Australian Government

Bureau of Meteorology

National performance report 2013–14: **urban water utilities**

PART A

National performance report 2013–14: urban water utilities, part A
April 2015

ISBN: 978-0-642-70659-1

ISSN: 1837-7572

Published by the Bureau of Meteorology

GPO Box 1289
Melbourne VIC 3001
(03) 9669 4000

waterinfo@bom.gov.au
www.bom.gov.au

National Library of Australia Cataloguing-in-Publication entry

Title National performance report 2013–14 : urban water utilities. Part A / Bureau of Meteorology, Independent Pricing and Regulatory Tribunal of New South Wales, the NSW Office of Water, the Essential Services Commission (Victoria), the Department of Energy and Water Supply (Queensland), the Economic Regulation Authority (Western Australia), the Essential Services Commission of South Australia, the Environment and Sustainable Development Directorate (for ACTEW), the Department of Treasury and Finance (Northern Territory), the Tasmanian Economic Regulator, and the Water Services Association of Australia.

ISBN 9780642706591 (ebook)

Notes Includes bibliographical references.

Subjects Water utilities--Australia.
Municipal water supply--Australia.
Water-supply--Government policy--Australia.

Other Creators/Contributors
Independent Pricing and Regulatory Tribunal of New South Wales, author.
New South Wales. Office of Water, author.
Victoria. Essential Services Commission, author.
Queensland. Department of Energy and Water Supply, author.
Western Australia. Economic Regulation Authority, author.
Essential Services Commission of South Australia, author.
ACTEW Corporation. Environment and Sustainable Development Directorate, author.
Northern Territory. Department of Treasury and Finance, author.
Office of the Tasmanian Economic Regulator, author.
Water Services Association of Australia, author.

Dewey Number 363.610994

Cover image: Parramatta Park, Old Government House and Parramatta River from above. © Sydney Water

An appropriate citation for this publication is: Bureau of Meteorology 2015, *National performance report 2013–14: urban water utilities, Part A*. Bureau of Meteorology, Melbourne

Acknowledgements

Data for this report was supplied by Australian urban water utilities.

Data coordination was undertaken by the Independent Pricing and Regulatory Tribunal of New South Wales (for Sydney Water, Hunter Water, and Sydney Catchment Authority); the NSW Office of Water (for all other New South Wales utilities); the Essential Services Commission (for Victorian utilities); the Department of Energy and Water Supply (for Queensland utilities); the Economic Regulation Authority (for Western Australian utilities); the Essential Services Commission of South Australia (for South Australia); the Environment and Sustainable Development Directorate (for ACTEW); the Department of Treasury and Finance (for the Northern Territory); and the Tasmanian Economic Regulator (for Tasmanian utilities).

Tables, graphs, and performance narratives are by the Bureau of Meteorology.

Disclaimer

This report has been produced by the Bureau of Meteorology, the Water Services Association of Australia, and the parties to the National Water Initiative, being the Commonwealth of Australia and the governments of New South Wales, Victoria, Queensland, South Australia, the Australian Capital Territory, the Northern Territory, Tasmania, and Western Australia (the contributors). These contributors accept no responsibility for the completeness or accuracy of any of the information contained in this report and make no representations about its suitability for any particular purpose. Users of this report should make their own judgements about those matters. To the extent permitted by law, the contributors exclude all liability for loss or damage arising from the use of or reliance on the information contained in this report, whether or not caused by any negligence or wrong-doing on the part of the contributors or their agents.

