. Westernport Water had the highest proportion of domestic restrictions of any business with 1.13 per 100 customers. City West Water and East Gippsland Water did not restrict any domestic customers.

Legal action was taken against 2 553 customers across Victoria in 2007-08 for the non-payment of water bills. The total comprised 2 082 domestic (1 938 non-concession customers and 144 concession customers) and 471 non-domestic customers.

Customer service and complaint handling in 2007-08

In 2007-08 the businesses received a total of 14 828 complaints, representing a 19 per cent increase from 2006-07. This equates to a frequency of 0.66 complaints per 100 customers across the State.

North East Water and South East Water recorded the lowest level of complaints with 0.24 and 0.28 per 100 customers respectively.

The complaint types received by the water businesses in order of frequency were water quality (52.3 per cent), billing (12.2 per cent), pressure (9.3 per cent), sewer odour (5.6 per cent), water service reliability (2.4 per cent), sewer service reliability (1.9 per cent) and affordability (1.3 per cent).

In 2007-08, the Energy and Water Ombudsman (Victoria) EWOV received 1 109 complaints in relation to the metropolitan and regional urban businesses.

Reliability in 2007-08

Overall reliability of a water supply network is measured by customer minutes off supply. In 2007-08 the average customer minutes off supply for water supply interruptions averaged 34 minutes across all suppliers, with a range of 8 minutes for North East Water to 200 minutes reported by Westernport Water.

The average duration of unplanned water supply interruptions was 102 minutes in 2007-08. With average times for businesses ranging from 56 minutes for Lower Murray Water to 139 minutes for City West Water. The percentage of customers experiencing an unplanned interruption ranged from 5.1 per cent for Wannon Water to 28.7 per cent for South Gippsland Water.

In 2007-08 the total rate of planned and unplanned water supply interruptions ranged from 13.1 to 74.4 per 100 kilometres of water main. North East Water had the lowest rate of water supply interruptions (13.1 interruptions per 100 kilometres) followed by Wannon Water (13.2), Western Water (20.8) and East Gippsland Water (20.9).

In 2007-08 the average rate of sewer blockages was 31.5 blockages per 100 kilometres of sewer main (down from 34.3 blockages per 100 kilometres of sewer main in 2006-07). Performance ranged from 6.8 blockages per 100 kilometres for Westernport Water to 60.4 for Coliban Water.

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

Drinking water quality in 2007-08

The microbiological quality of drinking water delivered to customers across Victoria remained high. Tests for *E. coli* bacteria (the most significant indicator) showed that during 2007-08, almost all customers received drinking water that met *E. coli* requirements as specified by the Department of Human Services (DHS).

Additionally, in 2007-08 almost all customers received drinking water that met the turbidity (which affects the water appearance) requirements with 15 of the 16

businesses reporting 100 per cent of customers receiving water that met turbidity requirements.

Environmental performance in 2007-08

2007-08 saw a 1.5 per cent reduction in the volume of sewage treated across Victoria's 195 sewage treatment plants from 413 279 ML to a total 406 056 ML. Over 97.6 per cent of sewage was treated to at least secondary level, with 11.1 per cent being treated to a tertiary standard. Most businesses reported close to 100 per cent compliance with discharge requirements specified by their Environment Protection Authority (EPA) licences.

Across Victoria 29.1 per cent of effluent was recycled in 2007-08, an increase from 28.6 per cent the previous year. In regional Victoria 30.5 per cent of effluent was recycled compared to 31.2 per cent in 2006-07. In metropolitan Melbourne, 28.6 per cent of effluent was recycled (including beneficial environmental flows for Ramsar listed wetlands at the Western Treatment Plant). This represented a contribution of 23.1 per cent recycling towards the Government's 2010 target of 20 per cent (which does not include beneficial environmental flows) compared to 22.5 percent in 2006-07.

Overall, 36.8 per cent of biosolids were reused in 2007-08. The highest rate of biosolids recycling was reported by Western Water with 133 per cent reused followed by Barwon Water with 120 per cent reused, representing a reduction in stockpiled biosolids.

Total net CO_2 equivalent emissions generated by Victorian urban water businesses were 715 101 equivalent tonnes in 2007-08. On average, businesses reported a 2.1% increase from 2006-07.

Data accuracy and regulatory audits

This is the fourth time that data from the regional urban businesses and Melbourne Water has been reported by the Commission and subject to external audits. Generally, regional businesses have improved systems to collect and report information leading to a higher level of data quality.

Audits of selected clauses of the customer service code covering payment methods, collection and restriction showed a high level of compliance with the customer service code.

1 INTRODUCTION

1.1 Background

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 reports on the performance of the electricity and gas distribution and energy retail businesses, as well as the Victorian water businesses. The experience from across these sectors is that public disclosure and reporting of information can be a strong driver of performance.

Since 1995, the Commission has reported annually on the performance of the three metropolitan water retailers. In March 2006, the Commission completed its first annual report published on the performance of all of the Victorian businesses that provide water, sewerage and related services to urban customers. This is the Commission's third annual report on the performance of all of the Victorian urban water businesses.

Specifically, performance reports now 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,[3] Westernport Water and Western Water and

[3] On July 1 2005, Wannon Water was formed by a merger of Glenelg Water, Portland Coast Water and South West Water.

- Melbourne Water — the supplier of bulk water and sewerage services to the metropolitan retailers (and a number of regional water businesses).[4]

This report covers the businesses' performance over the 2007-08 financial year across a number of key performance indicators. The range of indicators and definitions reported against were 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, the number of restrictions and legal actions for non-payment of bills, average debt levels at which restrictions and legal actions were applied, the availability of instalment payments and the number of hardship grant applications and approvals
- **customer responsiveness and service** — including customer complaints, call centre performance and timeliness of responding to development applications and information statements
- **network reliability and efficiency** — including frequency, duration, responsiveness to and rectification of water supply interruptions, sewer blockages and spills as well as levels of leakage and losses from water supply systems
- **water quality** — including drinking water quality and water quality complaints
- **conservation and the environment** — including compliance with Environment Protection Authority (EPA) discharge licences at sewage treatment plants, water consumption, the level of reuse and recycling of effluent and biosolids and the level of greenhouse gas emissions and
- **historical performance** — including comparisons for all indicators and businesses with last year's data.

This report does not include information on the rural water businesses that supply irrigation, drainage, diversions and storage operator and bulk water services.[5] The Commission is currently developing performance indicators and a reporting framework to apply to these businesses.

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[4] Note that as a bulk supplier of water and sewerage services, not all measures reported on in this report are applicable to Melbourne Water.

[5] Note that this report does cover the urban aspects of those businesses that provide both rural and urban services.

1.3 The Commission's role in regulating service standards

This report includes performance measures related to a number of key areas including conservation and the environment and water quality. However, it is important to note that the Commission is not responsible for regulating or driving performance in all of these areas. For example, the Environment Protection Authority is responsible for regulation of environmental standards and the Department of Human Services is responsible for drinking water quality standards.

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 in this regulatory period for the businesses to propose their own service levels or targets rather than having to meet a consistent performance standard across businesses.[6] 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 Charters must cover certain minimum information requirements set by the Customer Service Code, and outline the businesses' approved service standards.

The Commission is responsible for monitoring and enforcing compliance with the 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 Information sources

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

[6] The first regulatory period expired on 30 June 2008. The Commission released its Final Decision for regional and rural businesses for the next regulatory period (2008-09 - 2012-13).

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

1.5 Performance indicator review

The Commission is planning to conduct a review of the performance indicators and their definitions during 2009-10. The Commission considers sufficient time has elapsed since the release of the original Water Performance Reporting Framework and performance indicators in July 2004, for a review to be of value.

One aspect to be included in the review will be the inclusion of financial indicators in performance reporting.

2 STRUCTURE OF THE WATER INDUSTRY

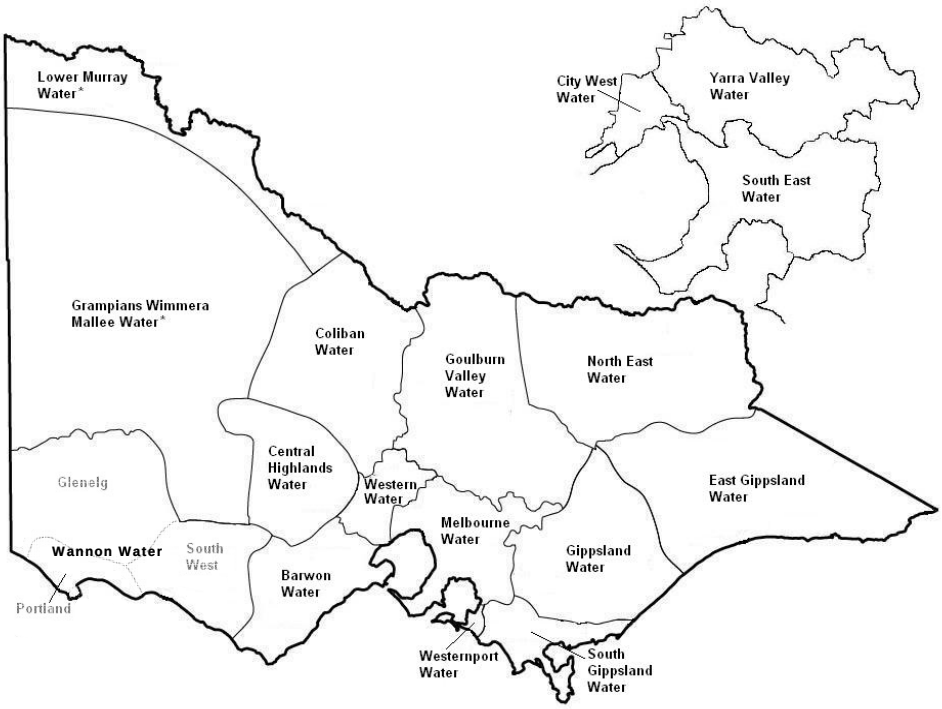
The Victorian water businesses are diverse in terms of size, the services they provide and the environments in which they operate. The Commission is required to take this diversity into account in developing its regulatory approach.

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, Westernport Water, Western Water, and
- the rural water sector comprising Goulburn Murray Water and Southern Rural Water. GWMWater and Lower Murray Water provide urban water services in addition to rural water services.[7]

[7] The Victorian Government in August 2008 appointed Lower Murray Water (LMW) to take over First Mildura Irrigation Trust (FMIT).

Figure 1 — Victorian urban water industry 2007-08



* Urban service area for Lower Murray Water and GWMWater

2.1 Metropolitan businesses

In the metropolitan area, Melbourne Water provides wholesale services to the three metropolitan retailers.[8] 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 all 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[9] of total water use in Victoria. Their functions include:

8 Melbourne Water also provides bulk water services to a number of regional businesses including Gippsland Water, Southern Rural Water and Western Water.

9 State Water Report 2004-05

- 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.
- providing trade waste services to commercial and industrial customers.

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

Table 1 Metropolitan water businesses – overview

	Water customers	*Sewerage customers*	*Length of water main (km)*	*Length of sewer main (km)*
City West	336 947	333 205	4 217	3 708
South East	625 862	591 427	8 585	8 033
Yarra Valley	660 263	610 017	9 088	8 673
Melbourne Water	Not applicable	Not applicable	1 232	343

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[10] of total water use in Victoria. Regional urban water businesses are statutory authorities with powers and functions derived from the *Water Act 1989*.

Unlike the metropolitan sector, these businesses are generally vertically integrated. The services they provide may include:

- harvesting water and operating and managing headworks (although some regional urban businesses purchase water from rural water businesses)
- treating water
- distributing water to households and industrial customers
- collecting, treating and disposing of sewage and further treating sewage for recycling and reuse purposes and
- a range of retail customer service functions, including meter reading, billing and payment, and handling call centre enquiries and complaints.

[10] State Water Report 2004-05

Table 2 Regional water businesses – overview

	Water customers	*Sewerage customers*	*Length of water main (km)*	*Length of sewer main (km)*
Barwon	130 550	116 958	3 472	2 245
Central Highlands	58 371	48 782	2 194	1 178
Coliban	65 223	56 040	2 135	1 733
East Gippsland	20 332	16 409	877	576
Gippsland	59 822	51 239	2 009	1 485
Goulburn Valley	52 033	43 952	1 694	1 170
GWMWater	30 564	24 654	1 243	636
Lower Murray	30 162	25 738	894	598
North East	43 705	38 638	1 520	1 036
South Gippsland	17 481	14 607	626	373
Wannon	40 157	33 219	1 755	859
Western	47 959	41 870	1 690	1 024
Westernport	14 305	12 875	374	308

2.3 Rural water businesses

There are four water businesses that provide rural water services to regionally based customers: GWMWater, Goulburn Murray Water, Lower Murray Water and Southern Rural Water.[11] The rural water business service areas are defined geographically across the state. The services that they provide include:

- supplying water for irrigation, private diverters and stock and domestic water users
- providing irrigation drainage services
- supplying water to fulfil delivery and source bulk entitlements
- operating storage facilities and the infrastructure of irrigation districts
- constructing and maintaining delivery and irrigation drainage services
- licensing ground water and surface water extraction and
- dealing with customer issues such as complaints, billing and payment collection.

The performance of the rural water businesses is not included in the scope of this report. The Commission has developed a performance reporting framework that will apply to rural water businesses.

[11] Both GWMWater and Lower Murray Water also provide water, sewerage and related services to urban customers. The performance of the urban components of these businesses is included in this report. The Victorian Government in August 2008 appointed Lower Murray Water (LMW) to take over First Mildura Irrigation Trust (FMIT).

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
- a customer's income and 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 and
- whether businesses use restrictions for non-payment or take legal action against customers who are experiencing payment difficulties.

The Commission is responsible for approving water, sewerage, rural water and other prescribed prices to apply for the three metropolitan retail businesses, the regional urban water businesses, as well as the rural water businesses operating in Victoria. The first urban water price review undertaken by the Commission was completed in 2005 and approved prices applied from 1 July 2005 until June 2008. The first rural water price review was completed in June 2006, and approved prices applied from 1 July 2006 until 30 June 2008.

In June 2008 the Commission approved prices for regional and most rural businesses for a five year regulatory period from 2008-09 to 2012-13. Prices for 2008-09 for the three metropolitan retailers and Melbourne Water were determined by the Minister for Water. The Commission will undertake a review and approve prices for the metropolitan retailers and Melbourne Water for a four year 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 functions are the responsibility of the Victorian Government through the Department of Human Services.

The Commission's Customer Service Code requires that the Victorian urban water businesses:

- provide 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
- offer to extend the due date for some or all of an amount owed
- appropriately refer customers to government funded assistance programs (including the Utility Relief Grant Scheme), or to an independent financial counsellor
- observe minimum periods of notice before applying supply restrictions or pursuing legal action to recover outstanding debts
- not restrict the water supply of a customer or pursue 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 and
- have a hardship policy that details procedures for assisting residential customers in hardship.

This section reports the:

- impact of price changes on households between 1 July 2007 and 30 June 2008
- 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 customers applying to water businesses for hardship grants and the number of assistance grants awarded by each business.

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.

3.2.1 Price impacts on household customers

Water and sewerage prices for the three years commencing 1 July 2005 were approved by the Commission for each of the metropolitan businesses and most of the regional urban businesses in June 2005. This followed a process in which the water businesses were required to submit Water Plans that set out the key outcomes the businesses proposed to deliver over the next three years and the proposed prices to be charged to customers.

In its review of Water Plans, the Commission was required to assess the businesses' pricing proposals against the principles set out in the *Water Industry Regulatory Order 2003* (WIRO). Specifically, it was required to ensure (among other things) that the prices would:

- enable businesses to earn a sustainable revenue stream that does not reflect monopoly profits or inefficient expenditure
- allow businesses to recover operational costs, the costs of renewing existing assets and to earn a return on existing and any new assets
- provide incentives for the sustainable use of water
- consider the interests of customers, including low income and vulnerable customers and
- be readily understandable by customers.

On 1 July 2005, the Commission approved average annual real price increases over the three year regulatory period ranging between 0.5 per cent and 5.7 per cent across the urban water businesses

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. To further encourage customers to reduce their discretionary level of water use, some businesses use an 'inclining block structure' for water, where the usage price rises with the level of consumption.

The water businesses charging an inclining block tariff structure in 2007-08 were City West Water, South East Water, Yarra Valley Water, Coliban Water, Lower Murray Water, Wannon Water and Western Water. All other urban water service providers have flat variable water usage charges.

3.3 Average household consumption

Greater emphasis 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 more recently the widespread introduction of water restrictions across the State as a result of drought conditions and the need to conserve water.

In 2007-08 all but two Victorian water businesses reported a reduction in consumption compared to the previous year largely due to the imposition of water restrictions. State-wide, average household consumption fell from 180 kL in 2006-07 to 160 kL in 2007-08.

In 2007-08 average household consumption ranged from 71 kL for Westernport Water's region with a large seasonal population, to 307 kL in Lower Murray Water's region in the North West of the State (figure 2). City West Water's customers have the lowest average consumption in Melbourne (149 kL).

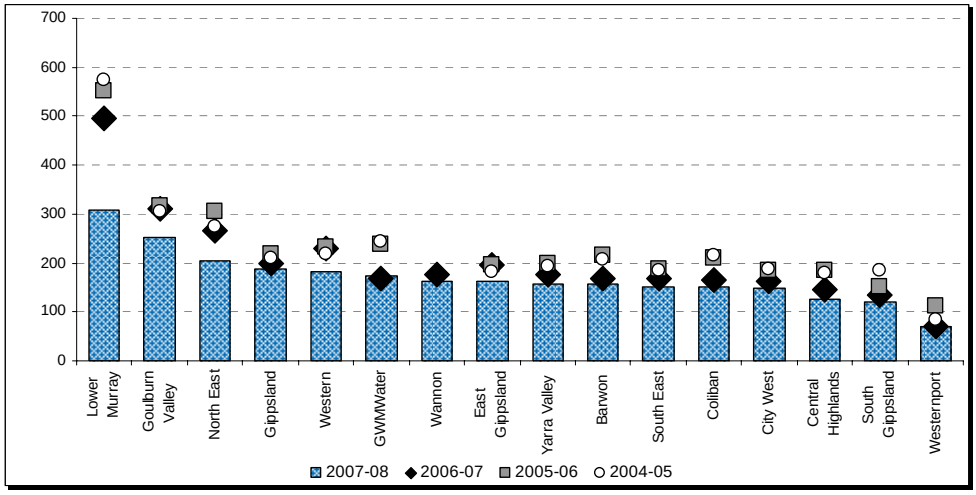
Generally, average household consumption levels in 2007-08 are higher in regional Victoria 176 kL per household (down from 207 kL in 2006-07) than metropolitan Melbourne where average household consumption was 153 kL (down from 171 kL).

Lower Murray Water experienced the largest decrease in consumption (from 497 kL to 307 kL per customer), followed by North East Water (266 kL down to 205 kL), Goulburn Valley Water (311 kL down to 251 kL) and Western Water (230 kL down to 182 kL).

According to the businesses, Goulburn Valley Water and Lower Murray Water customers have responded well to water conservation messages. Lower Murray Water and North East Water both cited restrictions as a key driver behind the decline in average household water consumption. North East Water also noted a significant change in customer behaviour that has resulted in lower than expected consumption levels even when restrictions are relaxed.

Westernport Water commented that average household consumption is heavily influenced by the fact that 62 per cent of the business's customer base is non-permanent households. According to the business, average consumption in a permanent household was 200kL per annum compared to 22kL per annum in a non-permanent household.

Figure 2 Average household consumption
(kL per household)



3.4 Average household bills

The average household bills for water and sewerage services shown in figure 3 have been calculated using the average consumption shown in figure 2 and include both the fixed and variable water and sewerage charges.[12] In regions with multiple pricing zones, the prices in the largest town have been used to calculate the average household bill for the business.

[12] In addition, metropolitan customers are also billed drainage charges on behalf of Melbourne Water, and parks charges on behalf of the Minister for Water, which are based on the rated value of the property.

Overall the average household bill in 2007-08 was lower than 2006-07 in real terms, a result of generally lower consumption through restrictions and water conservation. The average household bill ranged from $436 to $740, with:

- The lowest average water bills were reported by City West Water ($436), South East Water ($438), Yarra Valley Water ($461) and Goulburn Valley Water ($501).
- The highest average water bills were South Gippsland Water ($740), Westernport Water ($718), GWMWater ($710) and Central Highlands Water ($690).

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.

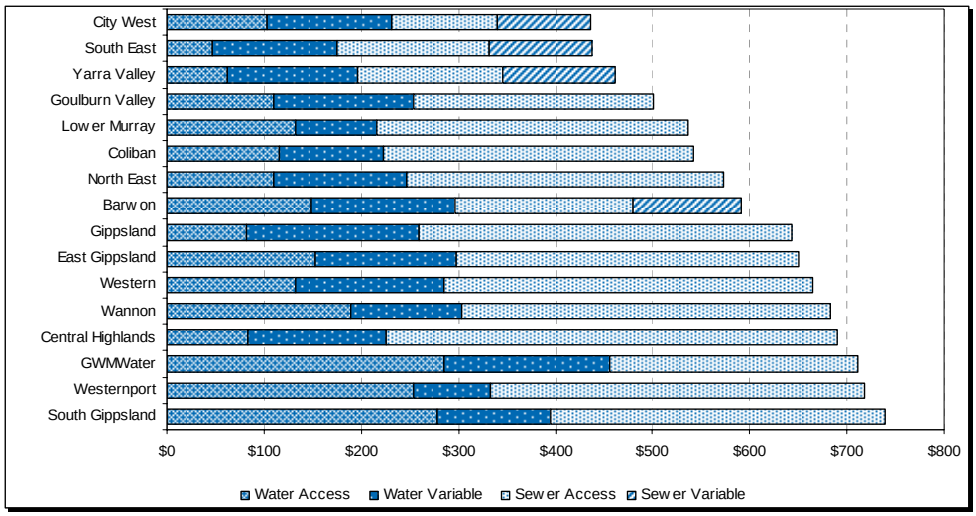
Goulburn Valley Water responded that its low average household bills are influenced by prudent management of resources, operating costs and ongoing capital investment. Yarra Valley Water identified that its low household bills are a function of low prices and low consumption through water restrictions and water conservation programs.

Central Highlands Water responded that the ongoing drought, the need for more costly system augmentations and subsequent stage 4 water restrictions has resulted in a decrease in volumetric income and an increase in drought response costs.

GWMWater advised that its average household bill has fallen due to reduced consumption during stage 4 water restrictions.

Westernport Water indicated that despite having the lowest average household consumption, the businesses' infrastructure must meet peak demand during holiday periods and major events resulting in greater fixed access charges.

Figure 3 Average household bills, 2007-08



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 average household bill is based on bills in Wonthaggi, Western Water's is based on Melton/Sunbury, Central Highlands Water's on Ballarat, Wannon Water on Warrnambool, North East Water's on Wodonga, East Gippsland Water's on Bairnsdale, Coliban Water's on Bendigo, and Goulburn Valley Water's on Shepparton.

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.

3.5.1 Customers with instalment plans

Instalment plans help to address affordability issues by providing customers with flexibility to manage their bill payments. The availability of flexible payment options is important to domestic and non-domestic customers who are experiencing financial difficulties. As part of the Commission's performance reporting framework, the businesses are required to report the number of instalment plans entered into by customers.

In 2007-08, the use of instalment plans for domestic customers ranged from 1.3 per cent of customers for North East Water to 11.6 per cent of customers for Coliban Water (figure 4).

North East Water indicated that they attempt to consult with customers as soon as it becomes apparent that payment difficulties exist. The business considered its proactive approach has allowed the business to identify relevant customers while they still have the ability to pay the outstanding debt, resulting in a reduced need for instalment plans.

Coliban Water advised that its internal performance measures aim to ensure early intervention to offer customers alternatives to lump sum payment of debt. The business considers this strict review process essential for the efficient collection of debts, especially as it has adopted a policy of charging no penalty interest on outstanding debts.

The largest increase from the previous year occurred amongst GWMWater customers where instalment plans increased by 1.1 per cent. Lower Murray Water reported the greatest decrease of 2.8 per cent.

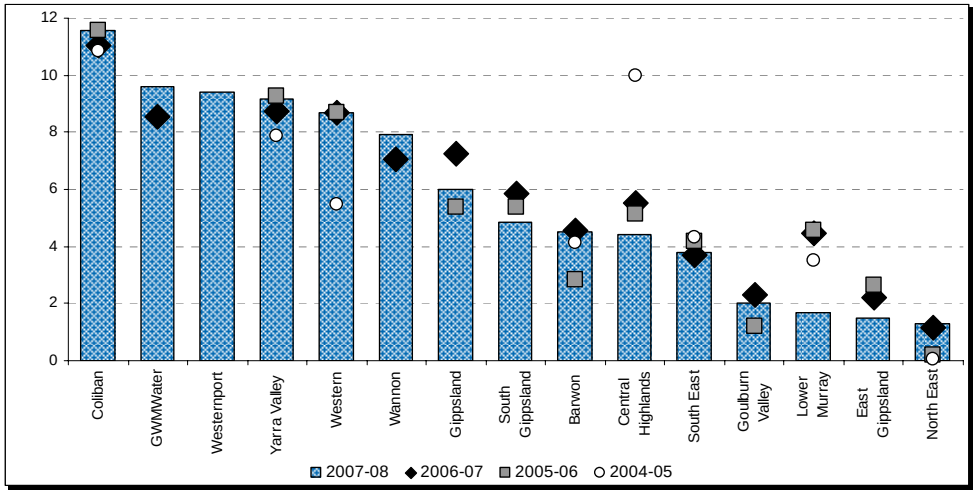
GWMWater indicated that as a direct result of the drought customers are experiencing greater financial stress, which is reflected in the increased number of customers entering instalment plans.

Lower Murray Water explained that as average household water consumption decreased the number of customers needing to enter into an instalment plan has declined.

The range of non-domestic customers using instalment plans was smaller than for domestic consumers, ranging from no reported plans by East Gippsland Water and North East Water to 6.9 per cent for Coliban Water, who also recorded the largest increase in the number of instalment plans, rising from 5.3 per cent in 2006-07 to 6.9 per cent in 2007-08. Lower Murray Water recorded the largest decrease from 1.4 per cent in 2006-07 to 0.2 per cent In 2007-08.

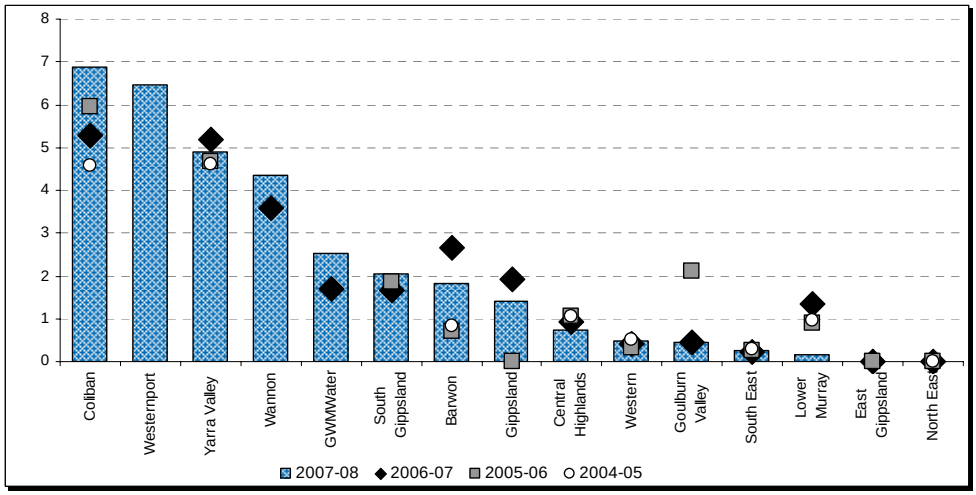
Barwon Water indicated that its efforts to promote efficient use and management of water have led to more affordable bills, thereby lowering the number of customers requiring instalment plans.

Figure 4 **Domestic customers with instalment plans**
(per 100 customers)



Note: City West Water did not provide reliable data for this indicator.

Figure 5 **Non-domestic customers with instalment plans**
(per 100 customers)



Note: City West Water did not provide reliable data for this indicator. East Gippsland and North East Water and East Gippsland Water did not have non-domestic customers on instalment plans in 2007-08.

3.5.2 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 3.6 for further discussion).

Wannon Water and Western Water had the highest rates of the URGS uptake by customers for the period, 1.27 and 1.19 per 1000 customers respectively.