Australian Government
Bureau of Meteorology

National performance report 2013–14: **urban water utilities**

PART A

ACT Government Environment and Planning

Department of Environment, Land, Water & Planning

State Government Victoria

NSW Government Department of Primary Industries Office of Water

Northern Territory Government

Australian Government
Bureau of Meteorology

Queensland Government

Tasmanian Government

Essential Services Commission of South Australia

Essential Services Commission

Water Services Association of Australia

Economic Regulation Authority

IPART New South Wales

Office of the Tasmanian Economic Regulator

Contents

CONTENTS

Tables

Figures

Explanatory notes

Utilities

Within this report, several utilities are represented by shorter forms of their full names to aid presentation in charts and tables:

- WC = Water Corporation
- Aqwest–Bunbury = Aqwest–Bunbury Water Board
- Busselton = Busselton Water
- Kal–Boulder = Kalgoorlie–Boulder
- WC (Kal–Boulder) = Water Corporation (Kalgoorlie–Boulder)
- P&W = Power and Water (both Alice Springs and Darwin).
- (B) = Bulk Water Supplier
- (S) = Sewerage only service provide
- (W) = Water only service provider

Utility types

Nine of the reporting utilities are 'single-service' utilities, five of which provide only water services only, and four of which provide sewerage services only Utilities that provide water-only services are denoted by '(W)' after the utility name; those that provide sewerage-only services are denoted by '(S)'.

Note also that Goldenfields Water has two businesses: a bulk business and a water reticulation business. Commentary on the bulk Goldenfields business is contained in Chapter 10 (Bulk utilities). In all other cases, the commentary refers to the water reticulation business, which is denoted by '(R)'.

Utility groups

For the purpose of this report, the 78 contributing utilities are grouped according to number of connected properties. There are four groups, as follows:

- 100,000+ connected properties group (100,000+ group)
- 50,000–100,000 connected properties group (50,000–100,000 group)
- 20,000–50,000 connected properties group (20,000–50,000 group)
- 10,000–20,000 connected properties group (10,000–20,000 group).

Reporting years

In the context of this report:

- The terms '2013–14' and 'reporting year' refer to the 2013–14 reporting year.
- References to years are according to reporting years (1 July–30 June) and not by calendar year.

Tables

In the context of the tables in this report, certain data has the following meaning:
0 = result was 0
blank = result was not supplied or was not available
n/a = results not applicable

Other common abbreviations

NPR = National performance report
Urban NPR = National performance report: urban water utilities
2014 Urban NPR = National performance report 2013–14: urban water utilities
2013 Urban NPR = National performance report 2012–13: urban water utilities
Bureau = Bureau of Meteorology

Executive summary

The *National performance report 2013–14: urban water utilities* (*2014 Urban NPR*) is the ninth in a series of national urban water performance reports and the first to be compiled by the Bureau of Meteorology (Bureau). It provides a comparison of performance for 78 urban water utilities across Australia. An overview of the key drivers of water performance in 2013–14, including rainfall, temperature, utility size, and water source availability, provides a context for urban water performance (chapter 2). Following the structure of the *2013 Urban NPR*, commentary and analysis covers water resources, pricing, finance, customer service, assets, environment and health as well as a number of bulk water utility indicators.

Drier-than-average conditions return to many major east coast and inland urban centres

Rainfall, one of the key drivers of urban water utility performance, was below long-term averages across northwestern New South Wales and southern and central Queensland in 2013–14. Some areas within these regions recorded their lowest rainfall on record. Of particular note was the re-emergence of dry conditions across many of the major east coast urban centres, including Brisbane and Sydney as well as many of the larger eastern coastal and inland centres including the Gold Coast and Sunshine Coast, Port Macquarie, Tamworth, Coffs Harbour, Grafton, and Lismore.

Drier-than-average conditions continued to persist in the west and southwest of Australia in 2013–14. These conditions are consistent with observed rainfall trends that show a long-term decrease in rainfall in the southwest, in particular winter rainfalls which have declined by 17% since 1970 (Bureau 2015a).

In contrast, average to above-average rainfall conditions returned across much of northern, central, and southern Australia, including the coastal fringes of southwestern Victoria and Tasmania. These regions include a number of major cities and urban centres, notably Darwin, Adelaide, Port Augusta, Whyalla, Warrnambool, and Launceston.