The average value of grants were relatively consistent, ranging from $214 for Lower Murray Water to $365 for South Gippsland. South East Water had the highest number of customers given grants, with a total of $80 160 paid between the 269 customers.

Table 3 Average amount of Utility Relief Grants 2007-08 ($)

	Approved	*Grants paid ($)*	*Average amount grant paid ($)*	*Grants per 1000 customers*
City West	152	46 397	305	0.45
South East	269	80 160	298	0.43
Yarra Valley	234	61 446	263	0.35
Barwon	61	16 089	264	0.47
Central Highlands	67	20 756	310	1.15
Coliban	7	2 020	289	0.11
East Gippsland	11	3 452	314	0.54
Gippsland	37	10 944	296	0.62
Goulburn Valley	27	6 230	231	0.52
GWMWater	18	6 008	334	0.59
Lower Murray	11	2 349	214	0.36
North East	23	5 266	229	0.53
South Gippsland	15	5 472	365	0.86
Wannon	51	16 289	319	1.27
Western	57	18 131	318	1.19
Westernport	12	3 304	275	0.84
Total	**1 052**	**304 312**	**284**	**0.47**

3.5.3 Concessions

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

In 2007-08, the Government contributed a total of $83 million in concession payments toward water bills (table 4)

Table 4 Concession payments 2007-08

Water business	*Payments ($)*
City West	11 614 290
South East	23 885 811
Yarra Valley	23 472 270
Barwon	5 090 813
Central Highlands	2 485 700
Coliban	2 990 213
East Gippsland	667 522
Gippsland	2 538 434
Goulburn Valley	2 083 909
GWMWater	1 222 237
Lower Murray	1 052 829
North East	1 750 303
South Gippsland	699 229
Wannon	1 670 863
Western	1 504 304
Westernport	345 074
Total	83 073 801

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 can occur. It also limits the scope for businesses to restrict customers where the outstanding amount is less than $120 (or the customer has failed to pay consecutive bills in full over a 12 month period). They must also not restrict or commence legal action if:

- the customer is eligible and has lodged an application for a government funded concession and the application is outstanding
- the customer has made an application under the URGS and the application is outstanding
- the customer is a tenant and the amount unpaid is owed by the landlord or the tenant has a claim against the landlord in respect of a water bill pending at the Victorian Civil and Administrative Tribunal or
- the amount in dispute is subject to an unresolved complaint procedure in accordance with a water business's complaints policy.[13]

[13] Essential Services Commission, 2004, Customer Service Code, clause 7.2

In considering whether it is appropriate to restrict a customer's supply or take legal action it is important to consider:

- whether there are more effective means of encouraging prompt payment of bills and recovery of outstanding debts
- the costs and benefits of applying such measures (including whether the cost of the action taken to recover the debt is greater than the outstanding debt. For example, when legal actions are used to recover a small debt the additional cost of a summons may be greater than the debt owed to the business, thus further exacerbating the customer's payment difficulties) and
- the individual circumstances of the customer and their capacity to pay the debt or their willingness to enter into alternative payment arrangements such as instalments.

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.

3.6.1 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 2007-08, a total of 2 667 domestic customers (including 563 domestic customers on concession) and 49 non-domestic customers had their water supply restricted for non-payment of water bills. This was an increase of 551 customers from 2006-07 which can be largely attributed to the increases in restrictions for non-payment of bills amongst South East Water, Westernport Water[14], Gippsland Water and Yarra Valley Water customers.

East Gippsland Water and City West Water did not restrict any domestic customers for non-payment in 2007-08.

East Gippsland Water considers that other means of debt management are more effective than restricting customers, both in terms of cost and resourcing effort. The business may consider using restrictions if these efficiency circumstances change in future.

Westernport Water had the highest proportion of domestic restrictions of any business with 1.13 per 100 customers; they had not previously reported on this indicator. Goulburn Valley Water reported the second highest total number of domestic restrictions with 1.11 per 100 customers, down from 1.37 in the previous year.

Goulburn Valley Water reported the highest number of non-domestic restrictions with 0.38 per 100 customers, followed by Westernport Water with 0.37 per 100 customers and South Gippsland Water with 0.30 per 100 customers.

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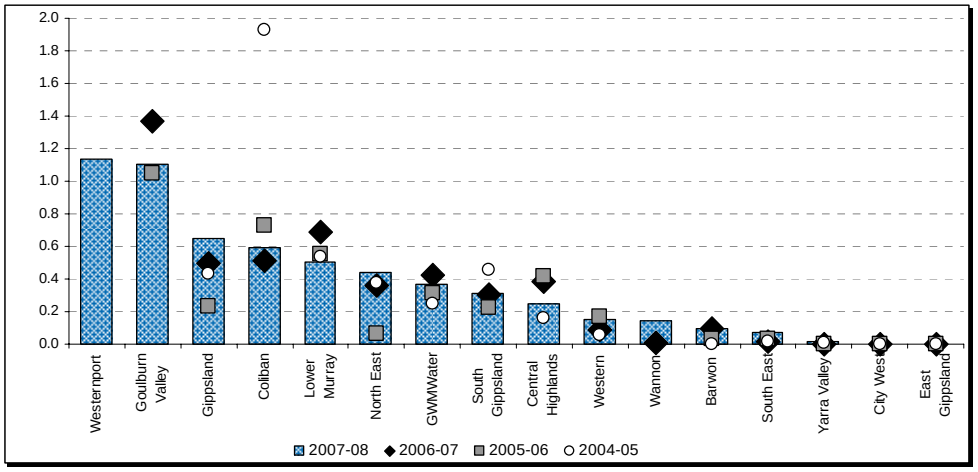
[14] Note that Westernport Water had not previously reported on this indicator

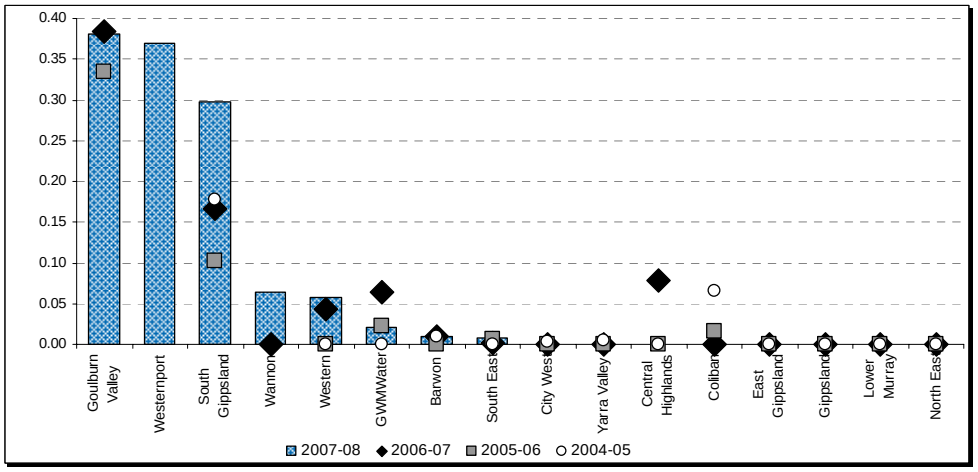
Goulburn Valley Water stated that restrictions are applied only after careful consideration and in accordance with requirements set out in the Customer Service Code. Goulburn Valley Water considers restrictions provide a cost effective method for both the customer and business to control debt levels, adding that most customers enter into communication, instalment plans or seek hardship grants upon having their water restricted.

Figure 6 **Domestic restrictions for non-payment of bills**
(per 100 customers)



Note: City West Water and East Gippsland Water did not restrict any domestic customers in 2007-08.

Figure 7 **Non-domestic restrictions for non-payment of bills**
(per 100 customers)



Note: City West Water, Yarra Valley Water, Central Highlands Water, Coliban Water, East Gippsland Water, Gippsland Water, Lower Murray Water and North East Water did not restrict any non-domestic customers in 2007-08.

3.6.2 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 be 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.

Western Water restored water supply within three days for 81 per cent of its restricted customers, followed by Coliban Water (70 per cent), Yarra Valley Water (69 per cent) and Barwon Water (68 per cent). See figure 8. Coliban Water reported the largest increase in responsiveness having reported 23 per cent in 2006-07.

Western Water and Yarra Valley Water indicated that they only restrict customers that have the capacity to pay and are not already on an instalment plan. Those that do not have the capacity to pay are identified in accordance with the hardship policy and offered instalment plans including hardship assistance to manage outstanding balances.

Coliban Water advised that restoration times reflect its strategy to offer customers instalment payment plans as opposed to restrictions.

GWMWater had the lowest percentage of water supply restored within three days, with 10 per cent, down from 20 per cent in the previous year. GWMWater advised that it removes any restriction within 12 hours of customer contact. The business added that it continues to promote its Hardship Policy and approve all acceptable payment arrangements customers make. Due to the continuing drought however, there may be other reasons some customers do not call straight away.

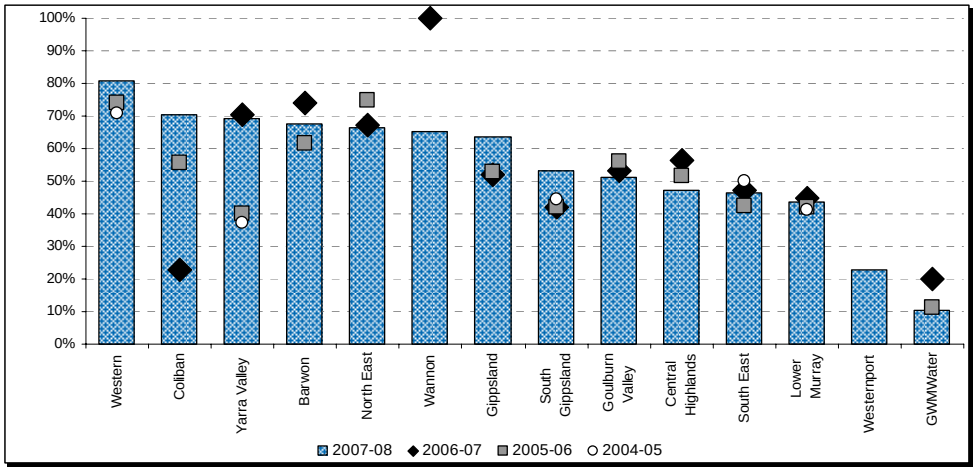
Westernport Water reported the highest rate of restrictions not being restored within 14 days with 77 per cent, followed by Lower Murray Water (48 per cent), South East Water (46 per cent) and GWMWater (39 per cent).

Lower Murray Water indicated that restrictions are applied upon non payment of water bills or if customers do not honour their instalment plans. It is the business's policy that customers that wish to have restriction meters removed either pay a substantial portion of their outstanding water bill and/or enter into an instalment plan.

South East Water indicated that it makes many attempts to contact the customer and offer payment assistance prior to restricting supply. The business also endeavours if there is observable hardship, in which case a restriction will not proceed. Full supply will not be restored until the customer has contacted the business concerning their circumstances or entered into a mutually-agreed payment arrangement.

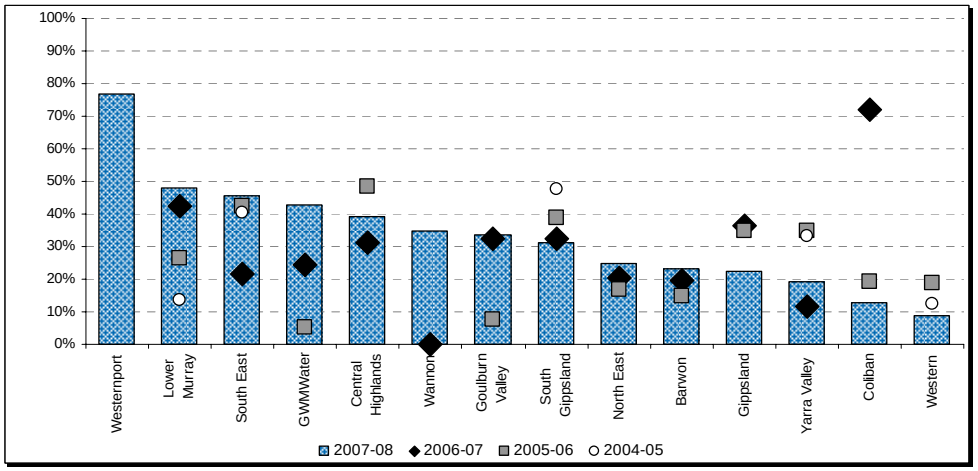
Coliban Water experienced a significant reduction in the proportion of restrictions not restored within 14 days, falling from 72 per cent in 2006-07 to 13 per cent in 2007-08. Coliban Water considers that the reduction is result of the customer instalment payment plan strategy and effectiveness of the debt collection process.

Figure 8 Restrictions restored within three days
(per cent, domestic only)



Note: City West Water and East Gippsland Water did not restrict any domestic customers in 2007-08.

Figure 9 Restrictions over 14 days
(per cent, domestic only)



Note: City West Water and East Gippsland Water did not restrict any domestic customers 2007-08.

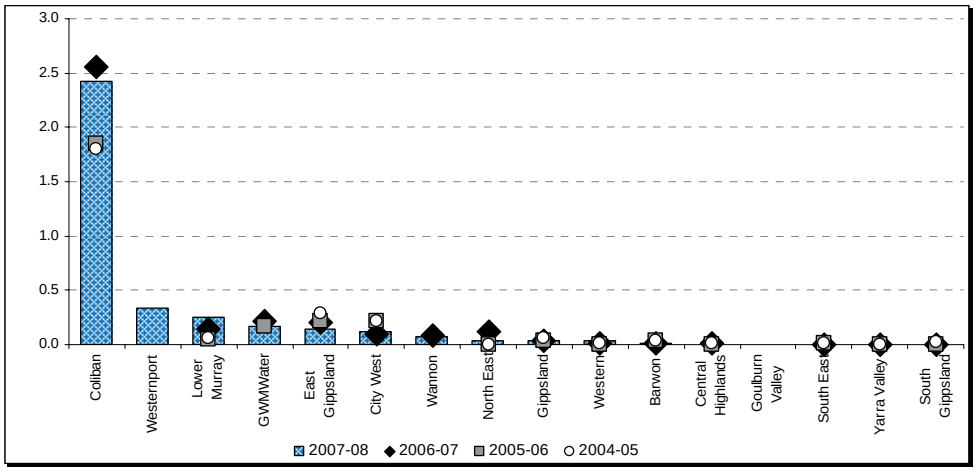
3.6.3 Legal actions for non-payment of bills

Overall, legal action was taken against 2 553 customers across Victoria in 2007-08 for the non-payment of water bills — 41 more than the previous year and 163 less than the number of customers restricted for non-payment. In total 2 082 domestic (1 938 non-concession customers and 144 concession customers) and 471 non-domestic customers had legal action taken against them.

Coliban Water continued to stand out as having the highest use of legal actions for non-payment with 2.4 action per 100 domestic customers and 5.9 actions per 100 non-domestic customers. They commented that the reduction in legal actions from 2006-07 is result of the customer instalment payment plan strategy and effectiveness of the debt collection process.

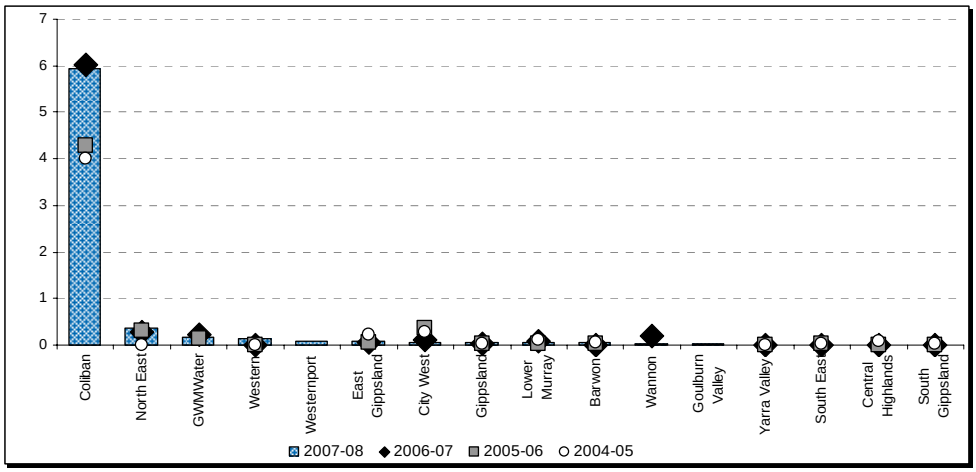
Yarra Valley Water responded that legal action is often not the most appropriate course of action and is often not commercially viable. The business usually reaches a mutually acceptable arrangement with the customer without the need for legal action.

Figure 10 Domestic legal actions
(per 100 customers)



Note: South Gippsland Water did not take legal action against any domestic customers for non-payment in 2007-08.

Figure 11 Non-domestic legal actions
(per 100 customers)



Note: Central Highlands Water and South Gippsland Water did not take legal action against any non-domestic customers for non-payment in 2007-08.

3.6.4 Average debt levels for restriction and legal action

The businesses are required to report the average amount owing at the time that they apply supply restrictions or take legal action for unpaid water bills. As this is an average measure, it is important to recognise that action may have been taken against some customers for amounts that are greater than or less than the average. The Customer Service Code sets the minimum level of debt before restrictions or legal action can be applied at $120.

The average debt at the time of restricting water supply ranges from $207 for South Gippsland Water to $983 for South East Water. In 2007-08 there was a general increase in the average value of debt being restricted or subject to legal action compared to 2006-07 (figure 12).

Yarra Valley Water recorded the highest change in average debt at the time of restricting water supply, decreasing by $325 from the previous year followed by Barwon Water ($308). Wannon Water recorded the greatest increase, with average debt increasing from $261 in 2006-07 to $407 in 2007-08, an increase of $146.

Both South East Water and Yarra Valley Water indicated that restrictions on water supply are only undertaken as a measure of last resort; after all avenues of recovery or contact have failed and where there is no record of financial hardship.

Barwon Water advised that average debt levels at the time of restriction have fallen due to lower bills through more efficient use of water which in turn has led to more affordable bills. The business also pointed to its hardship policies and the availability of payment plans in assisting customers with the payment of their bills.

Wannon Water conducted an extensive media campaign to encourage customers experiencing hardship to contact the business. The business considers that every

opportunity was afforded to customers to either pay their account or make arrangements to pay before water supply was restricted.

Having recorded the second highest level of average debt level at the time of restricting water supply, Western Water stated that the business does not enter into debt recovery until the customer has accrued over $870 in debt. The business proposes to review its current policy during 2009.

The average debt at the time of legal action being taken ranged from $303 for Coliban Water to $8 102 for Yarra Valley Water (figure 13).

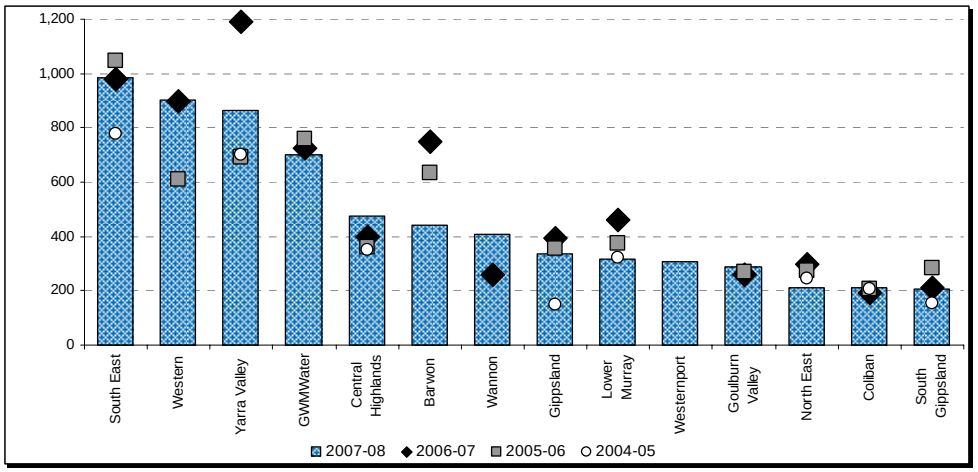
In 2007-08 there was a general increase in the average value of debt being restricted or subject to legal action compared to 2006-07. Yarra Valley Water reported the largest change in debt levels at the time of legal action being taken, increasing from $3 063 in 2006-07 to $8 102 in 2007-08. Wannon Water reported a significant fall from $5 157 in 2006-07 to $536 in 2007-08 in the average value of debt.

Yarra Valley Water stated that the significant increase in average debt levels at the time of legal action was the result of one large legal case that commenced April 2008.

Wannon Water inherited high value debtors from the three predecessor water authorities that merged to form Wannon Water on 1 July, 2005. The majority of these large outstanding debts were resolved in 2005-06, hence the lower average value of debtors for which legal action was taken in the latest year.

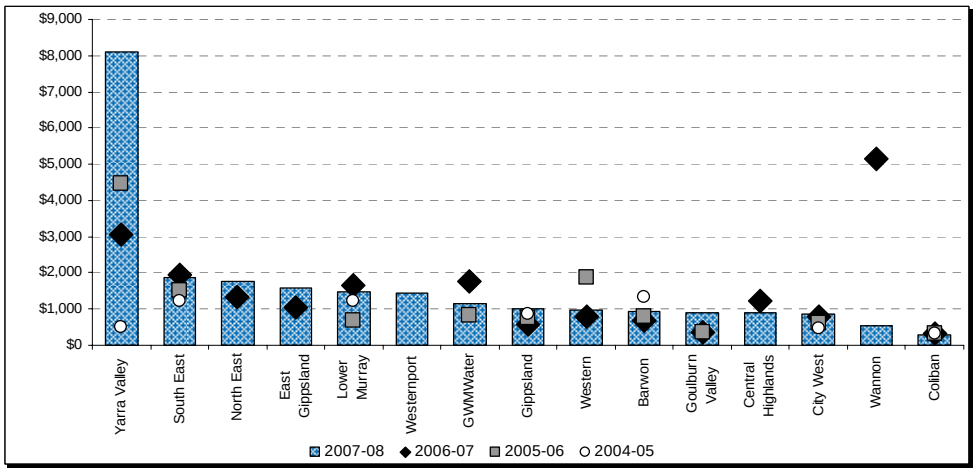
The debt levels upon which restriction or legal action is undertaken remain well above the limits defined in the Customer Service Code due to the extensive credit collection process undertaken with the customer prior to the initiation of these actions. This often takes time however it ensures that all other avenues to collect outstanding debt are closed.

Figure 12 Average debt level — restrictions
($, nominal)



Note: City West Water and East Gippsland Water did not restrict any customers for non-payment in 2007-08.

Figure 13 Average debt level — legal action
($, nominal)



Note: South Gippsland Water did not take legal action against any customers for non-payment in 2007-08.

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.

Each business is required to report the number of hardship applications made and the number of assistance grants awarded under its hardship policy (figure 14). The data provides an indication as to effectiveness of a water business's hardship policies.

In total, water businesses approved 10 908 hardship grants in 2007-08 down from 11 839 in the previous year. Yarra Valley Water again had the most extensive hardship scheme accounting for 93 per cent of the total number of grants approved at an average value of $59.

Westernport Water reported the highest average value of hardship grants at $824. Gippsland Water had the second highest average value with $489 followed by City West Water with $414. Central Highlands Water had the biggest change in average value of hardship grants, falling from $711 in 2006-07 to $160 in 2007-08.

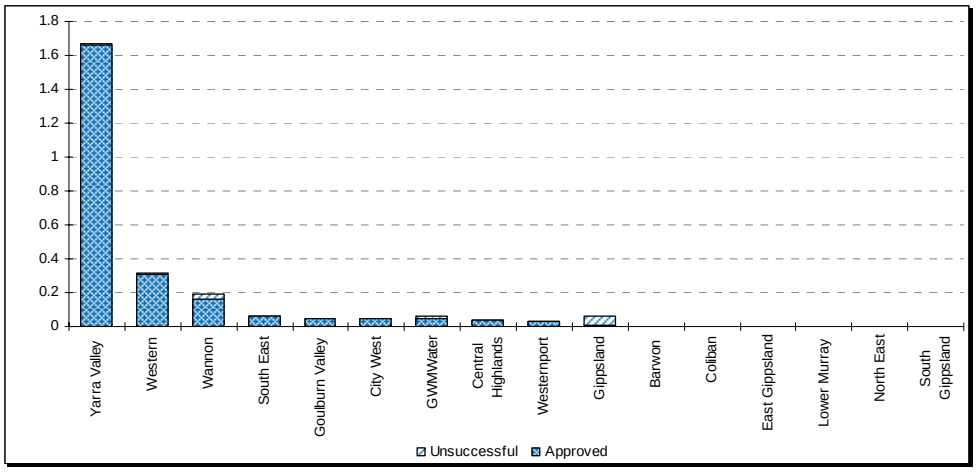
Gippsland Water commented that the business works closely with customers in financial hardship. This includes home visits and aligning payment methods with a customer's capacity to pay.

Central Highlands Water indicated that the average value of its hardship grants has fallen significantly because the previous year's average figure was inflated by a large grant to one customer.

Six businesses, Barwon Water, Coliban Water, East Gippsland Water, Lower Murray Water, North East Water and South Gippsland Water did not provide any hardship grants to customers.

Coliban Water, North East Water and South Gippsland Water identified that flexible payments arrangements contributed to no hardship grants being provided. North East Water also identified that low average household bills and early intervention strategies, including consulting with local financial counsellors contributed to no hardship grants being made.

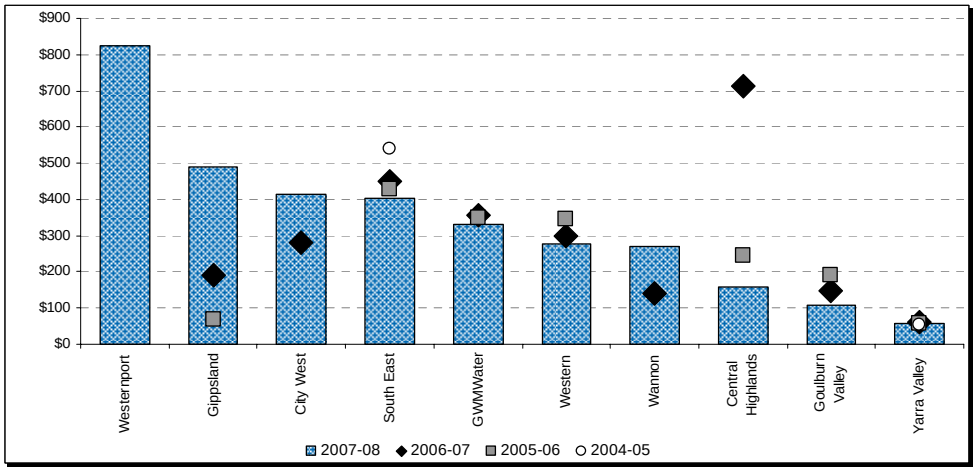
Figure 14 Hardship grants and applications
(per 100 customers)



Note: Barwon Water, Coliban Water, East Gippsland Water, Lower Murray Water, North East Water and South Gippsland Water did not provide any hardship grants to customers in 2007-08.

Figure 15 Average value of hardship grants

($, nominal)



Note: Barwon Water, Coliban Water, East Gippsland Water, Lower Murray Water, North East Water and South Gippsland Water did not provide any hardship grants to customers in 2007-08.

4 CUSTOMER RESPONSIVENESS AND SERVICE

4.1 Background

This part of the report provides information on the water businesses' customer service and responsiveness performance. It covers the areas of call centre performance, customer complaints and timeliness of responding to property development applications and requests for information statements.

The Customer Service Code places a number of obligations on businesses regarding customer responsiveness and service, including requirements to have policies, practices and procedures for handling complaints and disputes from customers and to provide certain information to customers on request.

Water businesses are required to meet service standard targets approved during the 2008 Water Price Review, which were generally based on average historical performance. The customer service related targets that businesses must achieve are for the percentage of calls answered within 30 seconds and the level of complaints to the Energy and Water Ombudsman (Victoria).

4.2 Call centre performance

Call centres provide an important interface between water businesses and their customers. Under the Commission's performance reporting framework, call centre performance is measured in terms of the timeliness of operators to answer customer calls. Businesses are required to report performance for:

- the average time taken for calls to be connected to an operator and
- the percentage of calls connected to an operator within 30 seconds.