Increased reliance on diversified sources in Western Australia and South Australia

Surface water remained the dominant source of urban water across the eastern and northern States. Supply source diversification in Western Australia and South Australia has seen a continued decrease in their reliance on their historically dominant supply sources—groundwater in the case of Western Australia and surface water in the case of South Australia.

This diversification has been primarily through the development of desalination capacity. Desalination now comprises over one quarter of the total volume of urban water sourced in Western Australia and South Australia. In 2013–14, the percentage of water sourced from desalination was 35% in Western Australia and 28% in South Australia, up from 30% and 23% respectively in 2012–13. While Queensland, New South Wales, and Victoria have invested in desalination capacity, the availability of surface water resources in these States has not necessitated any significant use of this source in 2013–14.

With the exception of Queensland, the volume of water sourced from recycling, on the basis of a percentage of total water sourced, remained consistent with 2012–13. Despite the drier-than-average conditions experienced in southeast Queensland, the reported 2% decline in recycled water sourced is consistent with the strong position of surface water resources in the region.

Slight increases in residential supply per property, three years running

The average volume of residential water supplied (Indicator W12) is influenced by a number of factors, including climate, rainfall, water restriction policies, water conservation, available water supply, housing density, and the price of water. Rainfall is arguably the most influential factor affecting residential consumption. The calendar years of 2013 and 2014 were the hottest and third hottest respectively since national temperature records began in 1910.

The median average volume of residential water supplied per property across all reporting utilities rose from 179 kL/property in 2012–13 to 185 kL/property in 2013–14 (Figure ES1). This is the third consecutive year of observed increases and reflects the hotter temperatures, average or below-average rainfalls, and easing of water restrictions across Australia.

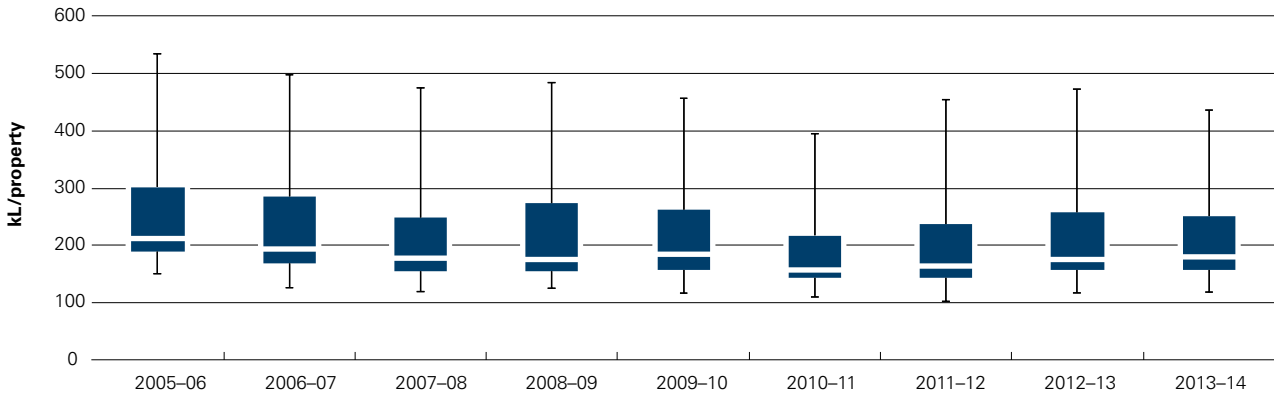

Figure ES1 W12—Average annual residential water supplied, 2005–06 to 2013–14 (kL/property)

A modest increase in the national median typical annual residential water bill

The typical residential water bill (Indicator P8) is the sum of fixed charges and volumetric water usage (and sewerage, in some utilities) billed to a residential customer and is calculated using each utility's average annual volume of residential water supplied and pricing structure.