These measures are disaggregated between account enquiries and emergency contact numbers. In interpreting and comparing the businesses' performance against these indicators, it is important to note that a number of businesses do not have separate account and emergency lines and instead receive all calls through a single line. In these cases, businesses are required to record all calls against accounts, which can make direct comparisons between businesses difficult.

The Commission engages Customer Service Benchmarking Australia (CSBA) to monitor water businesses' call centre performance on an annual basis using a 'mystery caller' approach. The results of CSBA's review are outlined in section 4.2.3.

In 2007-08, Victoria's water businesses received a total of 2.16 million phone calls. For those businesses with separate account enquiries and emergency lines, 73.8 per cent of all calls were to their account enquiries line.[15]

4.2.1 Time taken to connect to an operator

Customer satisfaction with water businesses depends on a number of factors, including the manner and product knowledge demonstrated by staff and their effectiveness in handling enquiries and complaints. Another important factor influencing customer satisfaction is the timeliness of call centres in connecting incoming calls to operators.

The time taken to connect to an operator depends on the nature of the phone system used by the business. Many businesses 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.

North East Water reported the lowest average time to connect to an operator for both accounts and fault lines in 2007-08 with 13 seconds, followed by GWMWater with 14 seconds and Coliban Water with 16 seconds.

City West Water had the longest connect time with 94 seconds, followed by Central Highlands Water with 41 seconds. All other business reported average call connect times of below 30 seconds. However, City West Water also had the biggest improvement in connection times from 2006-07, reducing the time taken to connect to an operator by 42 seconds. Central Highlands Water improved its performance by 14 seconds from 2006-07 while improvements were made by seven other businesses.

Westernport Water experienced the largest increase in call connect times with an increase of 12 seconds from 2006-07. Small increases were experienced by four other businesses.

City West Water noted that it is in the process of upgrading its IVR system. The upgrade is designed to reduce connect time by providing the flexibility to streamline IVR menu options, allowing more opportunity for self service and providing capability to place 'interim' messages on the IVR. Some of the upgrades already completed have reduced average connect time to 70 seconds for the 2008-09 year to date. City West Water anticipates these results will improve further once the new system is fully implemented.

Central Highlands Water has focussed on reducing its call connection time and continues to review the effectiveness and efficiency of its IVR recording, while North East Water has steadily increased customer service staff numbers. North East Water also noted that it does not have an IVR system in place.

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[15] Coliban Water, East Gippsland Water, Lower Murray Water, South Gippsland Water, Wannon Water and Western Water are not able to report calls to their fault lines separately or do not maintain separate lines for account enquiries and emergency calls. East Gippsland Water answers all calls directly.

Western Water advised that steps have been taken to improve call flows including shortening its privacy message (from 14 seconds to 10 seconds) to reduce call connection time.

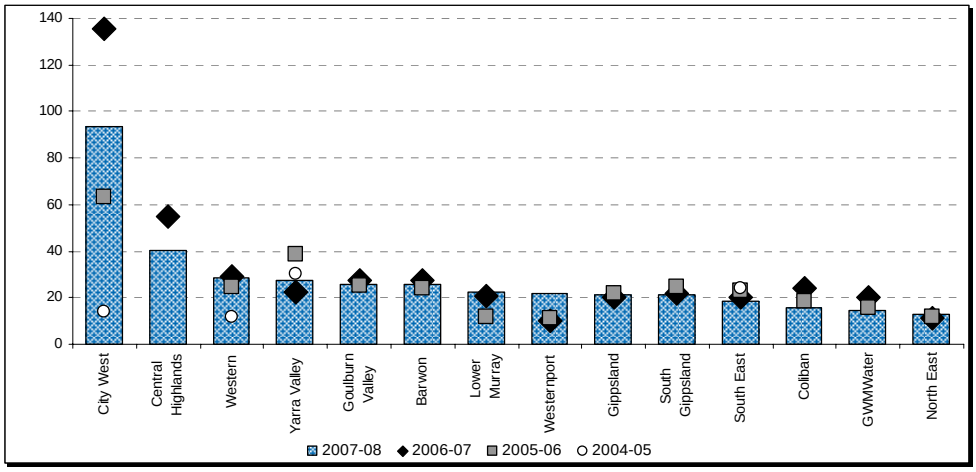
Coliban Water advised that the 16 seconds to connect to the operator was an excellent performance due to the focus on customer service.

Of those businesses with an emergency fault line, Yarra Valley Water had the fastest connect time with 10 seconds, followed closely by Westernport Water with 11 seconds and GWMWater with 14 seconds. City West Water had the longest fault line response time with 41 seconds.

Yarra Valley Water indicated that emergency calls have the highest priority and has taken steps to ensure that such calls get through to an operator as fast as possible.

GWMWater stated that it does not use IVR technology and therefore connection times for faults are clearly identified and attended to.

Figure 16 Average time taken to connect to an operator – account and fault lines
(seconds)



Note: East Gippsland Water and Wannon Water did not provide reliable data for this indicator in 2007-08.

4.2.2 Calls 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 an important measure because it more accurately reflects the incidence of poor waiting times.

South Gippsland Water reported the highest percentage of calls (account and fault lines combined) answered within 30 seconds with 99.4 per cent, followed by

Goulburn Valley Water (98.2 per cent), South East Water (96.9 per cent) and Barwon Water (96.5 per cent). Another four businesses answered over 90 per cent of all calls within 30 seconds.

South East Water has attributed this result to a strong focus on meeting customer expectations and providing flexibility within the business to support the call centre during peak call times. GWMWater indicated that calls answered within 30 seconds are an integral part of its internal performance benchmarking processes.

Goulburn Valley Water noted that its phone centre allows calls to be transferred to available staff when its customer service centre is busy, while Barwon Water indicated that it will be removing its interactive voice response (IVR) systems to allow customers to connect to an operator more quickly.

Yarra Valley Water had the lowest percentage of calls answered within 30 seconds with 82.1 per cent followed by Lower Murray Water (84.6 per cent) and Central Highlands Water (85.4 per cent).

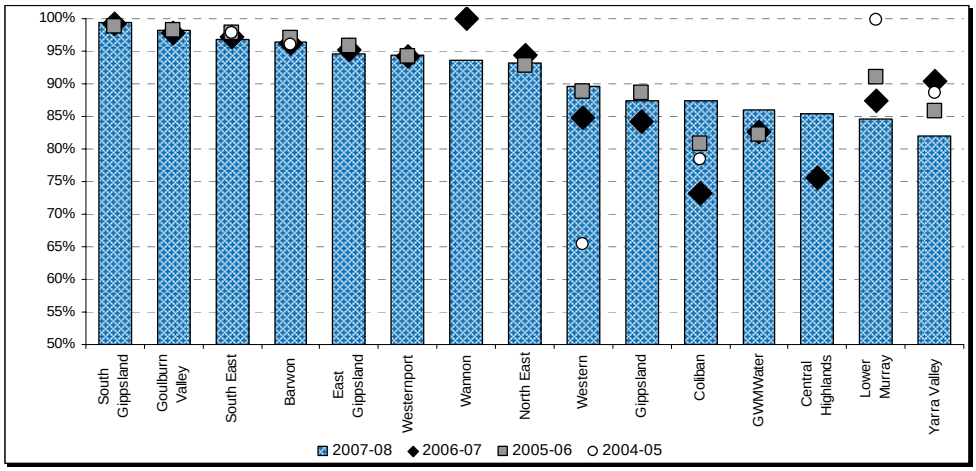
Large improvements in the percentage of calls answered within 30 seconds were made by Coliban Water (87.4 per cent, up from 73.1 per cent in 2006-07) and Central Highlands Water (85.4 per cent, up from 75.6 per cent in 2006-07).

Yarra Valley Water noted that while speed of answer is one attribute of customer service, it places greater emphasis on resolving customer issues in the first telephone call. It added that this is supported by its performance in enquiry handling skills.

Telephone calls to Lower Murray Water rose more than 25 per cent during the year due mainly to enquiries about stage 4 water restrictions. While it adjusted resources in an effort to cope with this increase, the percentage of calls answered within 30 seconds fell slightly compared with last year.

Coliban Water advised that the large improvement was a direct result of the focus on customer service.

Figure 17 Calls answered within 30 seconds - account and fault lines
(seconds)



Note: City West Water did not provide reliable data for this indicator in 2007-08.

4.2.3 Call centre benchmarking

Customer Service Benchmarking Australia (CSBA) was commissioned to benchmark the water businesses' call centre performance in 2007-08 against Australian water and energy sector averages. CSBA assesses the performance of the businesses from calls to their account lines using the 'mystery caller' technique. In reporting to the Commission, CSBA discloses performance in terms of sector averages (metropolitan retail and regional urban) and only identifies individual businesses if they are among the top performers in a particular category. During 2007-08, CSBA made 1,470 calls to regional urban businesses and 325 calls to the metropolitan retailers. A summary of CSBA's findings is provided below.

Call centre response times

The average response time for the metropolitan retailers call centres was 70 seconds in 2007-08, increasing from 55 seconds in 2006-07 and 46 seconds in 2005-06. South East Water was the best performing retailer, averaging 27 seconds per call over 2007-08 and leading the category in each of the four quarters.

Response times for the regional urban businesses were significantly lower than their metropolitan counterparts, with average response times of 31 seconds. This is equal to the average response time recorded in 2006-07 and up slightly from 28 seconds in 2005-06 for the regional urban businesses. Wannon Water was the best performed regional urban business for the third consecutive year with an average response time of 11 seconds over 2007-08. Gippsland Water, North East Water and Coliban Water also achieved the highest quarterly results for this category at various stages in 2007-08.

The average response time for the Australian water sector was 42 seconds (42 seconds in 2006-07 and 46 seconds in 2005-06), while the average response time

for all utilities in Australia was 55 seconds (58 seconds in 2006-07 and 61 seconds in 2005-06).

Coliban Water advised that the performance achieved was a direct result of the focus on customer service.

Neither Wannon Water nor South East Water has an IVR system in their call centres and both businesses cite this as being a key driver behind their quick telephone response times. Gippsland Water allocates more resources during times of peak call-loads with back office staff on stand by to answer calls when required.

Calls answered within 30 seconds

The metropolitan retailers answered 25 per cent of calls within 30 seconds in 2007-08, down from 30 per cent in 2006-07 and 38 per cent in 2005-06. As with average response times, South East Water was the best performed retailer answering 70 per cent of all calls within 30 seconds in 2007-08 and leading the category in each quarter.

The regional urban businesses also performed better than the metropolitan retailers in this category, answering 58 per cent of all calls within 30 seconds. This result compares with 61 per cent in 2006-07 and 73 per cent in 2005-06 for this sector. Wannon Water was the best performing regional urban water business, answering 93 per cent of calls within 30 seconds during the year. Strong quarterly performances were also reported for GWMWater, Gippsland Water, North East Water and Westernport Water at various stages in 2007-08.

The percentage of calls answered within 30 seconds for the Australian water sector was 47 per cent, down from 48 per cent in 2006-07 and 50 per cent in 2005-06.The percentage of calls answered within 30 seconds for the Australian utility sector was 33 per cent (33 per cent in 2006-07, 36 per cent in 2005-06).

Greeting quality

CSBA measures greeting quality according to a greeting quality index[16]. Greeting quality has remained relatively constant over the three years to 2007-08. The metropolitan retailers achieved an overall greeting quality score of 90 per cent in 2007-08. This compares to scores of 91 per cent and 90 per cent in 2006-07 and 2005-06 respectively. City West Water and South East Water achieved the best results with 91 per cent. However, each retailer performed well in this category, with each achieving the best quarterly results at various stages during the year.

The regional urban businesses achieved an overall greeting quality score of 88 per cent, compared to 89 per cent and 83 per cent in 2006-07 and 2005-06 respectively. South Gippsland Water was the best performed regional urban water business on greeting quality with a score of 93 per cent over the year and achieving the best quarterly results three times.

[16] The greeting quality index is based on a composite of the following elements: welcome salutation, giving the business name, giving the agent's name, making an offer to help the caller and sign off.

In response, South Gippsland Water and Goulburn Valley Water have attributed the performances to highly trained and supervised staff.

The overall greeting quality score for the Australian water sector was 89 per cent (90 per cent in 2006-07, 87 per cent in 2005-06). The overall greeting quality score for the Australian utility sector was 90 per cent (92 per cent in 2006-07, 89 per cent in 2005-06).

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 77 per cent of the time in 2007-08, down from 82 per cent in 2006-07 and 78 per cent in 2005-06. Each of the three retailers achieved the best quarterly results for best practice agent manner at various stages in 2007-08 and generally performed equally over the course of the year.

The regional urban businesses also achieved best practice agent manner 77 per cent in 2007-08, showing improvements from 2006-07 (75 per cent) and 2005-06 (64 per cent). GWMWater was the best performed regional urban business for best practice agent manner, achieving the best quarterly performance three times and averaging a score of 88 per cent over the year. Western Water achieved the best quarterly results of the regional urban businesses in the October-December quarter.

The overall best practice agent manner score for the Australian water sector was 76 per cent, increasing from 72 per cent in 2006-07 and 67 per cent in 2005-06. The overall score for the Australian utility sector was also 76 per cent (76 per cent in 2006-07, 75 per cent in 2005-06).

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, down from 97 per cent in 2006-07 and 99 per cent in 2005-06. The regional urban businesses achieved a score of 95 per cent (96 per cent in 2006-07, 94 per cent in 2005-06). These results were comparable to the performance of the Australian water and utility sectors.

GWMWater attributed the result to its comprehensive training to call centre staff prior to operating the phones and regularly throughout the year.

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 2007-08, call centre staff of the metropolitan retailers:

- fully probed the caller’s needs 70 per cent of the time (compared to 74 per cent in 2006-07 and 68 per cent in 2005-06)

- demonstrated good product knowledge 82 per cent of the time (down from 89 per cent in 2006-07 and 91 per cent in 2005-06)
- provided a clear outcome to an enquiry 81 per cent of the time (down from 89 per cent in 2006-07 and 90 per cent in 2005-06)
- were courteous and helpful 90 per cent of the time (down from 95 per cent in 2006-07 and 93 per cent in 2005-06)

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

In 2007-08, call centre staff of the regional urban businesses:

- fully probed the caller's needs 71 per cent of the time (up from 70 per cent in 2006-07 and 58 per cent in 2005-06)
- demonstrated good product knowledge 81 per cent of the time (down from 84 per cent in 2006-07 and 2005-06)
- provided a clear outcome to an enquiry 81 per cent of the time (compared to 86 per cent in 2006-07 and 82 per cent in 2005-06)
- were courteous and helpful 90 per cent of the time (down from 95 per cent in 2006-07 and 93 per cent in 2005-06)

Coliban Water, Gippsland Water, Goulburn Valley Water and Western Water were the best performed regional urban businesses for enquiry handling.

Coliban Water advised that the performance achieved was a direct result of the focus on customer service and the increased training provided.

South East Water identified a number of factors that contributed to its result including strong system training, on-line scripts for operators, quality assurance and monitoring of calls to detect gaps in service delivery.

Yarra Valley Water and Western Water noted that they emphasise first call resolution to ensure that a customer's enquiry is handled appropriately the first time they call. Western Water also noted that this is reflected in the business's relatively low level of billing and enquiry complaints.

Gippsland Water provides customer service training to staff consisting of understand the customers needs, listening skills and empathy.

4.3 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 that need to be improved. 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.

4.3.1 Total number of complaints

Under the performance reporting framework, the businesses are required 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. Businesses are also required to provide information on the types of water quality complaints they received, namely complaints relating to colour, taste and odour, blue water and 'other' water quality complaints. Water quality complaints are discussed in more detail in section 6.4.

In 2007-08 businesses received a total of 14 828 complaints, representing a 19 per cent increase on the total complaints from 2006-07. This equates to a frequency of 0.66 complaints per 100 customers across the State.

North East Water reported the lowest number of complaints per 100 customers with 0.24 complaints, followed by South East Water (0.28 complaints) and Barwon Water (0.4 complaints). Westernport Water had the highest number of complaints per 100 customers with 1.73 complaints, followed by Central Highlands Water (1.64 complaints) and South Gippsland Water (1.51 complaints).

GWMWater had the best improvement in the number of complaints per 100 customers with 1.06 complaints, down from 1.8 complaints per 100 customers in 2006-07. Large improvements were also made by Wannon Water (1.08 to 0.65 complaints per 100 customers) and Barwon Water (0.64 to 0.40 complaints per 100 customers). Central Highlands Water had the largest increase in complaints with 1.64 complaints per 100 customers, up from 0.75 complaints in 2006-07. Lower Murray Water also had a significant increase (0.62 to 1.32 complaints per 100 customers).

Barwon Water pointed to a number of factors that have resulted in low customer complaints for the period, including its air scouring maintenance program, community education programs, instalment plans and hardship policies, and keeping customers informed via its consultative committee.

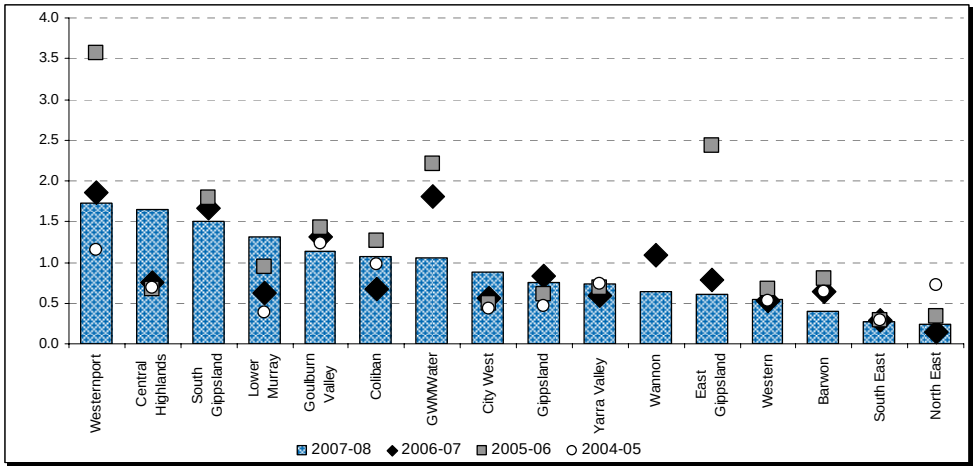
Water quality complaints increased significantly for Central Highlands Water as a result of water shortages and drought mitigation strategies that led to water reliability complaints. Lower Murray Water indicated that the substantial increase in complaints reported relate directly to staged water restrictions.

South Gippsland Water also indicated that an issue with water quality caused the increase in the business's level of customer complaints. Conversely, Wannon Water has attributed the decline in customer complaints to the works undertaken by the business to improve water quality.

North East Water credits success in low complaint levels to its extensive consultation and communication with the community through media, direct mail and client contact staff. South East Water also attributed the low levels of complaints recorded to its customer contact staff's ability to resolve customer issues.

Figure 18 Complaints received by water businesses

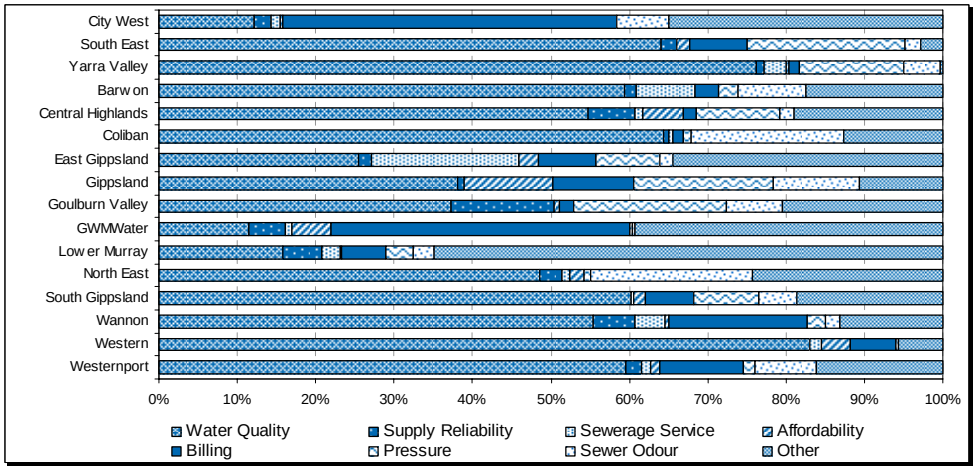
(per 100 customers)



The complaint types received by the water businesses in order of frequency were water quality (52.3 per cent), billing (12.2 per cent), pressure (9.3 per cent), sewer odour (5.6 per cent), water service reliability (2.4 per cent), sewer service reliability (1.9 per cent) and affordability (1.3 per cent).[17]

Figure 19 Complaint types

(percentage)



17 Other complaints not included in these categories comprised 15 per cent of total complaints.

Water quality

Western Water had the highest incidence of water quality complaints in 2007-08, with 83 per cent of its total complaints relating to water quality, followed by Yarra Valley Water with 76.3 per cent. Water quality complaints made up over half of all complaints for another seven water businesses. GWMWater had the lowest percentage of water quality complaints with 11.5 per cent followed by City West Water (12.1 per cent) and Lower Murray Water (15.8 per cent).

Western Water explained that unfiltered water from Melbourne Water being supplied over long distances (water age, sedimentation, chlorine residual variation) affected the quality and taste/odour of the water delivered to customers.

Yarra Valley Water responded that its relatively high proportion of water quality complaints was due to the natural sediment in the unfiltered water delivered from Silvan Reservoir. It noted that the sediment settles in pipes and is sometimes resuspended in times of peak demand. The close proximity of Yarra Valley Water customers to source water has also contributed to this result. Historically, a mains cleaning program would be undertaken to manage sediment, however these programs were suspended due to the drought and the need to conserve water.

Yarra Valley Water added that in June and July 2007 it experienced a 40 per cent spike in water quality complaints (relative to average water quality complaints over the 2007-08 period) for turbidity and water colour. A storm event near the Upper Yarra reservoir caused high inflows of water into the reservoir over a short period of time, which in turn washed naturally occurring sediment into the reservoir. In response, the Melbourne metropolitan water industry sought an alternative source of water for 40 per cent of Yarra Valley Water customers for four months. This water had higher naturally occurring colour. Routine water quality testings in the affected areas, however, verified that water was safe.

GWMWater indicated that its consultative programs give rise to a good understanding of customer expectations in relation to water quality.

Water service reliability

Goulburn Valley Water had the highest percentage of water service reliability complaints in 2007-08, with 13.2 per cent, followed by Central Highlands Water with 6.1 per cent.

Western Water and South Gippsland Water were the best performed in this category, with neither business recording any water service reliability complaints. These complaints also made up less that 1 per cent of all complaints for Coliban Water (0.7 per cent), Yarra Valley Water (0.9 per cent) and Gippsland Water (0.9 per cent).

Goulburn Valley Water reported that the major cause of the 78 water reliability complaints received for the year was a telemetry problem at Nathalia. The business added that it is continuing to place a strong emphasis on capital works and operational changes to improve system reliability.

Central Highlands Water cited a number of factors that contributed to the relatively high number of complaints received by the business for water reliability, including

low reservoir levels, saline drought relief sources of water and, network changes that created temporary dead-ends.

Coliban Water advised that the low percentage of water service reliability complaints is due to the focus on maintenance. This is supported by the reduction in interruptions experienced by customers.

Yarra Valley Water noted that despite its high level of service interruption rates, it received relatively few complaints due to proactive communication with customers, targeted investments to improve service reliability and fast response rates and interruption repair times when system failures do occur.

Gippsland Water commented that its investment in a mains-replacement program has minimised water loss and increased water supply reliability.

Sewage Service

East Gippsland Water had the highest percentage of sewer service reliability complaints in 2007-08 with 18.9 per cent. Barwon Water had the second highest with 7.4 per cent, while all other businesses had results of less than 4 per cent.

East Gippsland Water attributed the high proportion of sewage service complaints to the large number of sewer blockage incidents for the period. The business points out that maintenance programs have now been implemented to reduce blockages, which are caused primarily by tree root invasion.

Barwon Water explained that it undertook an extensive preventative maintenance and capital works rehabilitation program over the period including sewer mains clearing, chemical root treatment and relining.

Gippsland Water and Goulburn Valley Water did not report any sewer service reliability complaints while another 5 businesses had percentages of less than 1 per cent.

Affordability

Gippsland Water reported the high frequency of complaints related to affordability with 11.3 per cent, followed by Central Highlands Water and GWMWater with 5 per cent, while all other businesses had results of less than 4 per cent.

Barwon Water and Coliban Water did not report any affordability complaints while another 5 businesses had percentages of less than 1 per cent.

Central Highlands Water stated that it received complaints about fixed charges and general accounts. It also noted that although it bills customers on a four monthly basis, many customers assume their account is quarterly.

Barwon Water indicated that as a result of its water conservation program customers have reduced consumption and the size of their water bills. The business added that its bill payment option and hardship policies assist customers in paying their bills.

GWMWater attributes its high number of affordability complaints to the fact that their customer bills are amongst the highest in the state.

Billing

Billing complaints were a significant issue for City West Water and GWMWater in 2007-08. Billing complaints made up 42.7 per cent of all complaints for City West Water and 38.1 per cent for GWMWater. All other businesses had results of less than 18 per cent.

North East Water did not have any billing complaints while another four businesses had less than 2 per cent of all complaints relating to billing (Yarra Valley Water, Coliban Water, Central Highlands Water and Goulburn Valley Water).

City West Water advised that the high number of complaints it received over the period was a result of the (problematic) implementation of a new billing system. The business noted that complaints during the year reduced, as system issues were addressed.

Goulburn Valley Water suggested that its relatively low water tariffs appear to influenced the small number of billing complaints that it received over the year, while Central Highlands Water pointed to its robust billing systems that have remained relatively unchanged for many years.

Yarra Valley Water noted that its executive management undertakes monthly reviews of billing complaints to determine systemic causes and to develop improvement plans. This ensures that new causes for complaint are promptly addressed.

GWMWater advised that its billing complaints are generally an extension of affordability complaints.

Sewer Odour

Complaints relating to sewer odour comprised 20.6 per cent of all complaints for North East Water, 19.5 per cent for Coliban Water and 11.1 per cent for Gippsland Water. All other businesses recorded results of less than 10 per cent, with the best performed being Western Water (no complaints) and GWMWater (0.3 per cent).

Coliban Water advised that the large number of sewer odour complaints were attributed to the reduction in inflows and the large number of blockages. Coliban Water has a capital works program this Water Plan to reduce the sewer blockage rates.

GWMWater indicated that wastewater treatment plants are generally in relatively close proximity to towns and as a result a high proportion of customers are potentially exposed by odour.

Pressure

Pressure complaint rates were highest for South East Water (20.1 per cent), Goulburn Valley Water (19.4 per cent) and Gippsland Water (17.7 per cent).

City West Water reported no pressure complaints while three other businesses recorded results of less that 1 per cent (GWMWater, Western Water and North East Water).

Consistent with results from previous years, Goulburn Valley Water reported a relatively high percentage of pressure complaints due to the flat geographical nature of its area and relatively low pressure provided from elevated tanks and water towers. The business reported that many of the complaints are due to the customer's desire to use sprinkler systems that are not suited to pressure that is available, rather than pressures that are below design standards.

South East Water found that a large number of pressure complaints were due to the customers' own galvanized iron internal pipes that rust internally and limit flow. Additionally, the business identified that areas on the Mornington Peninsula, representing 20 per cent of the business's customers, account for 45 per cent of their total complaints. Despite meeting the pressure commitments set out in its Customer Charter, South East Water's system design pressure on the Mornington Peninsula is much lower than metropolitan Melbourne and some people moving to the area observe a difference in water pressure.

GWMWater attributes its result to the significant capital expenditure of the past that delivered pressure improvements.

North East Water received no pressure complaints during the period and attributes this to the age of its infrastructure and the dedication of its operations teams to resolve issues and improve the systems.

4.3.2 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 reach business is set out in table 5.

In 2007-08, EWOV received 1 109 complaints and 246 enquiries in relation to the metropolitan and regional urban businesses, compared to 858 complaints and 368 enquiries in 2006-07.

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 46 per cent of total complaints in the Melbourne Metropolitan area despite servicing only 20 per cent of the population. South East Water had the smallest frequency of complaints to EWOV, with 22 per cent of metropolitan complaints while servicing 39 per cent of metropolitan customers.

City West Water explained that the high frequency of complaints received by the ombudsman over the period were due to the (problematic) introduction of a new billing system.