Figure ES2 shows the median typical residential bill, in real terms within each size grouping for all utilities reporting data for each Urban NPR year. On this basis the largest change to the median typical bill (a 4% increase) occurred in the 10,000–20,000 and 50,000–100,000 connected properties groups. Nationally, the overall increase in the median typical annual residential water bill was 2%. Notably one quarter of utilities (17) reported a decrease in their typical residential water bill.

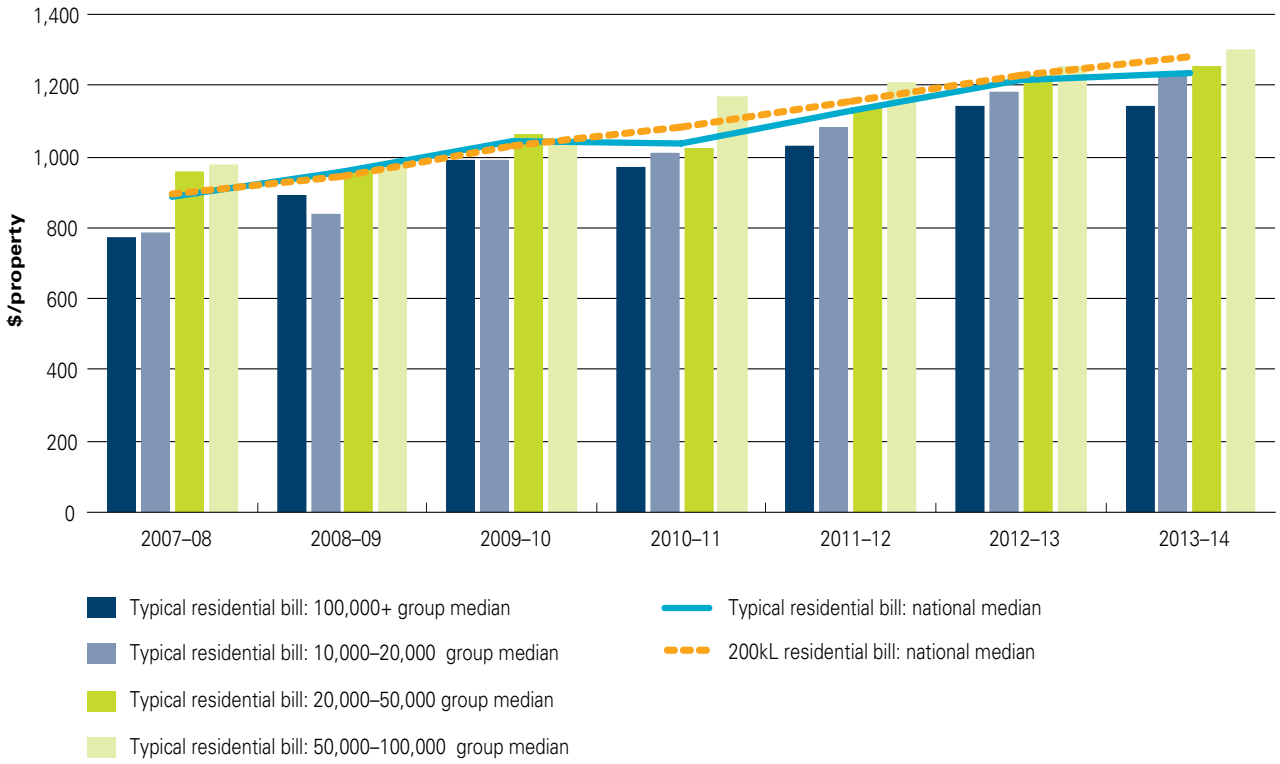

Figure ES2 P8—Typical residential bill (water and sewerage); median, based on average residential water supplied, 2007–08 to 2013–14 ($)

Operating expenditure remains steady nationally, despite a significant increase amongst large utilities

Combined operating expenditure includes costs associated with system operation, maintenance, and administration. It can be an important indicator of performance but is influenced by a wide variety of factors, in particular the utility size and the sources of water drawn upon.