For the regional businesses, Westernport Water had the highest frequency of complaints referred to EWOV with 4 per cent of all regional complaints while only servicing 2 per cent of the regional population. This was followed by Lower Murray Water (7 per cent of regional complaints and 5 per cent sector share). South Gippsland Water experienced the smallest frequency of customer complaints to EWOV, with only 2 per cent of all regional complaints while servicing 3 per cent of regional customers. This was followed by North East Water (5 per cent of regional complaints, 7 per cent sector share). The number of complaints to EWOV for the other businesses were generally in line with their sector share.

Table 5 EWOV cases

Source: Energy and Water Ombudsman (Victoria), 2007-08 Annual Report

	Total cases		Enquiries	Complaints				Total complaints		Sector share
	received	%	received	referred to water business	referred to higher level contact at water business	received for investigation	referred elsewhere and other complaints	received	%	%
Melbourne Water	41	-	8	8	12	7	6	33	-	-
City West	380	42	43	90	151	81	15	337	46	20
South East	190	21	26	59	67	29	9	164	22	39
Yarra Valley	334	37	98	96	89	37	14	236	32	41
Total – Metropolitan	904	100	167	245	307	147	38	737	100	100
Barwon	72	18	10	20	26	9	7	62	18	21
Central Highlands	37	9	6	4	15	8	4	31	9	10
Coliban	46	11	7	12	13	9	5	39	12	11
East Gippsland	17	4	4	7	2	2	2	13	4	3
Gippsland	37	9	8	7	12	6	4	29	9	10
Goulburn Valley	40	10	8	7	16	6	3	32	9	9
GWMWater	20	5	2	2	9	5	2	18	5	5
Lower Murray	28	7	4	8	10	6	0	24	7	5
North East	22	5	6	3	6	5	2	16	5	7
South Gippsland	10	2	2	5	2	0	1	8	2	3
Wannon	29	7	2	6	10	6	5	27	8	6
Western	36	9	10	8	10	4	4	26	8	8
Westernport	16	4	2	2	4	6	2	14	4	2
Total – Regional	410	100	71	91	135	72	41	339	100	100
Total – Victoria	1355	-	246	344	454	226	85	1109	-	-

4.4 Information statements

Information statements are documents that are frequently requested by customers or other parties. The time taken for a business to process an information statement provides an important indication of the business's administrative efficiency. Under the performance reporting framework, businesses are required to report the percentage of information statements processed within five days.

Coliban Water and Yarra Valley Water processed all requests for information statements within 5 days in 2007-08, while three other businesses did so over 99 per cent of the time (East Gippsland Water, South East Water and Barwon Water). Lower Murray Water had the fewest information statements processed within 5 days with only 43.6 per cent, followed by North East Water (74.1 per cent) and Western Water (83.9 per cent). All other businesses processed information statements with 5 days 90 per cent of the time.

South East Water and Gippsland Water had the largest improvements with 11.8 per cent and 9.6 per cent increases in the percentage of information statements processed within 5 days respectively. North East Water experienced a decrease of 15.9 per cent while Lower Murray Water had a decrease of 8.6 per cent.

South East Water noted that the improvement in the percentage of information statements processed within 5 days is mainly due to improved reporting of the data.

Western Water has advised that it has amended reporting procedures to provide more accurate results for this indicator, while Gippsland Water has focussed on improving its internal processing practices.

North East Water indicated that staff turnover within this workgroup resulted in new staff being trained and taking longer to respond than the allotted five days. Key staff in this area were also involved in the implementation of a new billing system.

Lower Murray Water noted that its processing timeframe depends on the type of information required. If the request is not for a settlement of a property then the information statement is completed on the day it is received. However, if the information statement requested is for a settlement of a property, Lower Murray Water issues the information statement close to settlement date to enable the meter reading to be obtained as close as possible to settlement and to allow more accurate apportionment of charges.

4.5 Property development agreements

Property development agreements are entered into between water businesses and property owners for the provision of new water or sewerage infrastructure to service new developments. The timeliness in processing property development agreements is therefore likely to be a good indicator for the overall administrative efficiency of businesses. Under the performance reporting framework, businesses are required to report the percentage of prepared works applications processed

within 45 days and the percentage of non-prepared works applications processed within 12 days.

Three businesses were able to process 100 per cent of prepared works agreements within 45 days (North East Water, GWMWater and Lower Murray Water), while four other businesses did so over 90 per cent of the time (Central Highlands Water, Western Water, East Gippsland Water and Goulburn Valley Water). South East Water and City West had the lowest rate of success in processing prepared works agreements within 45 days with 69 per cent each.

Central Highlands Water and East Gippsland Water had the biggest improvement in this category with increases of 11.9 per cent and 8.8 per cent respectively. South East Water (down 16 per cent) and City West Water (down 10.7 per cent) had the largest decreases.

Coliban Water was the worst performed business in this category, processing 13.7 per cent of non-prepared works agreements processed within 12 days. All other businesses recorded results of over 78 per cent.

Coliban Water advised that based on a workforce analysis, it was under resourced by one full time equivalent staff member, which has impacted on the number of non-prepared works agreements processed within 12 days. It also noted that it intends to employ additional staff to ensure compliance.

Central Highlands Water and East Gippsland Water were the biggest improvers in this category with increases of 29 per cent and 20.7 per cent respectively. Gippsland Water was the only businesses to experience a significant decreases (down 21.7 per cent from 2006-07).

South East Water conceded that while its system for recording and tracking property development applications is accurate, it does not currently allow the business to “stop the clock” when an application is placed on hold pending further information from the customer. Consequently, the average elapsed response times will appear higher than actual administration in some cases.

Central Highlands Water noted that it has refined work processes to allow more accurate monitoring and action of applications, ensuring that applications are processed, with minor exceptions, within agreed timelines.

City West Water experienced a 43 per cent jump in the number of prepared works agreements processed during the period. In response, it identified two strategies in place to improve on its result in future periods. First it has recruited additional staff within the Development Servicing Solutions group. Second, it is developing a new IT system to increase productivity in the administration and processing of prepared works agreements. Phase 1 of this project is expected to be introduced in the second half of 2009.

Conversely, North East Water and GWMWater indicated that the low volume of prepared works agreements always allowed the business to process and respond within the required timeframe. GWMWater added that its coverage area also does not have any complex planning overlays.

5 NETWORK RELIABILITY AND EFFICIENCY

5.1 Background

This part of the report provides information on the businesses' network reliability and efficiency. It covers the areas of water supply and sewerage services looking at the levels of service interruptions and responsiveness to service problems.

5.2 Water supply reliability

This section reports information related to water supply reliability from two perspectives — the performance of the businesses' assets and the impacts 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 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).

The impact of water supply interruptions on customers depends on factors such as:

- the time of day when interruptions occur
- the notice (if any) given to customers, particularly for planned interruptions
- the availability of emergency water supplies and
- the extent to which the needs of customers are otherwise accommodated.

Water supply interruptions may be:

- unplanned, such as the result of a burst pipe or damaged fire hydrant requiring immediate repair or
- planned, such as when replacing a fault-prone section of main or repairing a minor leak. The impact of planned interruptions on customers is lessened because businesses are required to notify customers in advance and as a result they can plan for the inconvenience. However, long duration planned interruptions can also inconvenience customers.

5.3 Water supply interruptions

A water supply interruption is an event that causes a total loss of water supply to some customers. 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.

The frequency of interruptions may be influenced by:

- the nature and reactivity of soil types in which pipes are laid, which differs across Victoria. Reactivity is a measure of the extent to which soils swell and shrink in response to changes in moisture content and
- the age, material and condition of water mains across the state.

Despite variations in soil type and the age, material and failure rate of mains in each area, the performance of each business in maintaining and improving the condition of its assets has a significant impact on supply reliability in the medium to long term. The effective and efficient targeting of renewals or replacement of pipes with high failure rates can help to reduce or contain interruption rates.

In 2007-08 the total rate of planned and unplanned water supply interruptions ranged from 13.1 to 74.4 per 100 kilometres of water main (figure 20).

North East Water had the lowest rate of water supply interruptions (13.1 interruptions per 100 kilometres) followed by Wannon Water (13.2), Western Water (20.8) and East Gippsland Water (20.9).

North East Water's attributed its low rate of interruptions to the age of its infrastructure and the renewals and maintenance programs. Wannon Water identified that stable sandy soils and a proactive water main renewable system resulted in low rates of interruptions.

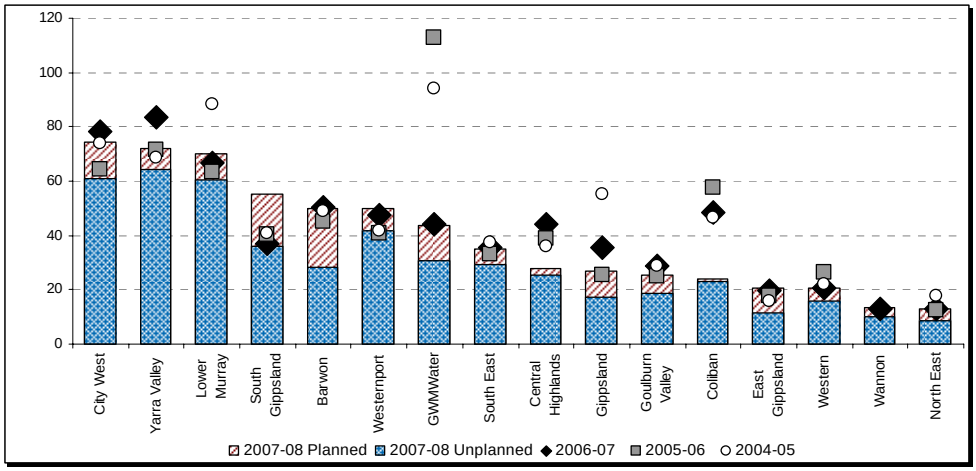
City West Water reported the highest rate at 74.4 interruptions per 100 kilometres of water main, down from 78.3 in 2006-07, followed by Yarra Valley Water (72.2), Lower Murray Water (69.9) and South Gippsland Water (55.1).

City West Water and Yarra Valley Water identified that the combination of dry conditions and a prevalence of reactive clay soils resulted in higher rates of water supply interruptions. Lower Murray Water also identified that ground movement due to dry conditions in addition to Stage 4 water restrictions, which prohibit the watering of gardens and lawns, resulted in a high rate of interruptions.

South Gippsland Water identified that most of the planned interruptions were due to cleaning programs of the reticulation mains, old age of reticulation pipe lines and ongoing drought conditions.

Coliban Water reported a significant reduction in the number of interruptions from 48.7 per 100 kilometres in 2006-07 to 24.1 per 100 kilometres in 2007-08.

Figure 20 Water supply interruptions
(per 100 kilometres of water main)



5.4 Customer interruption frequency

Customer interruption frequency measures how often on average a customer will experience an interruption. One water supply interruption will generally inconvenience a 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.

In 2007-08:

- the lowest frequency of planned customer interruptions were experienced by the customers of Coliban Water (0.01 interruptions per customer) followed by Central Highlands Water (0.02) and North East Water (0.03).
- the highest frequency of planned customer interruptions was experienced by customers of Westernport Water (0.49 per customer), South Gippsland Water (0.35) and Barwon Water (0.24).
- North East Water reported the lowest frequency of unplanned customer interruptions (0.06 per customer), followed by Wannon Water (0.07) and Central Highlands Water (0.08).
- Westernport Water for the third consecutive year had the highest unplanned customer interruption frequency (0.60 per customer), followed by South Gippsland Water (0.35) and City West Water (0.30).

Coliban Water advised that the low frequency of planned customer interruptions was due to its strategy of all planned work being conducted under pressure.

Central Highlands Water, North East Water and Wannon Water all identified a proactive mains renewal program as contributing to a low number of interruptions.

Wannon Water also identified the installation of valves minimised customer interruptions.

North East Water also advised that the age of its infrastructure assisted in this indicator. This can be contrasted with South Gippsland Water who attributed its higher interruptions to older water mains in most systems, as well as the reliance of several small towns on single transfer main and its water mains cleaning program.

Westernport Water identified that its interruptions were impacted on by increased mains shutdowns for repairs and cleaning as a result of the dry conditions. City West Water advised that soil type and climatic conditions contributed to the high frequency of interruptions.

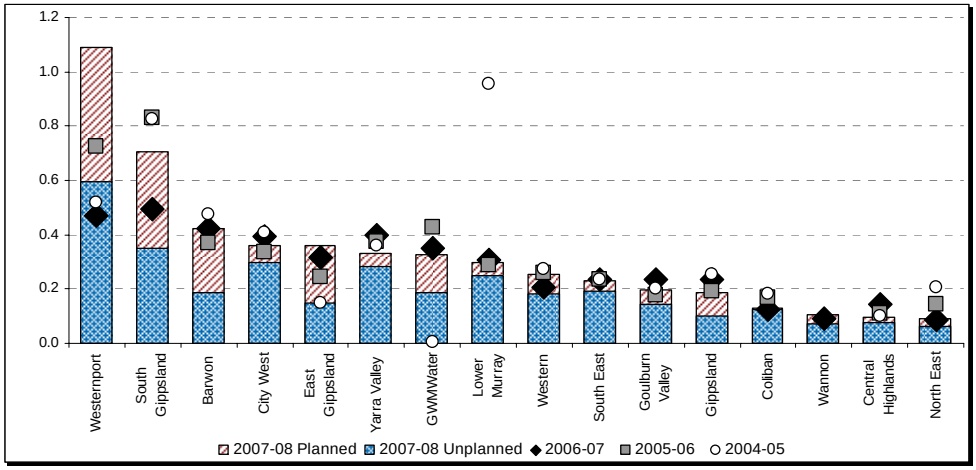
When considering both planned and unplanned customer interruptions together:

- the customers least likely to experience customer interruptions where those of North East Water (0.09 interruptions per customer), followed by Central Highlands Water (0.10) and Wannon Water (0.11).
- the customers most likely to experience customer interruptions were those of Westernport Water with 1.09 interruptions per customer. South Gippsland Water and Barwon Water customers also experienced high rates of interruptions with 0.71 and 0.42 respectively.

Higher levels of planned interruptions drove South Gippsland Water's total interruption levels. They identified that the water mains cleaning program requires the whole system to be cleaned every two years to maintain water quality resulting in a large number of planned interruptions.

Barwon Water conducts a large program of air scouring which adversely affects this indicator.

Figure 21 Average 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.

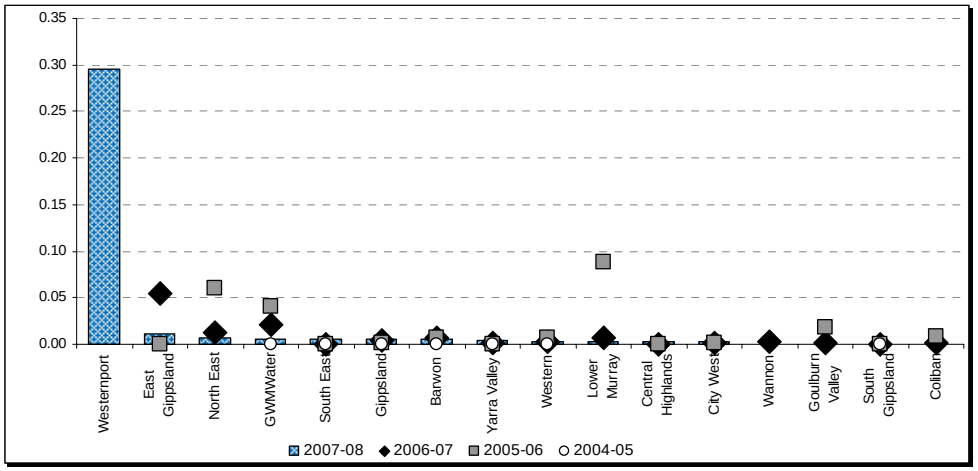
Regarding planned customer interruptions, even though customers will have prior knowledge of when and for how long the interruption will occur, peak hour interruptions can still be inconvenient for a household preparing for work and school.

In 2007-08 four businesses reported no planned customer interruptions during peak hours including Coliban Water, South Gippsland Water, Goulburn Valley Water and Wannon Water.

The business with the highest frequency of planned customer interruptions during peak hours were Westernport Water (0.30 interruptions per customer) followed by East Gippsland (0.01) and North East Water (0.007).

Goulburn Valley Water, South Gippsland Water and Wannon Water all advised that they schedule planned interruptions outside peak periods to minimise the impact on customers. Coliban Water and Wannon Water also advised that they conduct works under pressure to avoid planned interruptions.

Figure 22 Planned water supply customer interruptions frequency in peak hours
(interruptions per customer)



5.5 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.

The average duration of unplanned water supply interruptions increased from 97 minutes in 2006-07 to 102 minutes in 2007-08 across all businesses, with average durations ranging from 56 minutes to 139 minutes.

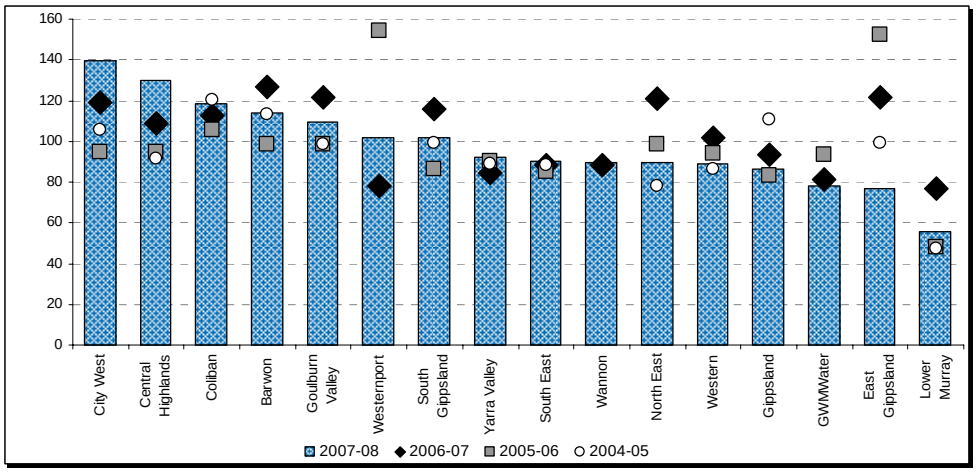
The shortest average duration of unplanned water supply interruptions was reported by Lower Murray Water taking on average 56 minutes to restore supply (down from 77 minutes in the previous year) followed by East Gippsland Water (77 minutes) and GWMWater (78 minutes). Lower Murray Water also reported the shortest time to restore unplanned water supply interruptions in 2004-05, 2005-06 and 2006-07.

East Gippsland Water commented that its result was achieved through changes to mains pipeline cleaning and air scouring processes.

The longest durations for unplanned interruptions were reported by City West Water (139 minutes), followed by Central Highlands Water (130 minutes) and Coliban Water (118 minutes).

City West Water have made changes in its practices that results in water turned off immediately, unless for public health or significant disruption, for conservation measures. Coliban Water advised that a number of complex mains experienced problems resulting in long repair times.

Figure 23 Average interruption duration unplanned
(minutes)



Planned water supply interruptions are undertaken to maintain and upgrade the supply system and to improve water quality. Planned interruptions are typically for longer durations than unplanned interruptions. Businesses seek to reduce the impact of planned interruptions by providing advance notice of when they will occur. Inconvenience can be further minimised by businesses scheduling interruptions when they will have less impact on customers and by adopting maintenance practices and procedures that ensure water supply is restored as rapidly as possible.

In 2007-08, the average duration of planned water supply interruptions was 170 minutes (up from 153 minutes in 2006-07).

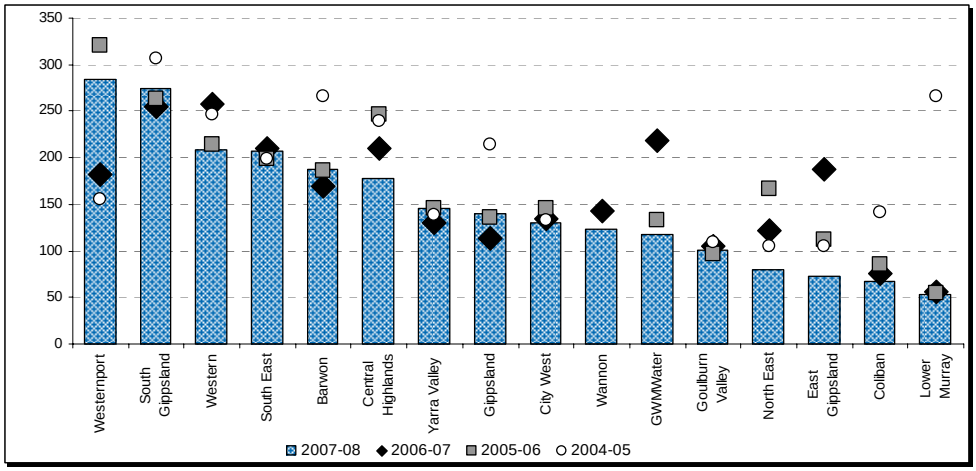
The fastest restoration time of planned water supply interruptions were reported by Lower Murray Water (54 minutes), followed by Coliban Water (67 minutes) and East Gippsland Water (73 minutes).

The slowest restoration times for planned interruptions were reported by Westernport Water (284 minutes), South Gippsland Water (274 minutes) and Western Water (209 minutes).

South Gippsland Water commented that it utilises their entire service standard minutes of interruption, currently 320 minutes, to ensure works are comprehensive. Western Water put forward that high growth in its service area has adversely influenced this measure.

In 2007-08 eleven retailers reported a decrease in planned interruption times including East Gippsland Water which reduced planned interruption times by 61 per cent and GWMWater with a 46 per cent reduction.

Figure 24 Average duration of planned interruptions
(minutes)



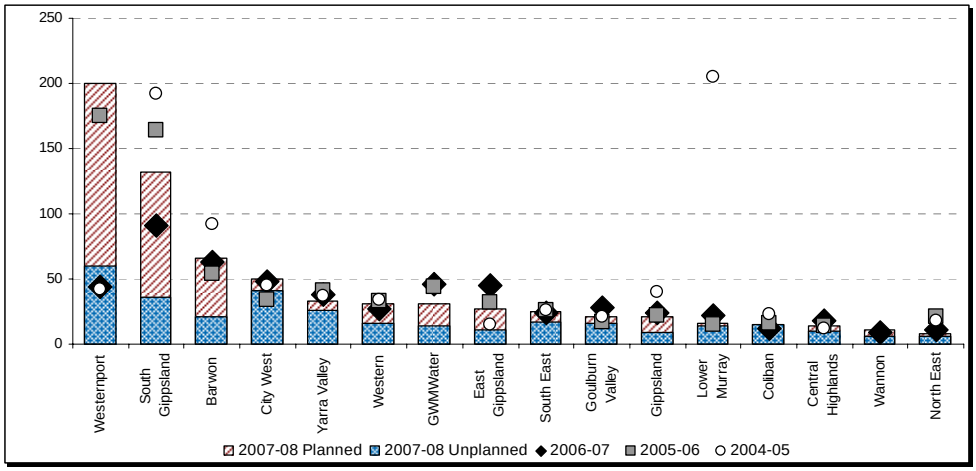
5.6 Overall reliability

Overall reliability of a water supply network is measured by customer minutes off supply (the product of average customer interruption frequency and average interruption duration). 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 each of these approaches.

In 2007-08 the average customer minutes off supply for water supply interruptions ranged from 8 to 200 minutes with an average of 34 minutes across all suppliers

(also with 34 minutes in 2006-07). The most reliable supply was from North East Water (8 minutes off supply per customer) and Wannon Water (11 minutes), while the least reliable supplies were at Westernport Water (200 minutes) and South Gippsland Water (133 minutes).

Figure 25 Average customer minutes off supply
(minutes)



In 2007-08:

- the lowest unplanned customer minutes off supply were reported by North East Water with 6 minutes, Wannon Water (7 minutes), Gippsland Water (9 minutes) and Central Highlands Water (10 minutes).
- the highest unplanned customer minutes off supply were reported by Westernport Water (60 minutes off supply), City West Water (41 minutes) and South Gippsland Water (36 minutes).
- the lowest planned customer minutes off water supply were reported by Coliban Water with less than 1 minute, followed by North East Water (2 minutes) and Lower Murray Water (3 minutes).
- the highest customer minutes off supply for planned interruptions were reported by Westernport Water (140 minutes off supply), South Gippsland Water (97 minutes) and Barwon Water (44 minutes).

North East Water and Wannon Water both identified ongoing valve replacement programs, reducing shutdown areas, as contributing to low minutes off supply. North East Water also commented that the age its infrastructure contributes to its reported total. Wannon Water advised that the mains renewal program and sandy soils results in less unplanned interruptions.

South Gippsland Water and Westernport Water both advised that they undertake extensive cleaning programs which results in a high number of minutes off supply.

5.7 Bursts and leaks

A burst or leak is an unplanned event in which water lost is attributable to the failure of a pipe, hydrant, valve, fitting of joint material (being the mains and trunk infrastructure, excluding the mains to meter connections) regardless of cause. Bursts and leaks can also be influenced by external factors such as network age and soil conditions. While the section above looks at interruptions to supply, not all bursts and leaks cause an interruption. The measure is therefore only an indication of the efficiency and condition of the water supply network.

In 2007-08, the average rate of bursts and leaks was 44 per 100 kilometres of water main (compared with 51 per 100 kilometres of water main in 2006-07), with performance ranging from 11 to 69 per 100 kilometres.

East Gippsland Water reported the lowest number of burst and leaks for the third year in a row, averaging 11 per 100 kilometres of water main, followed by North East Water (14) and Wannon Water (15).

North East Water and Wannon Water identified proactive water main renewal programs as limiting the rates of bursts and leaks. North East Water also advised that accurate reporting has assisted the renewals programs to address specific areas of concern.

The highest number of bursts and leaks were reported by South Gippsland Water with 69 per 100 kilometres of water main, followed by City West Water (67) and Yarra Valley Water (65).

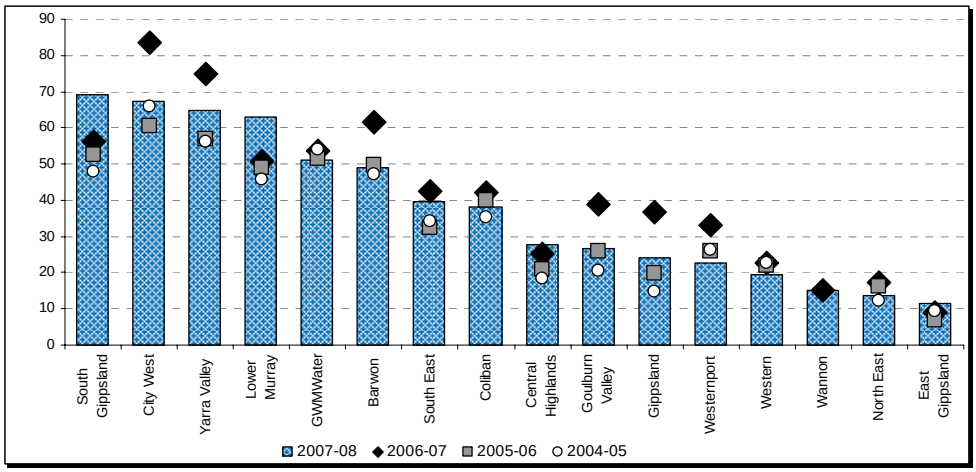
South Gippsland Water attributed the high number of bursts and leaks to the continuing drought conditions and the age of the reticulation pipe lines.

City West Water and Yarra Valley advised that the soil in the area is primarily reactive clay soils that expand and contract with changes in the moisture content the result in a high number of water main failures.

Twelve businesses reported a decrease in the number of bursts and leaks from 2006-07 with the largest decreases reported by Gippsland Water (34 per cent decrease) and Goulburn Valley Water (31 per cent).

Goulburn Valley Water attributes the decrease in bursts and leaks to mains replacement program and improved weather conditions which resulted in less soil movement.

Figure 26 Bursts and leaks
(per 100 km of water main)



5.8 Response times to bursts and leaks

This indicator provides a measure of the time taken by businesses to arrive at the site of the burst after it is reported by a customer (figure 27 and figure 28).

The severity of bursts and leaks has been recorded according to three priority levels:

- priority one: is a burst or leak that causes, or has potential to cause, substantial damage or harm to customers, water quality, flow rate, property or environment.
- priority two: is a burst or a leak that causes, or has the potential to cause, minor damage or harm to customers, water quality, flow rate, property or environment.
- priority three: a burst or leak that causes no discernable impact on customers, property or the environment.

Priority one and two events require more rapid responses from the businesses as they have the greatest impact on customers and water loss. Smaller businesses are likely to have lower rates of (and in some instances no) priority one bursts because of the nature of its water supply systems. For example, East Gippsland Water and Western Water did not report any priority one bursts.

Priority three interruptions are typically caused by minor leaks on valves or hydrants and have little direct impact on customers. This means that they have a lower maintenance priority and response times are often quite high. However, they need to be repaired to reduce water losses or avoid more extensive damage occurring.

In relation to priority one bursts (figure 27):

- the quickest response times were Goulburn Valley Water (1 minute) followed by North East Water (10 minutes) and Westernport Water (12 minutes).

- the longest response times were South East Water (38 minutes) followed by Central Highlands Water (32 minutes) and Gippsland Water (31 minutes).

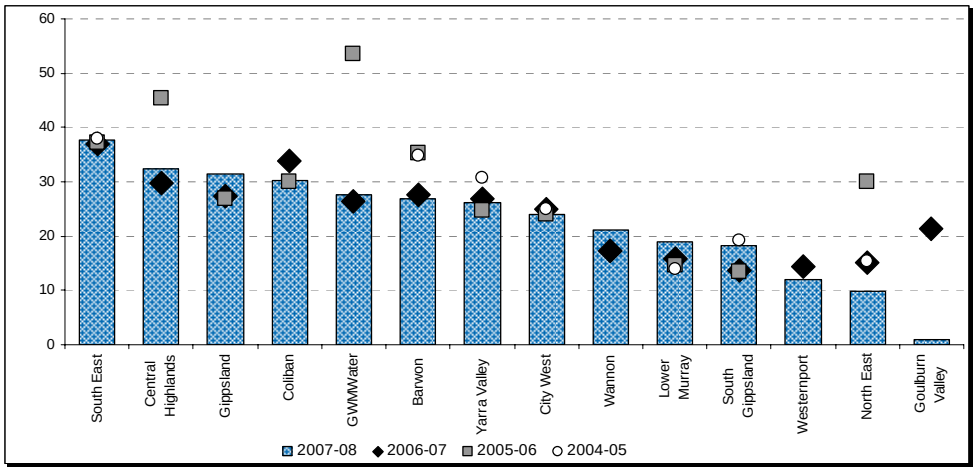
In relation to priority two bursts and leaks (figure 28):

- the quickest response times were Goulburn Valley Water (11 minutes) followed by Lower Murray Water (17 minutes) and Western Water (21 minutes).
- the longest response times were Gippsland Water (115 minutes), South East Water (108 minutes), Coliban Water (93 minutes) and Central Highlands Water (89 minutes).

Goulburn Valley Water advised that many priority one bursts were discovered by its staff resulting in a short response time. North East Water advised that only three priority one bursts and leaks occurred in 2007-08, and were in close proximity to a depot resulting in a faster than normal response. Westernport Water advised that improvements in resource management led to the short response times.

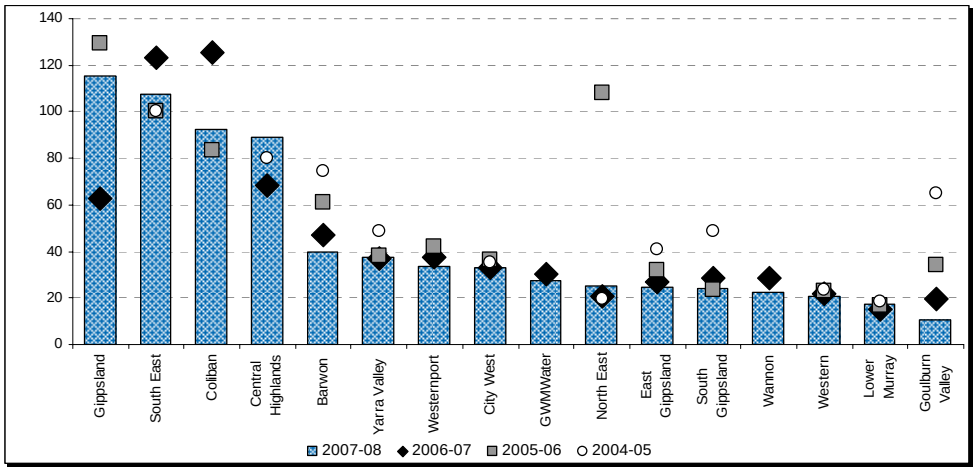
South East Water advised traffic management issues adversely impacted this indicator. Central Highlands Water, Coliban Water and Gippsland Water all identified the distances required to travel in the region greatly affected the time taken to attend a burst or leak.

Figure 27 Average response times to bursts and leaks – priority one
(minutes)



Note: East Gippsland Water and Western Water did not record any priority one bursts.

Figure 28 Average response times to burst and leaks – priority two
(minutes)



5.9 Rectification times for bursts and leaks

The rectification time represents the total time taken to repair a burst or leak. It is measured from the time of receiving the first notification of the problem and includes responding to and rectifying the fault to the required level of service.

In relation to priority one bursts (figure 29):

- East Gippsland Water and Western Water reported no priority one bursts and leaks in 2007-08. The businesses with the shortest rectification times were North East Water (165 minutes), Lower Murray Water (183 minutes) and GWMWater (184 minutes).
- businesses with the longest rectification times were Barwon Water (347 minutes) and Central Highlands Water (333 minutes).
- eight businesses reported an improvement from 2006-07 levels, with North East Water the most improved (down 71 per cent), followed by Goulburn Valley Water (down 58 per cent) and Westernport Water (down 50 per cent).

Barwon Water advised that the result is due to a priority one burst that was found not to be significant but was not allocated a lower priority.

Central Highlands Water advised that a small number of interruptions required specialist equipment as well as traffic management issues that contributed to the long rectification time.

Goulburn Valley Water's improvement was primarily due to the detection of the bursts and leaks by its staff. North East Water's improvement was attributed to a priority one burst and leak in 2006-07 having a longer than normal rectification time. The results achieved in 2007-08 are more consistent with North East Water's long term performance.

In relation to priority two bursts (figure 30):

- the businesses with the fastest rectification times were East Gippsland Water (140 minutes) followed by GWMWater (175 minutes) and North East Water (179 minutes)
- the business with the longest rectification time was Coliban Water (620 minutes)
- Western Water was the most improved for this indicator, down 83 per cent.

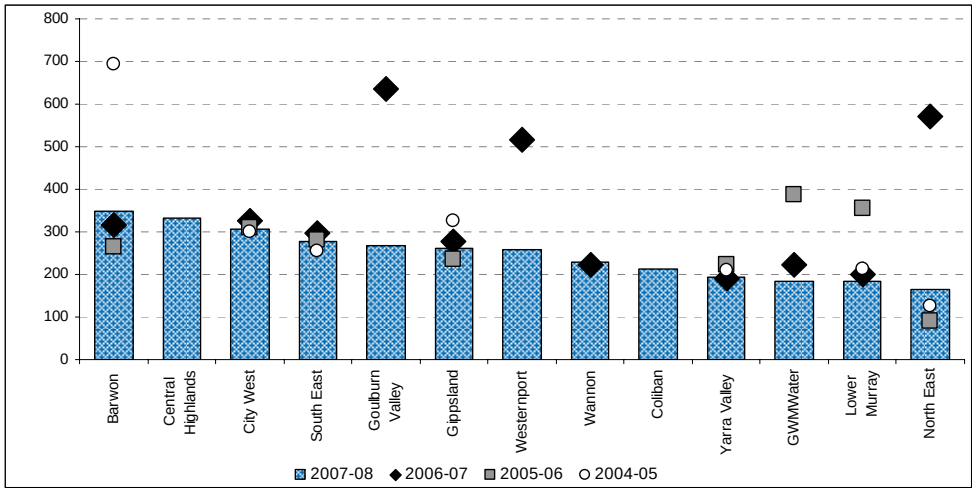
Coliban Water advised that the rectification time was due to difficult problems experienced with a few mains in priority two.

In relation to priority three bursts (not graphed):

- the businesses with the fastest rectification times were North East Water (188 minutes) and Lower Murray Water (262 minutes)
- the businesses with the slowest rectification times were South East Water (3 256 minutes), Coliban Water (2 916 minutes),City West Water (2 782 minutes) and Yarra Valley Water (2 600 minutes)

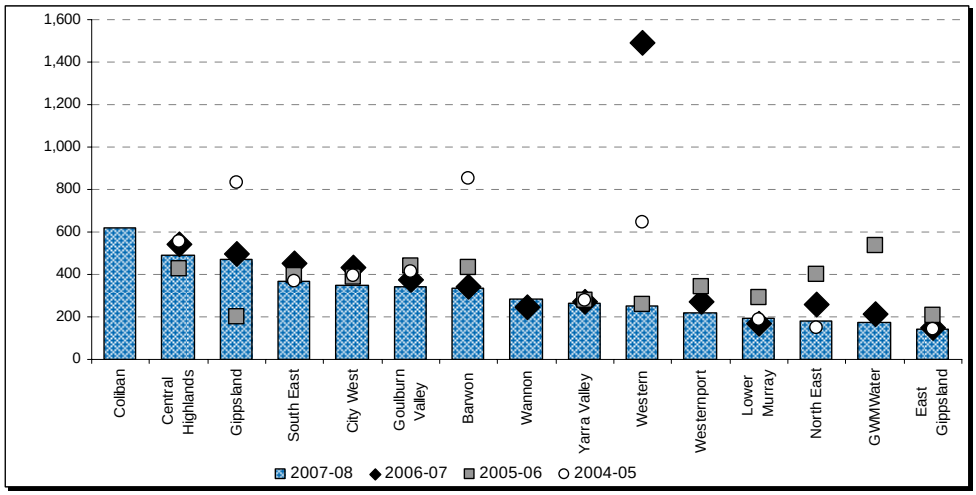
City West Water advised that as a result of drought conditions and the nature of how clay soils react to dry conditions there has been an increase in the number of priority three related leaks which has impacted upon rectification times.

Figure 29 Average time to rectify bursts and leaks – priority one
(minutes)



Note: East Gippsland Water and Western Water did not record any priority one bursts. South Gippsland Water data for this indicator was deemed to be unreliable.

Figure 30 Average time to rectify bursts and leaks – priority two
(minutes)



Note: South Gippsland Water data for this indicator was deemed to be unreliable.

5.10 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.

The information in table 6 shows that only a small percentage of customers experienced unplanned interruptions in 2007-08. The lowest percentages of customers receiving unplanned interruptions in a year were reported by Wannon Water (5.1 per cent receiving one or more interruptions in 2007-08), North East Water (5.6 per cent) and Coliban (6.0 per cent). Businesses with the highest percentage of customers experiencing one or more interruptions were South Gippsland Water (28.7 per cent) followed by City West Water (15.4 per cent) and Yarra Valley Water (14.9 per cent).

North East Water attributes its low rate of customer interruptions to the ages of its infrastructure and the renewals program, maintaining the overall level of service, but remains susceptible to short term deviations as a result of ground shrinkage from the drought.

South Gippsland Water advised that high customer interruptions are a result of aged water main infrastructure together with the reactivity of soil conditions generally throughout its region.

Table 6 Percentage of customers experiencing an unplanned interruption in 2007-08 (per cent)

Number of interruptions experienced by a customer	*1*	*2*	*3*	*4*	*5*	*>5*
City West	15.37	4.36	1.42	0.39	0.07	0.03
South East	10.97	2.44	0.61	0.29	0.04	0.01
Yarra Valley	14.92	3.90	1.15	0.30	0.14	0.08
Barwon	10.44	1.96	0.56	0.16	0.10	0.12
Central Highlands	6.78	0.87	0.11	0.01	0.00	0.00
Coliban	5.99	0.83	0.13	0.02	0.06	0.00
East Gippsland	11.78	2.61	0.28	0.20	0.00	0.00
Gippsland	8.33	1.64	0.28	0.00	0.00	0.00
Goulburn Valley	9.92	1.68	0.36	0.06	0.00	0.00
GWMWater	9.68	0.82	0.11	0.04	0.00	0.00
Lower Murray	13.30	3.03	0.78	0.76	0.03	0.00
North East	5.56	0.40	0.06	0.06	0.00	0.00
South Gippsland	28.69	4.97	1.01	0.32	0.25	0.00
Wannon	5.14	0.74	0.64	0.00	0.00	0.00
Western	11.79	2.31	0.24	0.20	0.04	0.00

Note: Westernport Water did not report on this indicator.

5.11 Restoration of unplanned and planned customer interruptions

This measure looks at the promptness of a water business in restoring supply once it shuts down a water main. The general expectation is that the businesses should be able to restore most supply interruptions within 5 hours. Yarra Valley Water guaranteed restoration of unplanned interruptions within 4 hours and planned interruptions within 5 hours and gives rebates if they last longer. Customers of Central Highlands Water, City West Water and South East Water received rebate payments when unplanned interruptions lasted longer than 5 hours.

In relation to the restoration of planned customer interruptions in 2007-08:

- four businesses reported all customer interruptions restored within 5 hours including Coliban Water, Goulburn Valley Water, Lower Murray Water and South Gippsland Water.
- the businesses with the highest rate of planned customer interruptions not restored within 5 hours were Westernport Water (78 per cent), followed by South East Water (23 per cent) and Western Water (22 per cent).
- GWMWater, Wannon Water and Western Water showed the greatest reductions relative to 2006-07. GWMWater's percentage of customer interruptions not restored within 5 hours fell from 35 per cent in 2006-07 to 1 per cent in 2007-08,

while Wannon Water's fell from 31 per cent to 12 per cent and Western Water's fell from 33 per cent to 22 per cent.

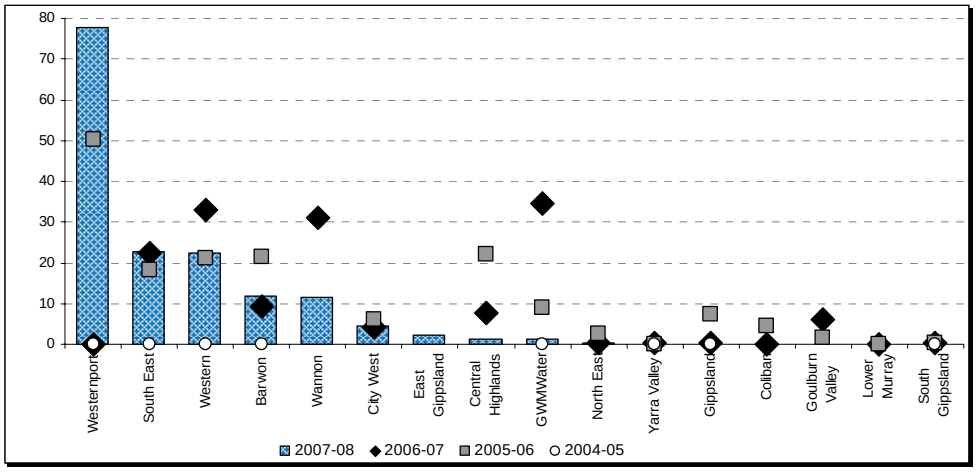
South East Water explained that the longer durations are a consequence of a reduction in planned interruptions over the past few years, with the remaining interruptions being more complex and taking longer.

Westernport Water advised that the high rate was a result of two one-off events. A night shutdown to replace valves contributed 57 per cent to the total and the remainder was a result of was an air scour of a reticulation pipe.

Drought and associated restrictions have led Barwon Water to reducing potential water loss through prompt isolation of burst mains and the capture of recharge water using tankers. However, this has resulted in longer than usual interruption times.

GWMWater and Wannon Water both identified increased operational focus on this target resulted in the reported improvements.

Figure 31 Planned customer-interruptions not restored within 5 hours
(per cent)

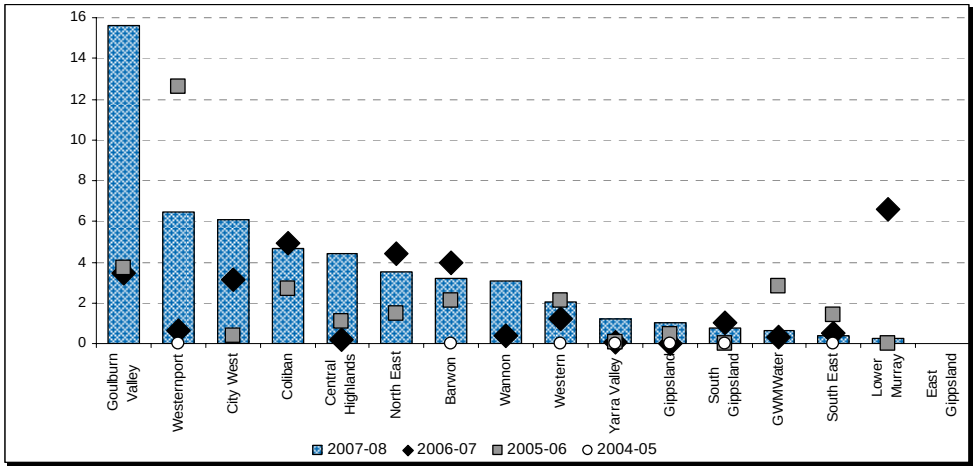


In relation to unplanned customer interruptions in 2007-08 the business:

- with the lowest rate of unplanned customer interruptions not restored within 5 hours was East Gippsland Water (0 per cent), followed by Lower Murray Water (0.3 per cent) and South East Water (0.4 per cent).
- with the highest rate of unplanned customer interruptions not restored within 5 hours were Goulburn Valley Water (15.6 per cent), Westernport Water (6.5 per cent) and City West Water (6.1 per cent)

Goulburn Valley Water and Westernport Water commented that a small number of unplanned customer interruptions not restored within five hours accounted for the majority of their customer interruptions.

Figure 32 Unplanned customer-interruptions not restored within 5 hours
(per cent)



The information in Table 7 shows that the majority of unplanned water supply interruptions are restored within 3 hours.

Nine businesses reported over 90 per cent of unplanned interruptions restored in 3 hours, 3 less than 2006-07.The best performers included: Lower Murray Water (98 per cent), Westernport Water (96 per cent) and East Gippsland Water (94 per cent). City West Water (72 per cent) and Barwon Water (78 per cent) were the only businesses to record less than 80 percent.

In 2007-08 the restoration rates for planned interruptions were generally slower. The best performers were Coliban Water reporting 100 per cent planned interruptions restored within three hours, Lower Murray Water (98 per cent) and GWMWater (93 per cent).

City West Water advised that longer restoration time was affected by restricted access in the Central Business District.

Table 7 Interruption restoration within specified times
(per cent)

	Unplanned water supply interruptions			*Planned water supply interruptions*		
	3 hrs	**5 hrs**	**12 hrs**	**3 hrs**	**5 hrs**	**12 hrs**
City West	71.8	94.4	99.8	77.3	93.6	100
South East	89.2	99.7	100	51.3	79.4	99.8
Yarra Valley	91.6	98.7	100	69.0	99.3	100
Barwon	77.6	96.4	100	51.9	88.1	100
Central Highlands	88.3	98.0	100	48.2	89.3	100
Coliban	82.4	96.8	100	100	100	100
East Gippsland	94.1	99.0	100	87.7	95.1	100
Gippsland	91.0	98.8	99.7	74.2	98.5	100
Goulburn Valley	90.6	98.4	100	87.9	100	100
GWMWater	93.5	99.2	100	92.6	96.9	100
Lower Murray	98.2	99.8	100	97.6	100	100
North East	90.9	96.2	98.5	88.1	98.5	100
South Gippsland	89.8	99.1	100	20.0	100	100
Wannon	89.1	98.3	100	87.9	94.8	100
Western	92.5	98.9	100	52.4	82.1	100
Westernport	95.5	98.7	100	53.3	83.3	100

5.12 Water losses

Non-revenue water is the difference between the volume of bulk water that leaves the business's treatment plants (or is received from bulk suppliers) and the volume of water for which the business bills its customers. It includes leakage, operational waste, theft or illegal usage, under-registration of customers' meters, unmetered water supplied for purposes such as fire fighting, and any over-registration in the bulk system meters.

The lowest level of non-revenue water was reported by Lower Murray Water (6.5 per cent) and GWMWater (7.1 per cent)

South Gippsland Water recorded the largest non-revenue water 17.7 per cent, followed by Central Highlands Water (15.9 per cent), Wannon Water (14.2 per cent) and Yarra Valley Water (14.1 per cent).

South Gippsland Water indicated that losses for high levels of manganese in its water results in additional losses in the treatment of water and required cleaning programs. In addition to this, water the age of its water mains results in higher leakages and pipe bursts.

Central Highlands Water advised that deterioration of the Daylesford system has resulted in increasing water losses. Wannon Water advised that due to the type of soil in the region, many leaks go undetected as water leaks to the water table rather than the surface.

The infrastructure leakage index measures the level of avoidable water losses against total water losses (the lower the number, the better the performance). The lowest infrastructure leakage index values were reported by Barwon Water (0.5), Westernport Water (0.6) and Western Water (0.8).

Barwon Water advised that the low infrastructure leakage index was achieved through a successful detection program and pressure reduction in high risk areas.

Table 8 Non revenue water and infrastructure leakage index

	2006 Non revenue water (per cent)	*2007 Non revenue water (per cent)*	*2008 Non revenue water (per cent)*	*2006 Infrastructure Leakage Index*	*2007 Infrastructure Leakage Index*	*2008 Infrastructure Leakage Index*
City West	9.8	9.3	8.4	1.32	1.16	1.00
South East	9.3	9.2	10.1	0.96	0.88	0.87
Yarra Valley	13.0	13.6	14.1	1.20	1.14	1.06
Barwon	6.2	6.4	7.8	0.46	0.43	0.54
Central Highlands	17.5	13.7	15.9	1.60	0.98	1.01
Coliban	25.5	13.9	11.0	1.31	1.13	1.31
East Gippsland	14.1	13.0	13.7		1.30	1.03
Gippsland	14.5	7.3	10.6	1.58	0.61	1.04
Goulburn Valley	8.4	8.9	9.9	2.21	1.72	1.68
GWMWater		7.1	7.1			
Lower Murray	8.3	6.9	6.5			0.84
North East	13.9	9.0	11.9	3.65	2.40	2.55
South Gippsland	21.0	15.1	17.7		1.20	1.40
Wannon		10.7	14.2		1.37	1.83
Western	9.7	12.2	11.8	0.93	0.86	0.80
Westernport						0.60

Note: GWMWater did not provide reliable data for the infrastructure leakage index and Westernport Water did not provide reliable data for non revenue water.

5.13 Sewerage service reliability

Background

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).

5.14 Frequency of sewer blockages

A sewer blockage is a part or total obstruction of a sewer main that impedes sewage flow and may cause a sewage spill. A sewage spill may occur as a result of a blockage or the incapacity of the sewer to handle the volume of sewage, particularly at times of high rainfall.

A range of external factors can influence performance, particularly fats and tree roots in the sewers, as well a business's own asset management practices. Dry weather conditions over the past eight years have resulted in more tree roots entering the sewers in search of water.

A sewer blockage is a partial or total blockage, which causes an interruption to sewerage services and/or a sewage spill. It includes all trunk and reticulation main blockages, but excludes blockages in the service connection branch and property drain.

In 2007-08 the average rate of sewer blockages was 31.5 blockages per 100 kilometres of sewer main (down from 34.3 blockages per 100 kilometres of sewer main in 2006-07), with performance ranging from 6.8 to 60.4 blockages per 100 kilometres. Generally the number of sewer blockages reported was similar to previous years.

The businesses with the lowest rate of sewer blockages were Westernport Water (6.8 blockages per 100 kilometres), North East Water (10.5), South Gippsland Water (14.2) and East Gippsland Water (15.4).

North East Water attributed its low rate of sewer blockages to the age of its infrastructure and its renewals program.

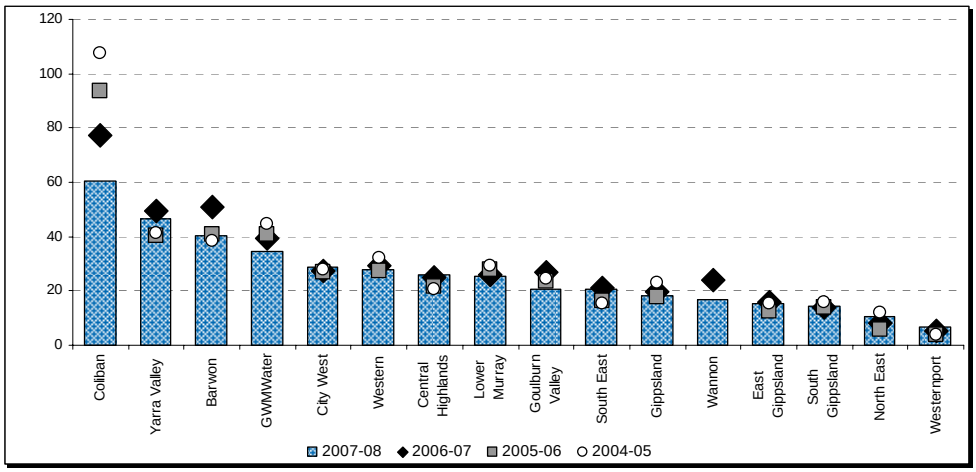
The businesses reporting the highest rate of sewage blockages were Coliban Water (60.4 blockages per 100 kilometres), Yarra Valley Water (46.4) and Barwon Water (40.3).

Coliban Water reported the largest improvement for this indicator, falling by 22 per cent from 2006-07 levels. Coliban Water advised that it has historically had a high number of sewer blockages with factors contributing to the high number of blockages including ground conditions, construction techniques and failure of ground asset components.

Yarra Valley Water advised that its records indicate that around 75 per cent of blockages are caused by tree root infiltration. Yarra Valley Water has significant areas where the combination of a high percentage of Vitrified Clay pipes in reactive soils and leafy suburbs combines to create a high level of blockages.

Barwon Water advised that the prolonged drought has impacted on sewer block frequencies through ground movement and tree root intrusion.

Figure 33 Sewer blockages
(per 100 kilometres of sewer main)



5.15 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 2007-08:

- the businesses with the lowest percentage of customers who experienced a blockage were North East Water (0.01 per cent), Wannon Water (0.1 per cent) and GWMWater and Westernport Water both with (0.2 per cent).
- the businesses with the highest percentage of customers who experienced a blockage were Coliban Water (3.3 per cent), and East Gippsland Water (1.7 per cent) and Yarra Valley Water with 1.6 per cent.

North East Water advised that a sewer root foaming project was conducted in 2006-07, which reduced root infiltration in identified regions of concern which assisted in reducing this indictor.

Figure 34 Customers experiencing a single sewer blockage

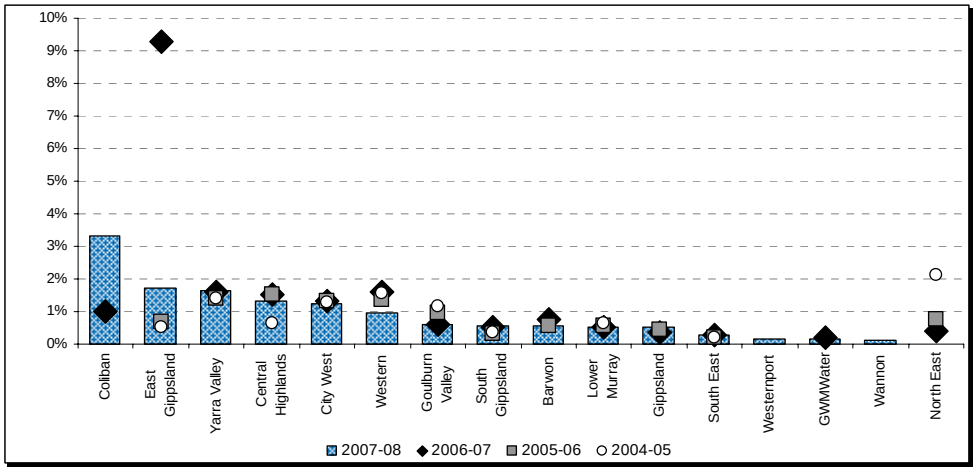


Table 9 shows the percentage of customers who experienced one or more sewer blockages in 2007-08. The information shows that very few customers experienced sewer blockages or interruptions because of faults in the business's sewer system. Multiple blockages were rarely experienced.

Table 9 Customers experiencing sewer blockages
(per cent)

Blockages	*1*	*2*	*3*	*>3*
City West	1.2	0.1	0.0	0.0
South East	0.3	0.0	0.0	0.0
Yarra Valley	1.6	0.1	0.0	0.0
Barwon	0.5	0.0	0.0	0.0
Central Highlands	1.3	0.0	0.0	0.0
Coliban	3.3	0.1	0.0	0.0
East Gippsland	1.7	0.1	0.0	0.0
Gippsland	0.5	0.0	0.0	0.0
Goulburn Valley	0.6	0.0	0.0	0.0
GWMWater	0.2	0.0	0.0	0.0
Lower Murray	0.5	0.0	0.0	0.0
North East	0.0	0.0	0.0	0.0
South Gippsland	0.6	0.0	0.0	0.0
Wannon	0.1	0.0	0.0	0.0
Western	1.0	0.1	0.0	0.0

Note: Westernport Water did not provide reliable data for this indicator.

5.16 Containment of sewer spills

Reticulation and branch sewage spills are a failure to contain sewage within the sewerage system.[18] 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.

[18] This measure excludes spills from emergency relief structures and at sewer pump stations and spills due to blockages in house connection branches.

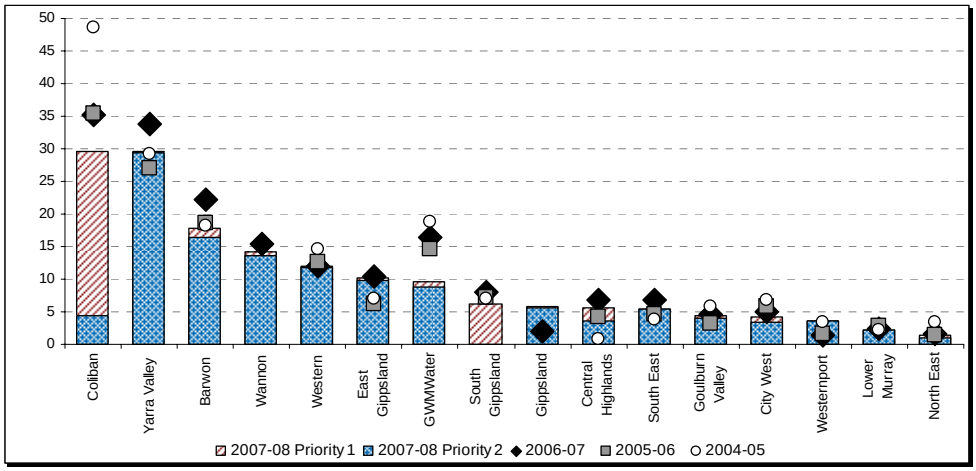
In 2007-08:

- three companies reported zero priority one spills per 100 km: South East Water, Lower Murray Water and Westernport Water. Nine other companies reported less than one priority one spill per 100km.
- Coliban Water had a considerably greater number of priority one spills with an average of 25.2 per 100 km, followed by South Gippsland Water (6.2) and Central Highlands Water (2.0).
- the businesses with the lowest rate of priority two spills per 100 km were South Gippsland Water (0.0), North East Water (1.1) and Lower Murray Water (2.2).
- Yarra Valley Water reported the highest rate of priority two spills per 100 km with an average of 29.5, followed by Barwon Water (16.5) and Wannon Water (13.6).
- Coliban Water and Yarra Valley Water reported the greatest overall number of priority one and two spills with 29.5 per 100 km.

Yarra Valley Water commented that its high rates of sewer blockages result in higher numbers of localised sewer spills. They also indicated that sewer spills are also caused by inadequate pipe capacity particularly in wet weather, which they are addressing through an ongoing program to improve the capacity of the sewer network.

Wannon Water has a program of identification and repair to deal with the high number of sewer spills, mainly due to the topography of the sewerage systems.

Figure 35 Sewer spills from reticulation and branch sewers
(per 100 km)



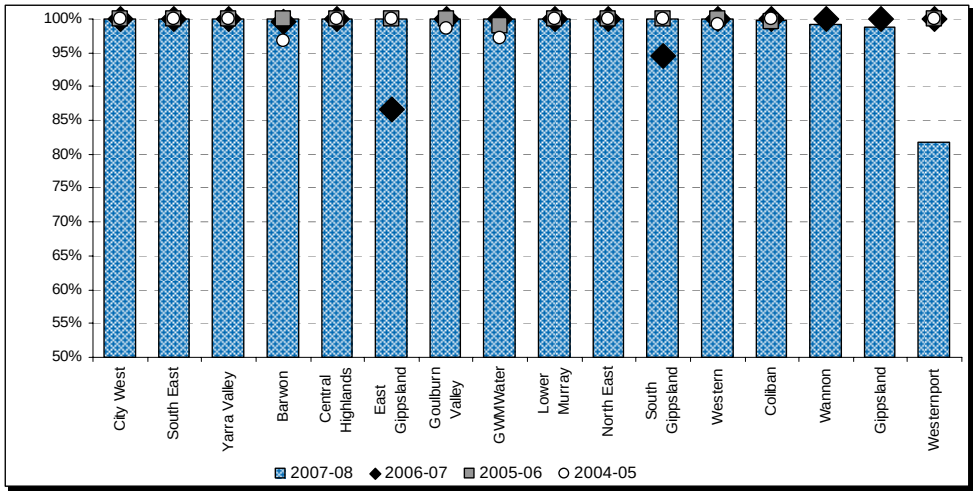
5.17 Sewer spills contained within 5 hours

This indicator measures the timeliness within which businesses contain sewer spills from branch and reticulation sewers. It is expressed as the percentage of spills that are fully contained within five hours.

In 2007-08, only Westernport Water (81.8 percent), Gippsland Water (98.9 per cent), Wannon Water (99.2 per cent) and Coliban Water (99.8 per cent) failed to contain 100 per cent of sewer spills within 5 hours. The high performance of companies for this indicator was consistent with results in 2006-07.

Gippsland Water advised that winter flooding restricted access to a number of sewer spills. Wannon water indicated that geographic distances between towns with sewerage services adversely impacted performance.

Figure 36 Containment of sewer spills within 5 hours
(per cent)



5.18 Spills to customers' property

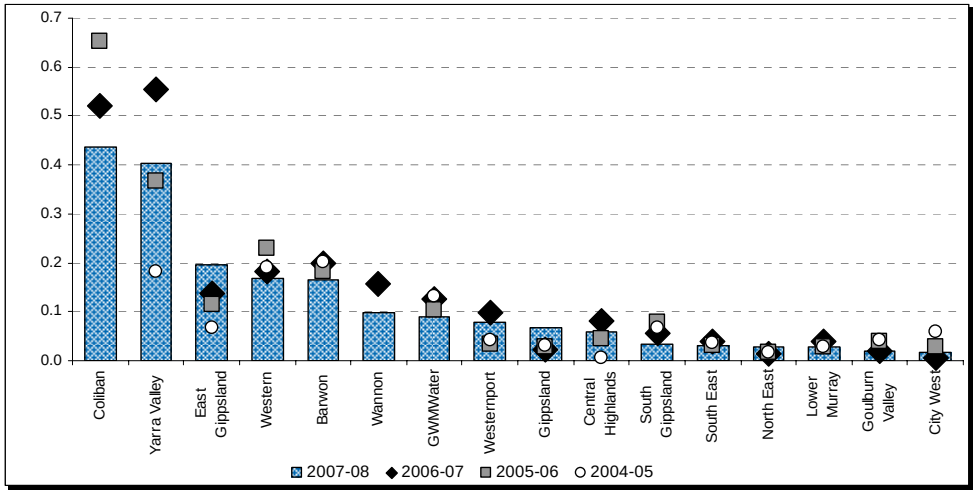
This indicator looks at the number of sewer spills caused by a fault in the water business's system that discharges to a customer's property.[19]

The lowest rates of sewer spills to customers' properties were reported by City West Water and Goulburn Valley Water (0.02 per 100 customers) followed by South Gippsland Water, South East Water, North East Water and Lower Murray Water all with 0.03 per 100 customers.

The highest rates of spills to customers' properties were reported by Coliban Water (0.44 per 100 customers), Yarra Valley Water (0.40) and East Gippsland Water (0.20). East Gippsland Water identified that flooding during the winter of 2007 resulted in increase sewer spills to customer properties.

[19] The indicator excludes sewer spills caused by faults in the service connection or house connection branch and the property drain.

Figure 37 Sewer spills to customer property
(per 100 customers)



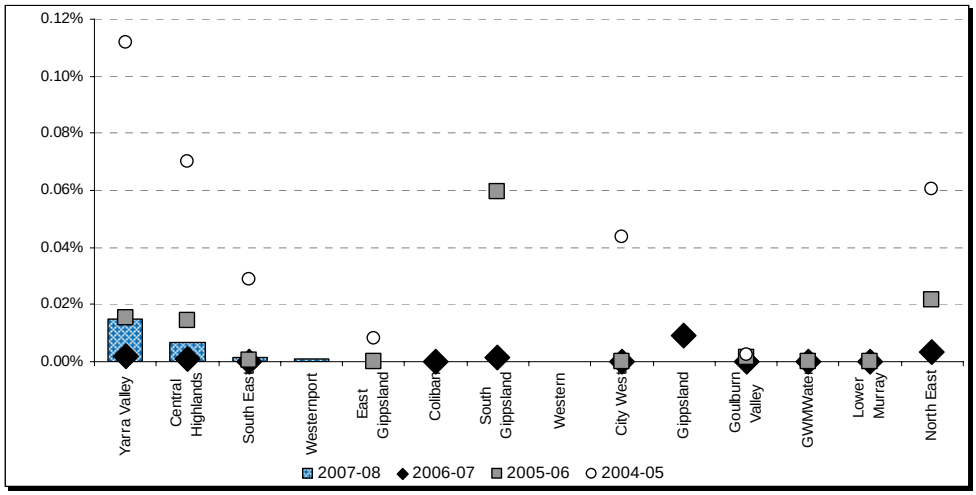
5.19 Overall reliability — proportion of sewage spilled

Overall reliability gives an indication of the percentage of sewage collected that is contained (that is, not released to the environment before treatment). It measures the volume of sewage spilt from emergency release structures and pump stations.

Figure 38 shows a relatively small volume of sewage was spilt to the environment during transportation in 2007-08. The highest volume of sewage spilt as a proportion of the volume transported was reported by Yarra Valley Water (0.015 per cent), followed by Central Highlands Water (0.007 per cent).

Central Highlands Water advised that it estimates the volume of sewerage spilt.

Figure 38 Sewer spill volume of percentage transported



Note: Not all business have emergency release structures on their sewers and many smaller water businesses do not have the capacity to measure the volume of sewage spilt.

6 DRINKING WATER QUALITY

6.1 Background

The water businesses monitor and manage the quality of drinking water supplied to customers with the aim of ensuring that its potential health, aesthetic and economic impacts are appropriately managed.

- health impacts may result from the presence of microorganisms such as bacteria and viruses due to, for example, the faecal contamination of source water or from the presence of chemicals that are in the water as a result of water treatment (such as aluminium, chlorine, trihalomethanes), natural occurrence (such as minerals) or agricultural or mining activities (such as pesticides).
- aesthetic impacts are caused mainly by colour, taste and odour, and result from microbiological, physical and chemical causes.
- economic impacts may arise from the physical and chemical characteristics of water, such as those that cause pipe corrosion or affect product quality.

The businesses have legal obligations under the *Safe Drinking Water Act 2003* to monitor and maintain the quality of drinking water they supply in their area. During 2007-08, water businesses were required by the Department of Human Services (DHS) to report summaries of their water quality test results for *Escherichia coli (E. coli)*, turbidity and a range of chemicals.

The *Safe Drinking Water Act 2003* provides a framework for drinking water quality that includes:

- risk management obligations
- a set of standards for key water quality parameters and
- information disclosure requirements for water businesses, including a requirement to publish an annual water quality report.

The performance indicators collected by the Commission measure the percentage of customers across a water business with a drinking water supply that complied with the standards. It should also be noted that some reticulated water supplies in regional Victoria do not need to be supplied to drinking water standards. These supplies are not included in the indicators.

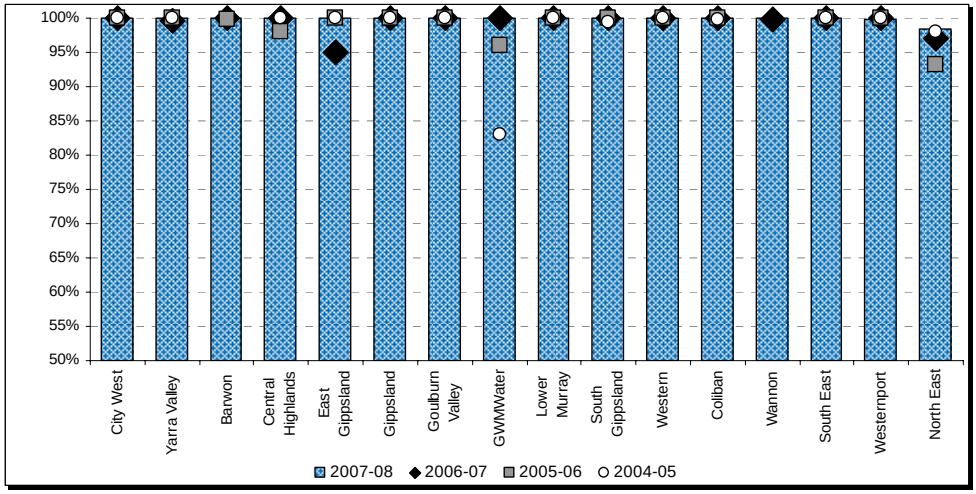
DHS publishes a detailed annual report on the quality of Victoria's drinking water supplies in February each year. Information about the quality of local drinking water supplies can be obtained from the DHS report or from water quality reports published by each business.

6.2 Microbiological water quality

The most significant indicator of microbiological water quality is the bacteria *Escherichia coli (E. coli)*. The presence of *E. coli* means that water may be contaminated with faecal material. These organisms should not be present in drinking water. For annual reporting purposes 98 per cent of samples of drinking water in each locality should be free of the presence of *E. coli*.

During 2007-08, almost all customers received drinking water that met *E. coli* requirements as specified by DHS (figure 39). An exception to this was North East Water (98.5 per cent) which improved from 97.0 per cent in 2006-07. East Gippsland Water improved its results from previous years, increasing from 95 per cent in to 100 per cent of customers receiving water meeting *E. coli* requirements in 2007-08.

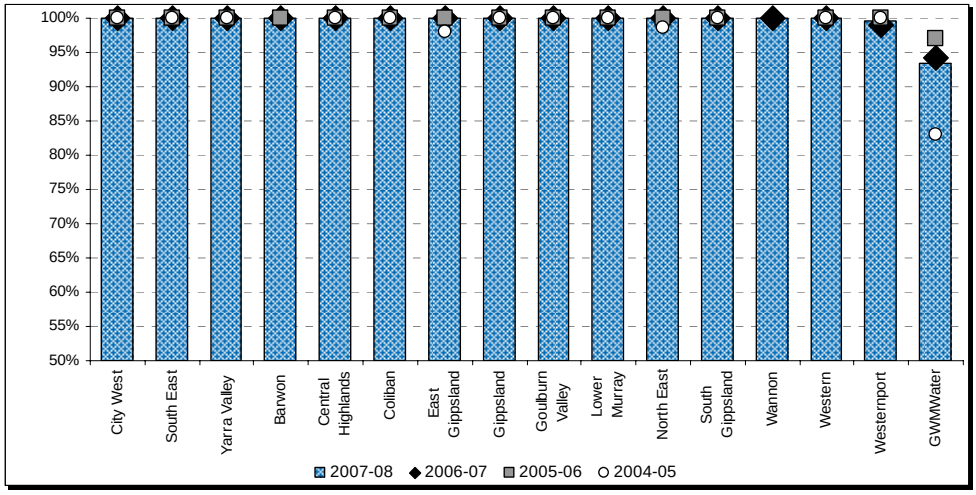
Figure 39 Microbiological water quality
(per cent of customers receiving drinking water meeting *E. coli* requirements)



Turbidity affects the appearance of water. It is caused by the suspension of fine particles in water and is measured in Nephelometric Turbidity Units (NTU). High turbidity levels can result in water having a “muddy” or “milky” appearance. The upper confidence limit of the mean turbidity of drinking water in each location should be not greater than 5 NTU.

In 2007-08 almost all customers received drinking water that met *these turbidity* requirements 100 per cent of the time. GWMWater (93.4 per cent) was the only businesses significantly below 100 per cent compliance.

Figure 40 Turbidity
(per cent of customers receiving drinking water that meets turbidity requirements)



6.3 Disinfection by-products

Disinfection by-products result from disinfectants used to make water supplies safe to drink reacting with naturally occurring organic material that is present in the water. Most disinfectants used to render drinking water safe from pathogenic micro-organisms will produce small quantities of by-products in the disinfection process.

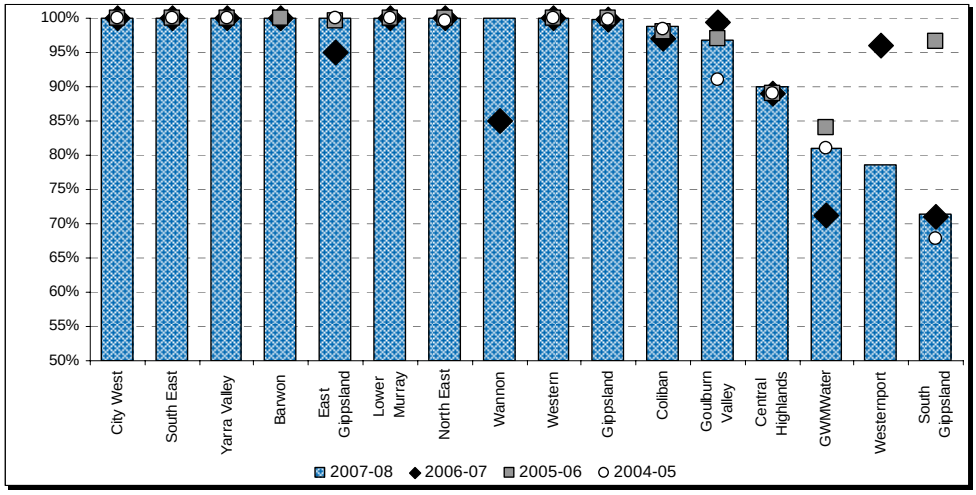
DHS has specified maximum concentration levels for a number of disinfection by products including (for supplies disinfected with chlorine based chemicals) trihalomethanes, monochloroacetic acid, dichloroacetic acid and trichloroacetic acid and (for supplies disinfected with ozone) bromate and formaldehyde. The indicator used in this report is a composite of the results for the four chlorine based parameters as this is the most common form of disinfection of drinking water used in Victoria.

In 2007-08 nine businesses supplied customers with drinking water that met DHS requirements for the maximum concentration of these disinfection products 100 per cent of the time (figure 41). Companies which reported lower performances included Gippsland Water (99.8 per cent), Coliban Water (98.7 per cent), Goulburn Valley Water (96.8 per cent),Central Highlands Water (90 per cent), GWMWater (80.9 per cent), Westernport Water (78.7 per cent) and South Gippsland Water (71.5 per cent).

Coliban Water advised that the lower performance is a known problem and its Water Quality Improvement Programs aim to improve performance.

Westernport Water commented that they have identified that powder activated dosing and regular air scouring will decrease the occurrence of non-compliances that occurred in 2007-08.

Figure 41 Disinfection by products
(per cent of customers receiving drinking water that meets disinfection by- product requirements)



6.4 Water quality complaints

From a public health perspective, microbiological water quality is the most important indicator. However, colour, taste and odour are important to customers' perceptions. The number of complaints received about water quality by each business is a measure of customer satisfaction with these aesthetic qualities.

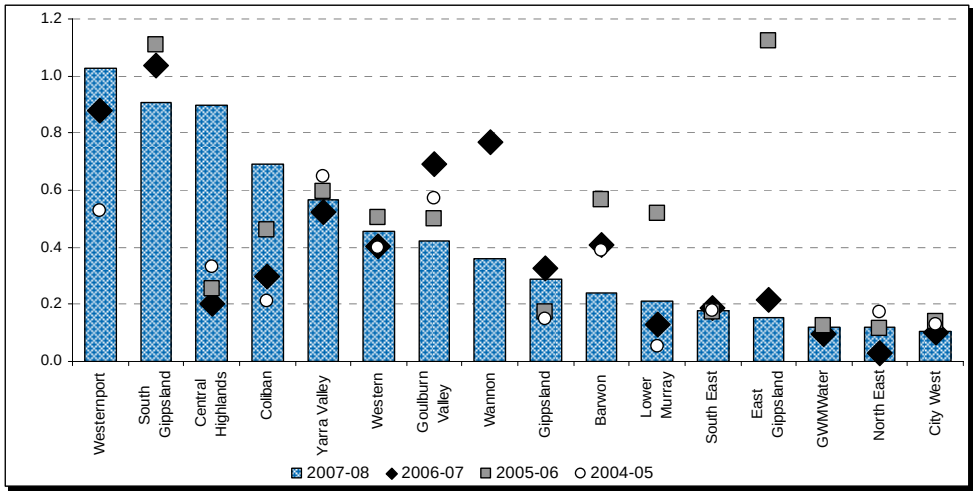
In 2007-08, water quality complaints made up 52.3 per cent of the total complaints received across all businesses, with concern about water colour being the main reason for complaints. Overall there was a small rise in water quality complaints to 7 749 up from 7 159 representing 0.35 complaints per 100 customers in 2007-08 up from 0.33 per 100 customers in 2006-07.

Westernport Water received the highest rate of water quality complaints for the year with 1.03 complaints per 100 customers (up from 0.88 in the previous year), followed by South Gippsland Water (0.91, down from1.04), Central highland Water (0.9, up from 0.2) and Coliban Water (0.69, up from 0.3). Westernport Water advised that very low water levels in the reservoir at the start of the reporting period resulted in variable water quality, contributing to a major part of these complaints. During the year Westernport Water conducted a flushing program as well as an air scouring on parts of the distribution system to improve water quality and colour.

Coliban Water advised that the increase in complaints is attributed to water quality issues in the Cohuna region in the 4 months the audit was conducted.

City West Water reported the lowest rate of water quality complaints with 0.11 per 100 customers, followed by North East (0.12), GWMWater (0.12) and East Gippsland Water (0.15).

Figure 42 Water quality complaints — all causes
(per 100 customers)

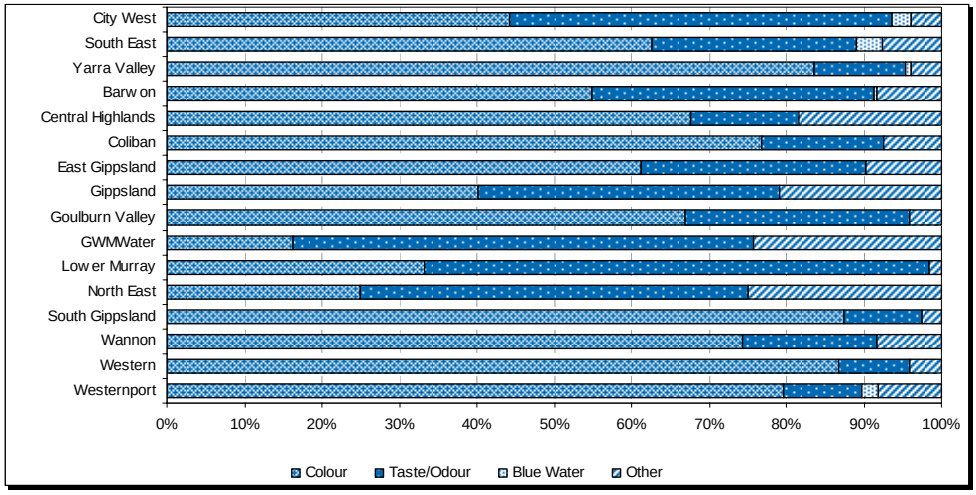


Note: Water quality complaints are reported in four categories: colour, taste and odour, blue water and other. 'All causes' refers to the total of these categories.

By cause of complaint:

- South Gippsland Water, Western Water, Westernport Water and Yarra Valley Water attributed 80 per cent or more of complaints to water colour
- GWMWater, Lower Murray Water and North East Water reported attributed 50 per cent or more of complaints to taste and odour issues and
- Blue water complaints resulting from copper corrosion were relative rare with 11 businesses reporting no complaints and South East Water and City West Water and Westernport Water reporting 3 per cent of less of complaints attributed to blue water.

Figure 43 Water quality complaints — by cause



6.5 Water quality at interface points

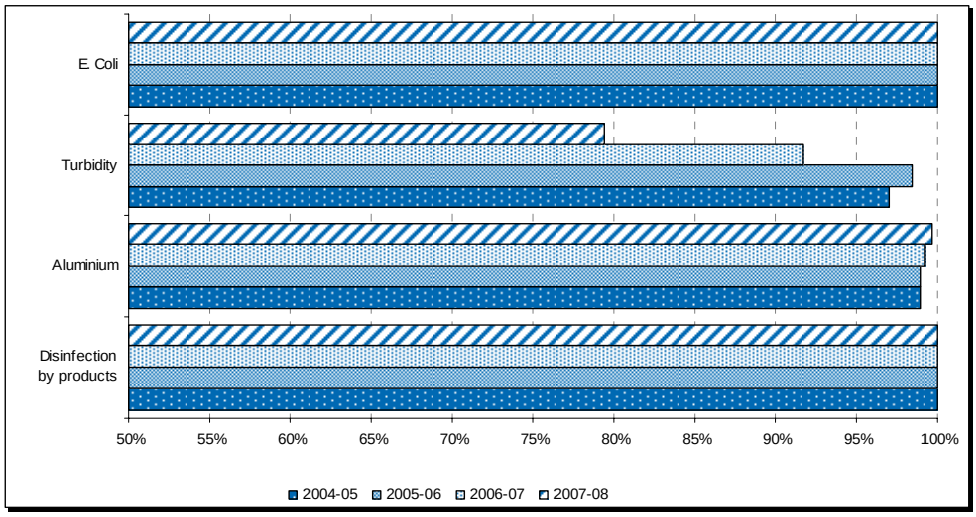
In the metropolitan water system, Melbourne Water supplies treated water to the three Metropolitan water businesses and Western Water. At the interface points Melbourne Water is required to ensure that water quality meets specified requirements set out by bulk supply agreements made with the metropolitan water businesses and Western Water. These requirements cover:

- *E. coli*
- turbidity
- aluminium and
- disinfection by-products.

In 2007-08, test results at the interface points showed 100 per cent compliance for *E. coli* and disinfection by-products, 99.7 per cent for aluminium and 79.4 per cent for turbidity down from 91.7 per cent (figure 44).

Melbourne Water advised that the lower turbidity compliance was a result of a significant storm event that affected the Upper Yarra storage for around 5 months.

Figure 44 Melbourne Water compliance with water quality requirements at interface points
(per cent)



7 ENVIRONMENTAL PERFORMANCE

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 quality

The Environmental Protection Authority (EPA) regulates sewage effluent quality through discharge licences at sewage treatment plants. The level of sewage treatment required usually depends on the type of waterway which the treated sewage is discharged. Table 10 shows the number of sewage treatment plants and the level of treatment provided by sewage volume. Sewage from primary treatment plants is less refined than sewage from tertiary treatment plants.

The total volume of sewage treated in Victoria was 406 056 ML in 2007-08. This was the second consecutive year total sewer volumes fell, decreasing by 1.5 per cent from the 2006-07 total of 413 279 ML (448 984 ML in 2005-06)..

97.6 per cent of sewage was treated to at least secondary level with 11.1 per cent being treated to a tertiary standard. Lower Murray Water and Gippsland Water were the only businesses to treat sewage to a primary level in 2007-08. Gippsland Water commented that the primary level treated waste is non-organic saline waste, transferred via a dedicated pipeline from Latrobe Valley Power Stations.

Melbourne Water treats sewage to a secondary level, treating 65.5 per cent (266 106 ML) of Victoria's total sewage.

Table 10 Sewage treatment plants

	TP-Primary	*TP-Secondary*	*TP-Tertiary*	*TP-Total*	*Volume Primary*	*Volume Secondary*	*Volume Tertiary*	*Volume Total*
Melbourne Water	-	2	-	2	-	266 106	-	266 106
City West	-	-	1	1	-	-	4 698	4 698
South East	-	5	3	8	-	9 028	1 966	10 994
Yarra Valley	-	1	7	8	-	404	7 822	8 225
Melbourne Total	-	8	11	19	-	275 538	14 485	290 023
Barwon	-	8	1	9	-	19 279	1 527	20 806
Central Highlands	-	9	2	11	-	1 456	7 334	8 790
Coliban	-	12	4	16	-	796	8 168	8 964
East Gippsland	-	9	1	10	-	1 679	1 150	2 828
Gippsland	1	8	5	14	8 697	14 278	4 181	27 156
Goulburn Valley	-	23	3	26	-	12 374	505	12 879
GWMWater	-	25	-	25	-	3 353	-	3 353
Lower Murray	1	9	-	10	1 140	4 071	-	5 211
North East	-	14	4	18	-	2 459	4 476	6 935
South Gippsland	-	7	2	9	-	1 440	1 054	2 493
Wannon	-	18	1	19	-	8 630	79	8 709
Western	-	5	2	7	-	4 794	2 084	6 877
Westernport	-	2	-	2	-	1 032	-	1 032
Non-Melbourne Total	2	149	25	176	9 837	75 639	30 557	116 033
State-wide Total	2	157	36	195	9 837	351 177	45 042	406 056

7.3 Sewage treatment plant compliance

In 2007-08 most businesses reported close to 100 per cent compliance with discharge requirements specified by their EPA licences. Six businesses report 100 per cent compliance with their licence requirements; Melbourne Water, City West Water, South East Water, Yarra Valley Water, Goulburn Valley Water and Westernport Water.

Goulburn Valley Water advised it continues to focus on maximising the efficiency and effectiveness of wastewater treatment processes, while licence compliance is a top priority to ensure environmental protection.

The lowest level of sewage treatment plant compliance was GWMWater with 74.8 per cent, followed by East Gippsland Water with 81.0 per cent. All other businesses reported results of greater the 96 per cent compliance. East Gippsland Water advised that most non-compliance reported was a result of salt water infiltration in the Lakes Entrance, Paynesville and Metung systems causing higher than expected electrical conductivity results. A number of special projects to reduce salt water leakage into the sewer line network are being undertaken.

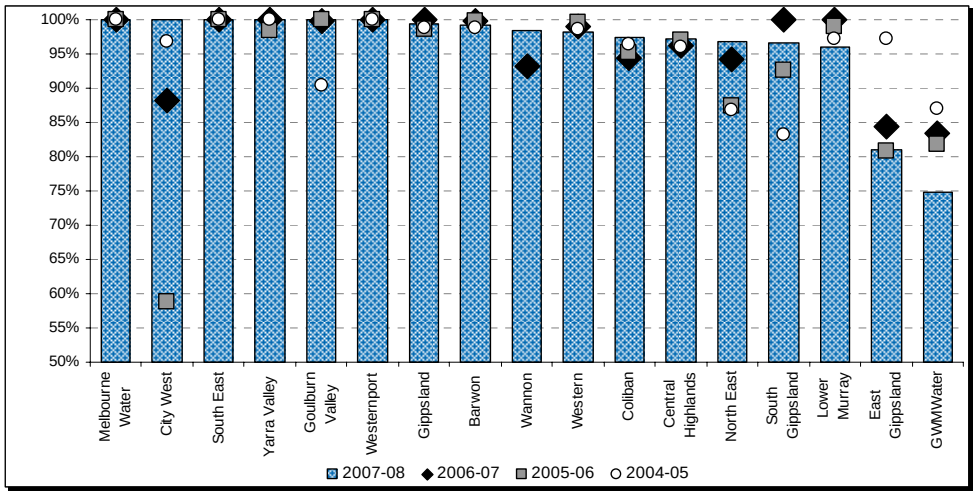
City West Water reported the highest improvement in sewage treatment plant compliance in 2007-08, increasing its compliance from 88.3 per cent in 2006-07 to 100 per cent. Wannon Water had the second largest improvement with 98.5 per cent, up from 93.3 per cent.

The largest decreases in sewage treatment plan compliance were reported by GWMWater (down from 83.4 per cent in 2006-07) and Lower Murray Water (down from 100 per cent in 2006-07 to 96 per cent in 2007-08)

Wannon water advised that the short-term upgrade at the Portland Water Reclamation Plant has shown improvements in the effluent quality for both biological oxygen demand (BOD) and suspended solids. A major upgrade to the Portland plant is scheduled for 2011. Works undertaken at the Port Fairy Industrial Water Reclamation Plant achieved significant improvement in licence compliance (BOD and suspended solids).

Lower Murray Water commented that its sewage treatment compliance moved from 100 to 96 per cent in the 2007-08 due to one non-complying BOD sample (out of a total of 29 samples) which occurred at the Koorloong treatment plant. The Koorlong treatment plant currently has pre-treatment and primary treatment processes with no secondary treatment process. The plant is currently being augmented and will include secondary treatment to produce class C reclaimed water. Lower Murray Water expects to achieve 100 per cent sewerage treatment compliance in 2008-09.

Figure 45 Overall sewage treatment plant compliance
(per cent)



7.4 Recycled water

The majority of sewage treatment plants operated by the water businesses are subject to the State Environment Protection Policy, Waters of Victoria schedules, which are developed and administered by the EPA. The schedules require 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. The State Government has required all metropolitan water businesses to collectively achieve 20 per cent recycling of treated effluent by 2010. The three retail businesses and Melbourne Water are also pursuing other opportunities to use recycled water, such as residential third pipe systems (where recycled water is reticulated to domestic customers for both internal use, such as flushing toilets, and external use).

Figure 46 shows the proportion of treated effluent that is recycled by each business.

Across Victoria 29.1 per cent per cent of all effluent was recycled in 2007-08, compared to 28.6 per cent in 2006-07 and 27.7 per cent in 2005-06. In regional Victoria 30.5 per cent of effluent was recycled compared to 31.2 per cent in 2006-07. In metropolitan Melbourne, 28.6 per cent of effluent was recycled (including beneficial environmental flows for Ramsar listed wetlands at the Western Treatment Plant). This represented a contribution of 23.1 per cent recycling towards the Government's 2010 target of 20 per cent (which does not include beneficial environmental flows) compared to 22.5 percent in 2006-07.

East Gippsland Water had the highest rate of effluent reused with 100 per cent, a result it has achieved for the fourth straight year, followed by GWMWater (98.5 per cent) and Goulburn Valley Water (92.7 per cent). Goulburn Valley Water noted it has established a relatively high level of wastewater recycling through large investment over many years in infrastructure, land purchases and negotiation with third party users to receive recycled water. Additionally, 2007-08 was relatively dry, which maximised Goulburn Valley Water's ability to recycle water to irrigation land. Transferring from Shepparton back to Mooroopna also provided more opportunity for reuse.

The lowest rate of recycling was by City West Water with 1.6 per cent followed by South Gippsland Water (4.2 per cent), Gippsland Water (5.9 per cent) and Central Highlands Water (7.4 per cent). Gippsland Water advised its re-use opportunities remain limited due to the high volume of saline waste water from a number of industrial sources. South Gippsland Water advised its overall region is one of generally high rainfall and lower water consumption (second lowest in state), impacting on its ability to introduce recycled water options.

Central Highlands Water advised that of 11 of wastewater systems, seven systems are fully reliant upon land based reuse and therefore recycle 100 per cent of reclaimed water. Of the three remaining systems Beaufort is scheduled for an upgrade with a view towards 100 per cent recycling. The percentage of reuse at Ballarat North will increase to around 35 per cent following the implementation of the Lake Wendouree reuse project and the disproportionately large volume of wastewater treated at the Ballarat South wastewater treatment plant. The overall percentage of reclaimed water recycled will remain relatively low in the absence of large scale recycling from this system.

Coliban Water had the biggest improvement in the percentage of effluent recycled with an increase from 33.8 to 49.9 per cent. Other businesses with improved results include Goulburn Valley Water (85.8 to 92.7 per cent) and Wannon Water 10.6 to 17.3 per cent.

Wannon Water indicated that it has increased its emphasis on marketing and management of recycled water and have appointed a recycled water manager to oversee implementation of Wannon Water's recycled water strategy. The drought has also boosted market interest in recycled water for agriculture.

Figure 46 Proportion of effluent reused
(per cent)

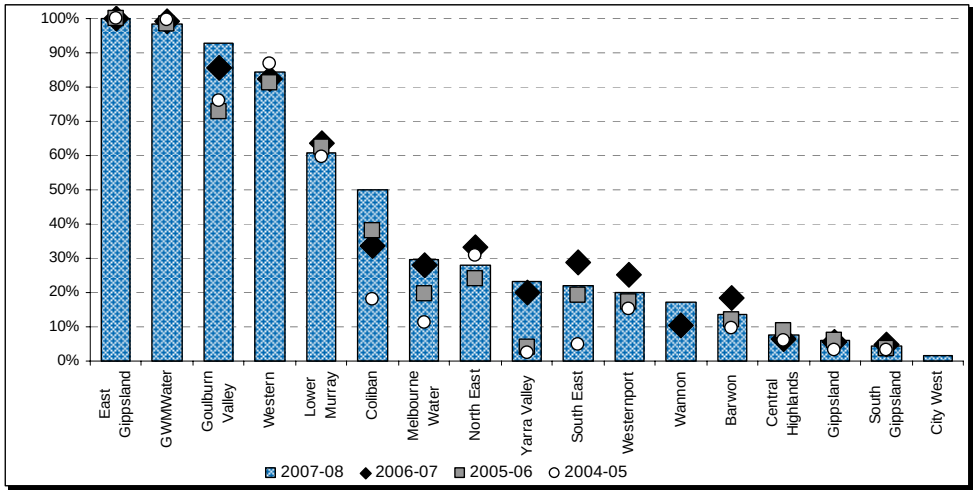


Table 11 breaks the volume of recycle effluent down by its use. The major use of recycled water is for agricultural purposes and only a small component is for urban and industrial use.

Table 10 Volume of effluent recycle by use
(ML)

	Urban & Industrial	Agriculture	Beneficial Allocation	Within Process	Return to retailers for reuse	Total Reuse	Per cent
Melbourne Water	553	27 481	15 930	13 255	20 695	77 914	29.6
City West	-	-	-	73	-	73	1.6
South East	1 009	891	-	669	-	2 569	22.1
Yarra Valley	322	240	-	1 533	-	2 094	23.1
Melbourne Total	1 884	28 612	15 930	15 530	20 695	82 651	28.6
Barwon	-	1 473	-	1 303	-	2 776	13.7
Central Highlands	161	268	-	189	-	618	7.4
Coliban	1 267	2 023	-	-	-	3 290	49.9

	Urban & Industrial	Agriculture	Beneficial Allocation	Within Process	Return to retailers for reuse	Total Reuse	Per cent
East Gippsland	-	1 603	1 127	-	-	2 730	100.0
Gippsland	36	686	632	-	-	1 354	5.9
Goulburn Valley	271	6 110	-	-	-	6 380	92.7
GWMWater	592	1 344	-	8	-	1 944	98.5
Lower Murray	103	2 500	-	-	-	2 604	60.8
North East	282	1 466	-	-	-	1 749	28.2
South Gippsland	4	141	-	-	-	144	4.2
Wannon	127	1 489	-	-	-	1 615	17.3
Western	1 032	3 881	-	371	-	5 284	84.5
Westernport	80	127	-	5	-	212	20.2
Non-Melbourne Total	3 954	23 112	1 759	1 876	-	30 700	30.5
State-wide Total	5 838	51 724	17 689	17 406	20 695	113 351	29.1

7.5 Biosolids reuse

Figure 47 shows the proportion of biosolids that are reused by each business. Overall, 36.8 per cent of biosolids were reused in 2007-08, down from 44.2 per cent in 2006-07.

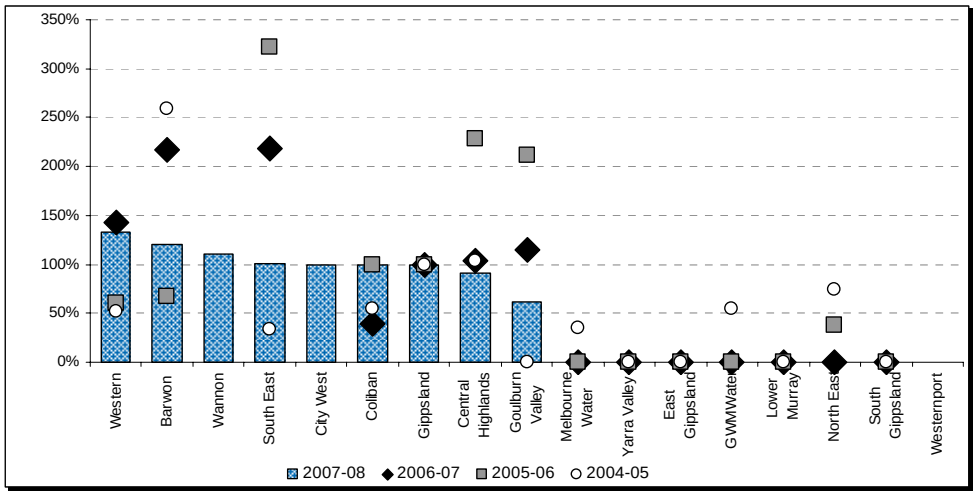
The highest rate of biosolid recycling was reported by Western Water with 132.6 per cent reused followed by Barwon Water with 120.2 per cent. Five other businesses also reported results of 100 per cent or higher (Wannon Water, South East Water, City West Water, Coliban Water and Gippsland Water), while eight business did not report any reuse of biosolids. Barwon Water noted that they continued to beneficially reuse 100% of the biosolids produced from its water reclamation plants during the year.

Coliban Water had a significant increase in the percentage of biosolids reused (38.9 per cent to 100 per cent), while large decreases were reported by South East Water (218.3 per cent to 100.1 per cent), Barwon Water (216.7 per cent to 120.2 per cent) and Goulburn Valley Water (114.8 per cent to 62 per cent). Barwon Water commented that the decrease in the percentage of biosolids beneficially reused is a consequence of the reduction in stockpiled biosolids available following previous stockpile reductions over past five years.

According to Goulburn Valley Water the ability to reuse biosolids is opportunistic and the amount used will vary year to year. Goulburn Valley Water advised that its strategy is to reuse 100 per cent of biosolids produced in the long run.

South East Water advised that for the few years before 2007-08 there has been a focus on reducing stockpiles of biosolids. The focus is currently on reusing incoming volumes with some minor ongoing reduction of stockpiles.

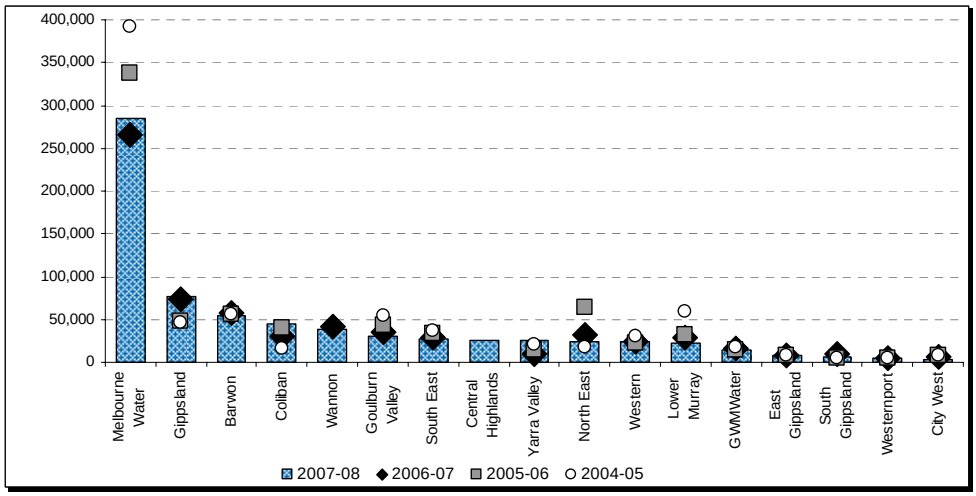
Figure 47 Proportion of biosolids reused
(per cent)



7.6 Greenhouse gas emissions

Figure 48 and Table 12 show the net greenhouse gas emissions produced by each of the businesses from 2004-05 to 2007-08.[20] The calculations are based on the conversion factors issued by the Australian Greenhouse Office. Although direct comparison between businesses is difficult because of the businesses' size and operational characteristics, the data establishes a baseline against which future performance can be measured.

Figure 48 Net historic greenhouse gas emissions
(CO_2 equivalent emissions, tonnes)



[20] These results are net of offsets.

Total net CO_2 emissions generated by Victorian urban water businesses were 715 101 equivalent tonnes in 2007-08. On average, businesses reported a 2.1% increase from 2006-07 after a decrease of 13.7 per cent between 2005-06 and 2006-07 [21] Due to the nature and scale of its operations, Melbourne Water was again the largest CO_2 emitter in Victoria. Gippsland Water, Barwon Water and Coliban Water were the next biggest CO_2 emitters.

Gippsland Water advised a large percentage of its greenhouse gas omissions are generated from its regional outfall sewer. A combination of high energy demand in pumping waste over a long distance and lost methane during the treatment process contributes largely to Gippsland Water's greenhouse gas omissions. The Gippsland Water Factory will have a positive impact on reducing direct greenhouse gas emissions primarily by capturing methane.

Table 12 sets out the greenhouse gas emissions over the period between 2005-06 and 2007-08. 10 businesses reduced their CO_2 emissions in 2007-08, with City West Water (50.3 per cent), North East Water (25.2 per cent), South Gippsland Water (24.2 per cent) and Lower Murray Water (22.3 per cent) making the largest improvements. Significant increases in CO_2 emissions were reported by Yarra Valley Water (156.4 per cent) and Coliban Water (44.6 per cent).

Table 12 Historic net greenhouse gas emissions
(CO_2 equivalent emissions, tonnes)

	2004-05	*2005-06*	*2006-07*	*2007-08*	*1 year per cent change*
Melbourne Water	392 550	338 147	265 769	284 464	+7.0
Gippsland	46 596	47 418	73 860	76 596	+3.7
Barwon	55 690	56 286	58 100	54 094	-6.9
Coliban	16 029	40 763	31 053	44 898	+44.6
Wannon			41 997	37 848	-9.9
Goulburn Valley	54 001	42 909	35 586	29 983	-15.7
South East	37 323	33 470	29 115	27 113	-6.9
Central Highlands				26 223	
Yarra Valley	20 821	14 667	10 136	25 985	+156.4
North East	17 569	63 893	32 722	24 473	-25.2
Western	30 434	23 192	23 958	23 484	-2.0
Lower Murray	59 137	32 120	28 220	21 925	-22.3
GWMWater	17 765	14 401	16 078	14 844	-7.7
East Gippsland	7 669	8 439	7 927	7 973	+0.6

[21] The total CO2 figures are net of offsets and both the 2005-06 and 2006-07 results (for the year on year comparison) exclude results for Central Highlands Water as the data provided is unreliable

South Gippsland	4 796	4 793	9 101	6 895	-24.2
Westernport	4 481	4 661	4 510	4 872	+8.0
City West	7 289	8 077	6 905	3 432	-50.3

Table 13 and Figure 49 set the contributions to CO_2 emissions by each water business activity. Sewerage treatment processes are the biggest contributor of greenhouse gas emissions, followed by water treatment processes. These two processes generate 89 per cent of the businesses' total greenhouse gas emissions.

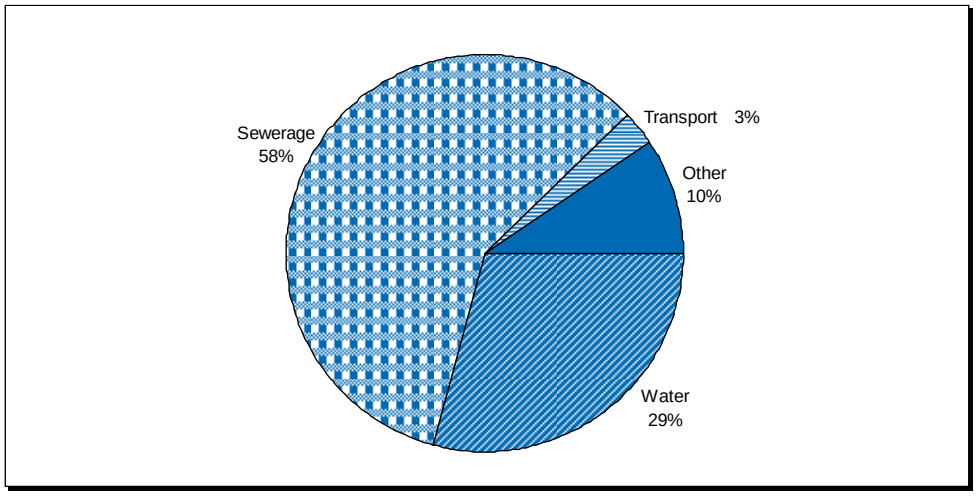
Table 11 Sources of greenhouse gas emissions
(CO_2 equivalent emissions, tonnes)

	Water	*Sewerage*	*Transport*	*Other*	*Offsets*	*Total* [a]
Melbourne Water	71 324	170 549	3 732	46 759	7 900	284 464
City West	81	5 086	1 568	2 419	5 722	3 432
South East	5 696	19 741	1 030	1 925	1 279	27 113
Yarra Valley	6 525	15 232	1 290	4 451	1 513	25 985
Barwon	13 938	35 791	1 554	2 812	-	54 094
Central Highlands	10 975	12 631	1 003	1 614	-	26 223
Coliban	26 485	16 760	1 085	568	-	44 898
East Gippsland	3 823	3 511	337	302	-	7 973
Gippsland	10 488	58 215	1 357	6 536	-	76 596
Goulburn Valley	12 713	15 865	1 125	717	437	29 983
GWMWater	8 421	3 562	1 848	1 018	4	14 844
Lower Murray	16 266	6 481	724	429	1 975	21 925
North East	7 803	36 570	945	219	21 064	24 473
South Gippsland	2 329	5 594	739	183	1 950	6 895
Wannon	13 526	22 851	987	484	-	37 848
Western	8 959	12 432	644	1 662	213	23 484
Westernport	1 905	2 464	267	236	-	4 872
Total	221 256	443 333	20 235	72 333	42 057	715 101

[a] Total CO_2 emissions are net of offsets

Figure 49 indicates that businesses' sewerage treatment processes are the biggest contributor of greenhouse gas emissions, followed by water treatment processes. These two processes generate 87 per cent of the businesses' total greenhouse gas emissions.

Figure 49 Breakdown of greenhouse gas emissions



8 MAJOR PROJECTS

8.1 Background

The Commission's regulatory framework provides financial incentives for businesses to efficiently deliver its capital works programs. The Commission has also set in place processes to monitor the delivery of key projects across the regulatory period. In assessing businesses' Water Plans the Commission found that a small number of key projects underpinned the capital expenditure forecasts for each business. The Commission's pricing decision identified these projects and the expected delivery dates. The performance report will each year identify the projects that were expected to be delivered by the end of the financial year and whether the project has been completed. Where businesses have not completed projects they have been asked to explain the reasons for the delays.

As businesses progress further into the regulatory period there will be an increase in the number of projects undertaken, and in the number that the Commission will expect to have been completed.

8.2 Status of projects nominated for completion in 2007-08

Given recent drought conditions in Victoria, it is to be expected that some businesses will have delayed or deferred projects nominated for completion in 2007-08. Table 14 describes the projects that each business scheduled for completion in 2007-08, and whether or not the project has been completed. The table also lists projects that were to be completed in 2006-07, but were delayed for various reasons provided at the time.

Table 12 Status of projects nominated for completion in 2007-08

Business	*Project Description*	*Comments*
City West Water	• Construction and commissioning of the Werribee Dual Pipe Project.	Detailed design of the pipeline has been completed. Following preliminary consultation with external stakeholders, formal acceptance of the design by stakeholders has now been sought. Functional design has been completed for the remaining assets, including treatment plant, storages and pump stations. City West Water aims to go to tender in early 2010.
	• Delivery of billing system (Gentrack) upgraded and integrated with other core systems (originally to be completed 2006-07)	Completed 2009

Business	*Project Description*	*Comments*
	• Trade waste management system (EMIS) upgrade – phase 2	Phase 2 to commence 2010
	• Monitoring system for pump stations, gauges and valves (SCADA) upgrade – phase 2	Phase 2 to be completed in the first half of 2009.
	• Geographical information system (GIS) enhancement – phase 1	Completed June 2008
South East Water	• 10 ML and Gamble Rd tank and 40 Ml/day pump station to provide security of supply to Carrum Downs	Tank and pipework have been completed but pump station not completed until mid 2009. Reduced demand due to restrictions has mitigated risk on this item.
	• Pakenham – Narre Warren Sewage transfer system	In November 2005, the Government released a revised Urban Growth Boundary for the Growth Corridor served by this sewer. These revisions have delayed commencement of detailed planning and increased the project scope. The design and construction of some elements has commenced.
	• Koo Wee Rup sewage treatment plant capacity upgrade	The scope of project has increased because of changing recycle customer circumstances. South East Water now has to purchase land and develop effluent re-use scheme on its own property to meet EPA guidelines. This has delayed project completion by 6 months.
	• Mt Martha disinfection and effluent capacity upgrade	Completed
	• Mt Martha sludge digestion	Completed
	• Pakenham organic capacity increase	This project has been influenced by the same issues that affected the Pakenham to Narre Warren strategy and the size of the upgrade has been consequently increased and commencement delayed.
	• Odour abatement in sewer system at 16 locations	Target has been largely achieved. Some additional odour hot spots have arisen which has extended the scope of the overall program significantly.
Yarra Valley Water	• Replacement of customer service and billing system	Was due for completion October 2008, an expansion of the program has delayed the delivery date until 2009-10. The expanded program of work incorporates the separation of property and customer billing into separate systems, interfacing between the systems and existing satellite applications and the delivery of businesses intelligence reporting

Business	*Project Description*	*Comments*
		capability.
Melbourne Water	• Eastern Treatment Plant: sludge processing refurbishment and upgrade	Delays were experienced in obtaining approvals from the Department of Treasury and Finance and in the tendering process. The current forecast completion date is June 2009.
	• Eastern Treatment Plant: final effluent screens	Functional design of project completed. However the upgrade to tertiary treatment will supersede works for this project.
	• Ringwood South branch sewer	Functional design of project completed. However detailed design and construction of the project has been deferred to 2013 Water Plan period.
	• Land remediation at decommissioned Dandenong treatment plant	Delays experienced at the start of works due to complexity of the project and in obtaining approvals from the EPA and Local Government authorities. The forecast project completion is March 2010.
	• Eastern Treatment Plant : outfall sewer – 9 per cent completed in 2007-08	The future of this project is dependant upon the outcome of the Eastern Treatment Plant Tertiary project. A business case decision on the tertiary treatment and the outfall will not be finalised until October 2009.
	• Eastern Treatment Plant: implement a new nitrification/denitrification process - 60 per cent of project planned for completion in 2007-08	The project is slightly behind schedule and the current forecast completion date is November 2009.
	• Eastern Treatment Plant: refurbish sludge drying system - 40 per cent of project planned for completion in 2007-08	Project ahead of schedule and the forecast completion date is end of 2011 based on the original project scope.
	• Northern diversion sewer/Moonee ponds intercepting sewer – 80 per cent of expenditure planned for 2007-08	Delays were experienced in obtaining approvals from the local community, Council, Vic Roads, Government Planning and the Department of Treasury and Finance before the project could commence. The project is currently in construction and progressing well. The current forecast completion date is February 2012.
	• Melbourne main sewer augmentation – 50 per cent of expenditure planned for 2007-08	Delays were experienced in obtaining approvals from the local community, Council, Vic Roads, Government Planning and the Department of Treasury and Finance before the project could commence. The project is currently in construction. The forecast completion date is May 2012.

Business	*Project Description*	*Comments*
Barwon Water	• Geelong northern retarding facility Increase capacity of the Northern Sewage Flow Retarding facility	Scheduled for practical completion in May 2009
	• Completion of Torquay sewage strategy. Originally planned to be completed in 2006-07.	Completed
	• Ocean Grove to Black Rock transfer sewer	Pipes ordered, detailed design completed for pipeline and in progress for pumping station. Construction scheduled to commence before the end of 2009.
	• Leopold / Geelong transfer sewer	Construction of the pumping station to be completed in 2009-10, with transfer sewer (rising main) scheduled to be constructed in 2010.
	• Wurdee Boluc water quality improvement project	Construction scheduled for completion in March 2009, followed by a 2 month commissioning process.
	• Works to enclose water supply distribution system	Montpellier No 4. completed and installation of liners in the other Montpellier basin scheduled for completion by April 2009.
	• Apollo Bay/Skene bulk water supply	Preferred site and functional design have been prepared. Documentation to support planning amendment are being prepared. Completion of project scheduled for 2012
	• Colac Basin No. 5	Completed
Central Highlands Water	• Ballarat South sewer improvement scheme	Project was deferred to allow expenditure on urgent drought response projects
	• Daylesford recycling	Project was delayed to inclement weather but has been completed
	• Maryborough water treatment works improvements	The project is on hold whilst water resource issues for Maryborough are being investigated. The project may need to be revised
	• Ballarat North Wastewater Plant upgrade	Project completed. Contract payments withheld due to contractor failing to satisfy contractual obligations.
	• Creswick Wastewater Plant upgrade	Project deferred to allow expenditure on urgent drought response projects. Project now complete.
Coliban Water	• Bendigo water supply augmentation – upgrading distribution pipeline to provide for future demand (to commence 2007-08)	A hydraulic model has been developed and to be presented to Coliban Water in March 2009. Coliban Water is currently completing an augmentation strategy for Bendigo for 25 years which will be completed in 2009.
	• Bendigo Ascot channel – increased water	The Bendigo Ascot Channel project will now form part of the Rural

Business	*Project Description*	*Comments*
	recycling	Reconfiguration (Ascot / Axe Creek component). Functional design works have been completed for this project, however works will now be included in the next Water Plan as part of the larger Rural Reconfiguration works.
Gippsland Water	• Gippsland Water Factory	The start of commissioning for the Gippsland Water Factory has been put back several months to ensure the safety of the workforce and to protect the environment and high-tech equipment at the new Maryvale plant. Commissioning was to begin at the Maryvale site while some areas of construction were still underway however, after a detailed risk review process, it was decided the two should not be run concurrently. Construction is more than 90 per cent complete at the Maryvale plant. The pipelines and pump stations that form the transfer system are largely finished and, in some cases, operational. The first quarter of 2009 is focused on finalisation of electrical works and initial operational checks to ensure the plant is prepared for a smooth, efficient start up**.**
	• Seaspray sewage scheme	Construction commenced in January 2007, with connection of properties and flows into the wastewater treatment plant commencing in October 2007. The practical completion date was 8 January 2009, with formal opening occurring in March 2008.
Goulburn Valley Water	• Kilmore - Sunday Creek Reservoir upgrade and raising	Completed
	• Kilmore - headwork upgrade	Completed
	• Alexandra water treatment plant	Completed
	• Mooroopna - HRAL upgrade	Deferred due to uncertainty of trade waste inflows beyond 5 year horizon
	• Marysville WMF augmentation (proposed completion originally 2005-06).	Completed
East Gippsland Water	Delivery of reuse infrastructure upgrades:	
	• Metung: additional irrigation and winter storage.	Works deferred to 2008-09
	• Mallacoota: refurbish and expand winter storage	Completed

Business	*Project Description*	*Comments*
	Delivery of water augmentation: • Tambo Bluff Estate: new reticulation mains. – design to be completed in 2007-08	Design for water and wastewater infrastructure completed. This project, which includes road, drainage and electricity infrastructure, as well as water and wastewater services, is being delivered by Council
	Delivery of sewage augmentation: • Bairnsdale Wastewater Treatment Plant upgrade – planning and design to commence	Planning and design is programmed for 2011-13
	• Bruces Track – land purchase.	Completed
North East Water	• Hariettville, Mt Beauty and Wangaratta clear storages	Projects completed in early 2009
	• Wodonga Water treatment plant	Expected to be completed in March 2009
	• Benalla Reuse – Stage 1 (originally to be delivered 2006-07)	Project completed in 2007-08
	• Myrtleford reuse	Project has been replaced by improvements to the wastewater treatment process, as a more effective means of disposal.
	• Yarrawonga wastewater treatment plant upgrade and relocation	This project has been delayed and is nearing completion in February 2009.
South Gippsland Water	• Yarram off stream storage – design	Bulk entitlement amendment is being prepared. Also, an alternative supply study has been initiated to further evaluate possible bore supply option for augmentation for the Yarram water supply. Consequently at this stage design of off stream storage is on hold.
	• Minor upgrade works to the Lance Creek Water Treatment Plants (originally to be completed 2006-07)	Completed
	• Wonthaggi trunk main augmentation (originally to be completed 2006-07)	Completed
Wannon Water	South West: • Delivery of the Warrnambool wastewater treatment plant capacity upgrade.	This project is scheduled for construction in the 2012/13 financial year as set out in the 2008-2013 Water Plan.
	• Camperdown wastewater treatment plant biosoilds facility	Completed in June 2009
	• Port Campbell waste water treatment plant and recycling works	In detailed design phase and is planned to be completed in October 2009
	• Port Campbell to Timboon water supply	A review of the water demand from the existing pipeline identified that future

Business	*Project Description*	*Comments*
	main replacement	demand growth predictions did not warrant proceeding with the project as the capacity of the existing pipeline will provide sufficient capacity until 2050.
	• Dales Road Water Storage Augmentation	Completed in January 2009
	• Delivery of the Peterborough sewerage scheme (originally to be completed 2005-06)	The construction of the reticulation network, pump stations, rising main and water reclamation plant was completed in May 2008.
	Glenelg:	
	• Coleraine pipeline works	The project was completed in December 2008.
	• Hamilton wastewater treatment plant biosolids dewatering and handling system. (originally to be completed 2006-07)	Project completed December 2008.
Western Water	• Gisborne wastewater treatment plant (originally to be completed by 2005-06).	Completed
	• Melton wastewater treatment plant (Secondary Sedimentation Tanks, Aeration and digester)	65% completed with project to be completed in following regulatory period. Works were delayed slightly due to the review of Melbourne's urban growth boundaries
	• Melton Blamey drive outfall sewer	70% completed with project to be completed in following regulatory period. Works were delayed slightly due to the review of Melbourne's urban growth boundaries
	• Sunbury wastewater purification plant (Tertiary tank, outfall sewer augmentation)	Completed
	• Woodend wastewater treatment plant	Project was deferred to 2008-13 regulatory period due to higher priority projects in the 2005-08 regulatory period, Project has now commenced
	• Romsey / Lancefield water treatment plant upgrade	Completed

9 AUDIT

9.1 Background

Under the Water Industry Regulatory Order 2003 (WIRO) the Commission has the function of carrying out audits in relation to:

- the compliance of a regulated water business with the standards and conditions of service and supply specified by the Commission in any Code or set out in the business's Water Plan, and the systems and processes established by water businesses to ensure such compliance
- the reliability and quality of information reported by a water business to the Commission, and the conformity of that information with any specification issued by the Commission and
- the compliance of a water business with asset management obligations imposed in any Statement of Obligations issued to it.

When requested by the Minister for Water, the Commission must also carry out audits in relation to compliance of water businesses with certain obligations imposed on those businesses under the Statement of Obligations.

Under the *Water Industry Act 1994* (or the licence issued to it under the Act), each regulated water business must comply with a Statement of Obligations. Pursuant to the Statement of Obligations issued to it, a regulated water business must, when requested to do so by the Commission:

- arrange for an audit to be undertaken
- ensure that the audit is conducted by an independent auditor nominated by the business and approved by the Commission and
- ensure that the audit is conducted in accordance with guidelines issued by the Commission.

The audits are an important element of the regulatory framework. They verify that the information collected and reported by regulated businesses is accurate and reliable and provides evidence to customers and other stakeholders that regulatory obligations are being complied with. The audits also benefit regulated businesses by identifying areas for improvement and providing incentives to achieve compliance.

9.2 The Commission's approach to auditing

The framework and approach previously used by the Commission to audit the metropolitan retail businesses was largely based on the approach used by Ofwat to audit UK water businesses, but tailored to meet the smaller size of the Victorian water sector at that time. This broad approach has subsequently formed the basis

for auditing the regulated electricity and gas businesses. The Commission has reviewed the audit arrangements from time to time to ensure that they remain relevant. While the audit framework that applied to metropolitan retailers had generally worked well, the Commission identified opportunities to streamline and clarify the process and approach in order to apply it more efficiently to a larger number of businesses.

To maximise the independence, quality and comparability of the audit findings, the Commission issued a guideline for conducting and reporting the audits. Key elements of the audit guideline are that:

- When requested, the water businesses must nominate an auditor to be approved by the Commission. The Commission established a panel of suitably qualified independent auditors to expedite the nomination process and to ensure that audits are consistently performed. The auditor may then be drawn from the panel or the business may nominate an alternative audit firm that meets the selection criteria.
- the audits are conducted in accordance with an audit scope specified by the Commission (which may include matters related to the Statement of Obligations identified by the Minister for Water) and
- the audit results are graded and reported in accordance with requirements specified in the guideline which are summarised further below.

9.3 Reliability and accuracy of performance data

The compliance grades used to assess regulatory data focus on the reliability of the procedures used to generate the information and the quality or accuracy of the data. The auditors evaluate the reliability and accuracy of the data by reviewing:

- the systems and processes used to generate the data and
- the methods used to extrapolate or estimate data.

A two part confidence grade (eg – B2, DX) is assigned to each performance indicator. The grades measure first the reliability of the data and then the overall data accuracy.

The reliability of data is graded from A to D. The grades correspond to the following:

- A – All data is based on sound information systems and records, and on documented policies, practices and procedures that are consistent with the Commission's information specifications and are fully understood and followed by staff.
- B – Most data conforms to grade A. Data that does not has a minor impact on overall data integrity. For example, a minority of data may be based on information specifications which are significantly, but not substantially different to those published by the Commission, procedures which are not fully understood by staff, minor variations from documented procedures, estimation or extrapolation of data which conforms with Grade A or reliance on unconfirmed reports.

- C – In many cases, but not all, data is based on information specifications which are significantly, but not substantially different from those published by the Commission, procedures which are not fully understood by staff, estimation or extrapolation of data which conforms with grade A or B or reliance on unconfirmed reports.
- D – other data.

The accuracy of the reported data is graded from 1 to 6 and X as follows:

- 1 – accuracy of ± 1 per cent
- 2 – accuracy of ± 5 per cent
- 3 – accuracy of ± 10 per cent
- 4 – accuracy of ± 25 per cent
- 5 – accuracy of ± 50 per cent
- 6 – accuracy of ± 100 per cent
- X – For small samples where accuracy cannot be calculated or the error would be more than 100 per cent.

9.4 Compliances grades for obligations

In assessing compliance with specified obligations (such as those set out in the Customer Service Code), the auditors are required to make their assessment using a two step grading system. The system is intended to provide practical and detailed information about how compliance could be achieved or improvements made in respect to businesses meeting their obligations.

First, they must use harvey balls to indicate the existence and quality of existing policies, practices, procedures, systems and training/skills respectively. Where a business is non-compliant or is compliant but there are opportunities for further improvements, the auditor must specify the nature of improvements that could be made.

Policies	Practices	Procedures	Systems	Training/Skills
				

Grade	Description	Action
	Non Compliance	Serious action required.
	Non Compliance	Full revision of all systems, processes etc,
	Non Compliance	Significant revision of systems and processes required.
	Compliant but need improvement	Revision of some systems and processes required.
	Full compliance	No further actions required.

Then the auditor must use a traffic light system to indicate overall compliance taking into account all five areas for which the separate harvey balls have been given.

R **Non Compliant**
Compliant - could do more
Compliant

Non Compliant
A **Compliant - could do more**
Compliant

Non Compliant
Compliant - could do more
G **Compliant**

9.5 Scope and conduct of this year's audits

The audits of rural and urban water businesses were conducted between September and December of 2008. All of the water businesses nominated auditors from the audit panel. The approved auditors were:

- Beca for Goulburn Valley Water and Gippsland Water
- Cardno/Ws Atkins for Central Highlands Water, City West Water, Coliban Water, GWMWater, South East Water and , Yarra Valley Water
- Deloitte for Barwon Water, East Gippsland Water, Lower Murray Water, North East Water, South Gippsland Water, Wannon Water, Western Water and Westernport Water.

A number of businesses changed auditors this year:

- Cardno was appointed by Central Highlands Water (URS in 2006-07), South East Water (PB in 2006-07), City West Water and Yarra Valley Water (BECA in 2006-07)
- BECA was appointed by Gippsland Water (PB in 2006-07) and
- Deloitte was appointed by Barwon Water (Cardno in 2006-07) and Western Water (BECA in 2006-07).

The 2008 audit scope covered:

- performance information for 2005-06 submitted by the urban water businesses in accordance with the Commission's performance reporting framework and
- Customer Service Code obligations contained in clauses 5.1 to 5.4 (payments), clauses 6.1 to 6.3 (collection notices) and clauses 7.1 to 7.4 (restrictions and legal actions)

A regulated water business must ensure that its board considers the auditor's report as soon a possible after it is received. Within 30 days of receiving the final audit report, the regulated water businesses must provide a response to the Commission that indicates:

- the actions that the regulated water business proposes to take in response to the audit findings and
- specifically where the auditor has identified non compliance, the actions that the regulated water business proposes to take and the timeframe in which it will achieve compliance.

A more detailed discussion of the audit results and actions to be taken in response is provided in the following section.

9.6 Overview of audit results – performance data

As noted above, the reliability and accuracy of each performance indicator was assessed using a two part confidence grade (eg – B2, DX). Generally, the audits suggested that:

- the majority of data reported was accurate and reliable. Most businesses recorded improvements in the reliability and accuracy of data from last year's

report. This reflects improvements made in documentation of procedures in response to last year's audits, particularly among regional businesses.

- 97 per cent of data provided was highly reliable (compared with 93 per cent last year), 87 per cent of the data was accurate to within 5 per cent (compared with 85 per cent last year).
- there are some performance indicators which by their nature are difficult to measure accurately, such as effluent and biosolids reuse, volume of sewage spilt from emergency relief structures, non-revenue water, greenhouse gas emissions and reduction in nitrogen loads to Port Phillip Bay.

In a number of cases the auditors were able to correct for inaccurate or unreliable data as part of the audit process. As in previous reports, the Commission has adopted these revised figures for the purposes of reporting and comparisons.

For the purposes of this report, the Commission has chosen not to publish information that has been graded lower than C4. This reflects the Commission's view that such information is not sufficiently reliable or accurate.

9.7 Overview of audit results – customer code obligations

The 2005-06 Water Performance Report included audits of selected obligations from the Customer Service Code, in clauses 4.5 and 4.6 (content of bill and presentation of charges), clauses 5.1 and 5.2 (payment methods and flexible payment plans), clauses 6.1 to 6.3 (collection notices), clause 8.4 (rectification) and clauses 9.1 to 9.5 (reliability of services). The 2005-06 audit showed a high level of compliance with the Customer Service Code.

This year's audits focused on the businesses' compliance with the Customer Service Code obligations contained in clauses 5.1 to 5.4 (payments), clauses 6.1 to 6.3 (collection notices) and clauses 7.1 to 7.4 (restrictions and legal actions).

The results of this year's audits again showed a high level of compliance with the Customer Service Code, with the majority of businesses recording full compliance with most indicators, and only two instances of non-compliance being reported.

9.7.1 Payment methods and flexible payment plans

Clause 5.1 (payment methods) of the Customer Service Code that applies to metropolitan and regional urban water businesses requires:

> A *water business* must accept payment from *customers*:
>
> (a) in person at a network of agencies or payment outlets;
> (b) by mail;
> (c) by electronic means;
> (d) through a facility (if any) provided by a provider of income support (eg Centrelink);
> (e) by direct debit arrangement in accordance with any agreement between the *water business*, the *customer* and the *customer's* bank; and

(f) in advance.

A *water business* must not require *customers* to agree to direct debit as a condition of service.

Clause 5.2 (flexible payment plans) of the Customer Service Code that applies to metropolitan and regional urban water businesses requires:

Subject to *water law,* a *water business* must make flexible payment plans available to *customers* in accordance with the *customer's* capacity to pay. A flexible payment plan must:

(a) state how the amount of the payments has been calculated; and
(b) state the period over which the *customer* will pay the agreed amounts; and
(c) specify an amount to be paid in each period; and
(d) be able to be renegotiated at the request of a *customer* if there is a demonstrable change in their circumstances; and
(e) be confirmed prior to or as soon as practicable after the flexible payment plan commences in writing to the *customer.*

A *water business* is not required to offer a *customer* a flexible payment plan if the *customer* has, in the previous 12 months, had 2 flexible payment plans cancelled due to non-payment unless the *customer* provides a fair and reasonable assurance (based on the circumstances) to the *water business* that the *customer* will comply with the plan.

Clause 5.3 (payment difficulties) of the Customer Service Code that applies to metropolitan and regional urban water businesses requires:

Subject to *water law,* a *water business* must assist *customers* on a case-by-case basis who have payment difficulties by:

(a) making provision for alternative payment arrangements in accordance with a *customer's* capacity to pay including:
    (1) offering a range of payment options, including flexible payments in accordance with clause 5.2; or
    (2) redirection of the bill to another person for payment provided that person agrees in writing;
(b) providing for written confirmation of an alternative payment method referred to in clause 5.3(a) to be sent to *customers* within 10 *business days* of an agreement being reached;
(c) offering to extend the due date for some or all of an amount owed;
(d) in the case of a *regional water business*, having policies stating any circumstances in which it will waive or suspend interest payments on outstanding amounts; and
(e) where appropriate, referring *customers* to:
    (1) government funded assistance programs (including the Utility Relief Grant Scheme); or
    (2) an independent financial counsellor at no cost to the customer.

Clause 5.4 (hardship) of the Customer Service Code that applies to metropolitan and regional urban water businesses requires:

> A *water business* must have a hardship policy and apply it to residential *customers* who are identified either by themselves, the *water business*, or an independent accredited financial counsellor as having the intention but not the financial capacity to make the required payments in accordance with the *water business's* payment terms.
> Without limiting this general obligation, the hardship policy must:
> (a) provide internal assessment processes:
> (1) to determine a *customer's* eligibility using objective criteria[22] as indicators of hardship; and
> (2) designed to make an early identification of a *customer's* hardship; and
> (3) to determine the internal responsibilities for the management, development, communication and monitoring of the policy;
> (b) provide for staff training about the *water business's* policies and procedures and to ensure *customers* in hardship are treated with sensitivity and without making value judgments;
> (c) 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;
> (d) in the case of *regional water businesses*, state any circumstances in which it will waive or suspend interest payments on outstanding amounts;
> (e) subject to *water law,* offer a range of payment options in accordance with the *customer's* capacity to pay;
> (f) provide for written confirmation of any alternative payment method to be sent to *customers* within 10 *business days* of an agreement being reached;
> (g) offer information and referral to government assistance programs (including the Utility Grant Relief Scheme) and no-cost independent financial counsellors;
> (h) offer information about the *water business's* dispute

[22] Criteria may include, but are not limited to: a *customer's* eligibility for concessions, a *customer's* status as a tenant, previous *customer* applications for the Utility Relief Grant scheme; a *customer's* previous payment history, and appropriate self-assessment by the *customer*.

resolution policy, and the *customer's* right to lodge a *complaint* with *EWOV* and any other relevant *external dispute resolution forum* if their hardship claim is not resolved to their satisfaction by the *water business*;

(i) offer information on how to reduce water usage and improve water efficiency and referral to relevant government water efficiency programs (including the Smart Homes program);

(j) detail the circumstances in which the policy will cease to apply to *customers*; and

(k) provide for a review mechanism of the policy and its associated procedures.

A water business must publish its hardship policy on its website and must make a copy available to a customer upon request.

The Commission sought confirmation as to whether each business had established policies, practices, systems and procedures to ensure that:

- the payment methods outlined in the Code are accepted from customers
- flexible payment plans are available in accordance with the customer's capacity to pay and
- flexible payment plans conform to the guidelines as set out in the Code.

The results of the audits on payment methods and flexible payment plans are summarised in table 15. The audit results showed that all businesses were compliant with clauses 5.1 (payment methods), 5.2 (flexible payment plans) and 5.3 (payment difficulties) of the customer service code.

Lower Murray Water was the only business to have a non-compliance with clause 5.4 (hardship). The audit identified that insufficient training led to a lack of knowledge of their "Harship code of Conduct" and "Hardship Procedures" and a lack of skills to assess customers facing hardship. Lower Murray Water is to undertake immediate and ongoing training to address the non-compliance.

Table 13 Overview of payment methods and flexible payment plans audit findings

	Payment methods	*Flexible payment plans*	*Payment difficulties*	*Hardship*
City West	Compliant	Compliant	Compliant	Compliant
South East	Compliant	Compliant	Compliant	Compliant
Yarra Valley	Compliant	Compliant	Compliant	Compliant
Barwon	Compliant	Compliant	Compliant	Compliant
Central Highlands	Compliant	Compliant	Compliant	Compliant
Coliban	Compliant	Compliant	Compliant	Compliant
East Gippsland	Compliant	Compliant	Compliant	Compliant
Gippsland	Compliant	Compliant	Compliant	Compliant
Goulburn Valley	Compliant	Compliant	Compliant	Compliant
GWMWater	Compliant	Compliant	Compliant	Compliant
Lower Murray	Compliant	Compliant	Compliant	Non-compliant
North East	Compliant	Compliant	Compliant	Compliant
South Gippsland	Compliant	Compliant	Compliant	Compliant
Wannon	Compliant	Compliant	Compliant	Compliant
Western	Compliant	Compliant	Compliant	Compliant
Westernport	Compliant	Compliant	Compliant	Compliant

9.7.2 Collection notices

Clause 6.1 (reminder notices) of the Customer Service Code that applies to metropolitan and regional urban water businesses requires:

> If a *customer* fails to pay by the required date stated in the bill, a *water business* must send a reminder notice (in the same manner in which it sent the bill).

Clause 6.2 (warning notices) of the Customer Service Code that applies to metropolitan and regional urban water businesses requires:

> At least 7 days prior to taking action for non-payment under clause 7, a *water business* must send a payment warning notice (in the same manner in which it sent the bill) that:
> (a) specifies any assistance that is available to the *customer*, including information about *EWOV* (including *EWOV*'s telephone number) and the *water business's* hardship policy; and
> (b) advises the *customer* that the bill is overdue and must be paid for the *customer* to avoid legal action or supply restriction; and
> (c) cautions that, if legal or restriction action is taken, the *customer* may incur additional costs in relation to those actions; and
> (d) in the case of *regional water businesses*, the date from which interest (if any) may be applied on outstanding amounts, and

the percentage interest rate that may be applied.

Clause 6.3 (additional content of reminders and warning notices) of the Customer Service Code that applies to metropolitan and regional urban water businesses requires:

> A reminder notice under clause 6.1 and a warning notice under clause 6.2 must contain (in addition to the requirements of those clauses) all of the information listed in clause 4.5 except information about meter readings, usage, previous bills or past payments.

The Commission sought confirmation as to whether each business had established policies, practices, systems and procedures:

- for sending reminder notices to customers
- to ensure that warning notices contain the required information as set out in the Code and
- to ensure that reminder notices and warning notices contained the required additional information as set out in the Code.

The results of the audits on collection notices are summarised in table 16. Generally, the audit results showed a high level of compliance. However, GWMWater's audit identified a non-compliance as their warning letter process is non in accordance with the Customer Service Code.

Table 14 Overview of collection notices audit findings

	Reminder notices	*Warning notices*	*Additional content of reminders and warning notices*
City West	Compliant	Compliant	Compliant
South East	Compliant	Compliant	Compliant
Yarra Valley	Compliant	Compliant	Compliant
Barwon	Compliant	Compliant	Compliant
Central Highlands	Compliant	Compliant	Compliant
Coliban	Compliant	Compliant	Compliant
East Gippsland	Compliant	Compliant	Compliant
Gippsland	Compliant	Compliant	Compliant
Goulburn Valley	Compliant	Compliant	Compliant
GWMWater[1]	Non-compliant	Non-compliant	Non-compliant
Lower Murray	Compliant	Compliant	Compliant
North East	Compliant	Compliant	Compliant
South Gippsland	Compliant	Compliant	Compliant
Wannon	Compliant	Compliant	Compliant
Western	Compliant	Compliant	Compliant
Westernport	Compliant	Compliant	Compliant

Note: 1. Audit report did not identify a separate grading for each clause

Restriction actions

Clause 7.1 (restriction and legal action) of the Customer Service Code that applies to metropolitan and regional urban water businesses requires:

> A *water business* may take legal action or restrict a *customer's* water or recycled water *services* for non-payment if:
>
> (a) for *metropolitan water businesses*, more than 28 *business days* have elapsed since the issue of the bill referred to in clause 4.5;
> (b) for *regional water business*, more than 14 days have elapsed since the issue of a reminder notice referred to in clause 6.1;
>
> (c) the *customer* has been sent a warning notice referred to in clause 6.2 including information on the *water business's* hardship policy and other programs that are available to help *customers* with payment difficulties; and
> (d) the *water business* or its agent has attempted to make contact with the *customer* about the non-payment; and
> (e) the *customer* has been notified of the proposed restriction or legal action and the associated costs, including the cost of removing a restrictor; and
> (f) the *customer* has:
>
> (1) been offered a flexible payment plan under clause 5.2 and the *customer* has refused or has failed to respond; or
> (2) agreed to a flexible payment plan and has failed to comply with the arrangement.

Clause 7.2 (limits on restrictions and legal action) of the Customer Service Code that applies to metropolitan and regional urban water businesses requires:

> A *water business* must not commence legal action or take steps to restrict a *customer's service* due to non-payment if:
>
> the amount owed by the *customer* is less than $120, unless the customer has failed to pay consecutive bills in full over a period of not less than 12 months; or
> the *customer* is eligible for and has lodged an application for a government funded concession relating to amounts charged by the *water business* and the application is outstanding; or
> the *customer* has made an application under the Utility Relief Grant Scheme and the application is outstanding; or
> the *customer* is a tenant and:
>
> (1) the amount unpaid is owed by the landlord; or
> (2) the tenant has a claim against the landlord in respect of a water bill pending at the Victorian Civil and Administrative Tribunal; or

the amount in dispute is subject to an unresolved *complaint* procedure in accordance with a *water business's complaints* policy.

This clause does not restrict a *water business's* rights under *water law* to pursue a debt owed to it by a person who is no longer a *customer*.

Clause 7.3 (additional limits on restrictions) of the Customer Service Code that applies to metropolitan and regional urban water businesses requires:

A *water business* must not take steps to restrict a *customer's service* due to non-payment if:

it is a Friday, public holiday, weekend, day before a public holiday, or after 3.00 pm; or

the *customer* is registered as a special needs customer under clause 9.5; or

the *water business* believes that the restriction will cause a health hazard having taken into consideration any *customer* concerns; or

it is a day of total fire ban declared by the Country Fire Authority in the area in which the property is located.

A restriction under clause 7 may reduce the supply of water, recycled water or *non-potable water* to no less than 2 litres per minute at the tap nearest the meter.

Clause 7.4 (removal of restrictions) of the Customer Service Code that applies to metropolitan and regional urban water businesses requires:

A *water business* must restore a *service* restricted under this clause within 24 hours, of becoming aware of the reason for restriction no longer persisting.

The Commission sought confirmation as to whether each business had established policies, practices, systems and procedures:

- for restricting supplies and taking legal actions
- the restoration of a service after a period of restriction

The results of the audits on collection notices are summarised in table 17. Overall the audit results showed a high level of compliance. Coliban Water was identified as not fully compliant with the Customer Service Code in regard to the requirements for the removal of restrictions in 24 hours if it falls outside business hours.

Table 15 Overview of payment methods and flexible payment plans audit findings

	Restriction and legal action	*Limits on restriction and legal action*	*Additional limits on restrictions*	*Removal of restrictions*
City West	Compliant	Compliant	Compliant	Compliant
South East	Compliant	Compliant	Compliant	Compliant
Yarra Valley	Compliant	Compliant	Compliant	Compliant
Barwon	Compliant	Compliant	Compliant	Compliant
Central Highlands	Compliant	Compliant	Compliant	Compliant
Coliban	Compliant - Could do more	Compliant - Could do more	Compliant - Could do more	Compliant - Could do more
East Gippsland	Compliant	Compliant	Compliant	Compliant
Gippsland	Compliant	Compliant	Compliant	Compliant
Goulburn Valley	Compliant	Compliant	Compliant	Compliant
GWMWater	Compliant	Compliant	Compliant	Compliant
Lower Murray	Compliant	Compliant	Compliant	Compliant
North East	Compliant	Compliant	Compliant	Compliant
South Gippsland	Compliant	Compliant	Compliant	Compliant
Wannon	Compliant	Compliant	Compliant	Compliant
Western	Compliant	Compliant	Compliant	Compliant
Westernport	Compliant	Compliant	Compliant	Compliant

Note: 1. Audit report did not identify a separate grading for each clause