Figure ES3 shows the median combined water and sewerage operating costs per connected property (Indicator F13), in real terms, within each size grouping for all utilities reporting data for each Urban NPR year. It also shows the national median water (Indicator F11) and sewerage (Indicator F12) operating expenditure (again based on all utilities reporting data within a year).

Nationally, the median combined operating expenditure per property remained steady, decreasing by less than 1% from $887 in 2012–13 to $880 2013–14. Notably, however, there was an average 9% increase in combined operating expenditure by utilities in the 100,000+ connected properties group. This increase saw their median expenditure increase by 31%, from $713 in 2012–13 to $937 in 2013–14.

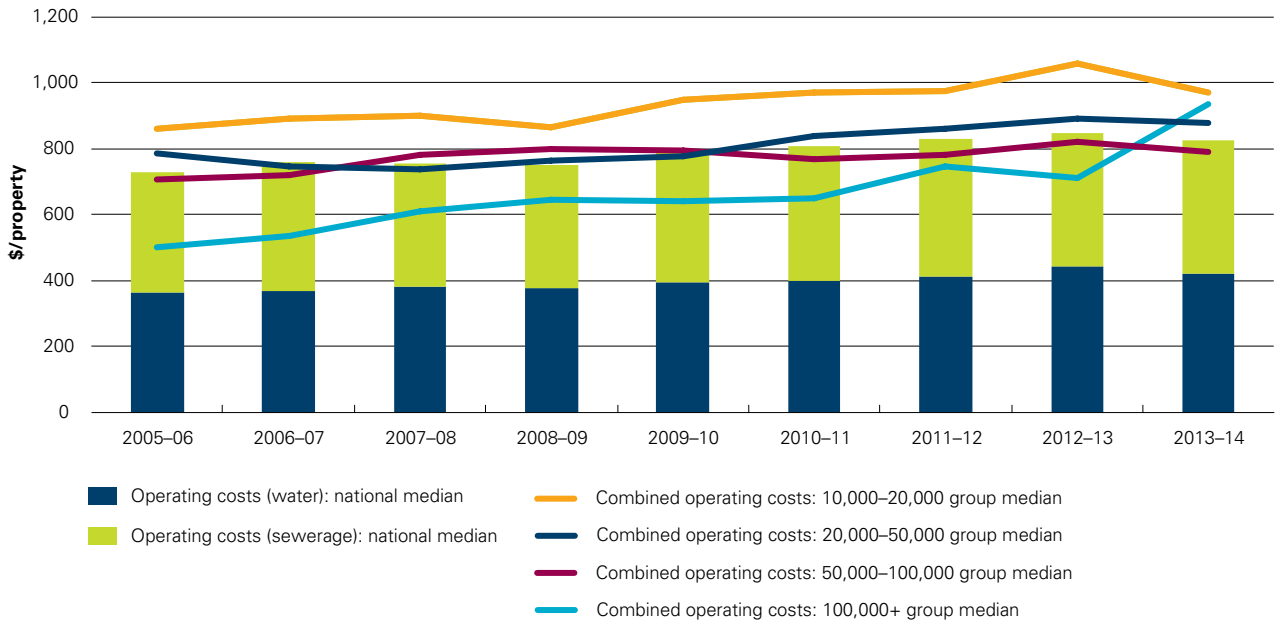

Figure ES3 F13—Median combined water and sewerage operating costs, 2005–06 to 2013–14 ($/property)

Service reliability remains steady

A valuable indicator of the quality and reliability of services provided by water and sewerage utilities is the number and/or duration of service interruptions (Indicators C15, C16 and C17).

Figure ES4 presents the national medians for these indicators over the last eight years. The figure shows that while the number of unplanned water supply interruptions and the average duration of sewerage service interruptions remained steady in 2013–14, there was a 9% decrease in the national median average duration of water supply interruptions. This decrease was driven by a 22% decrease within the 50,000–100,000 connected properties size group.

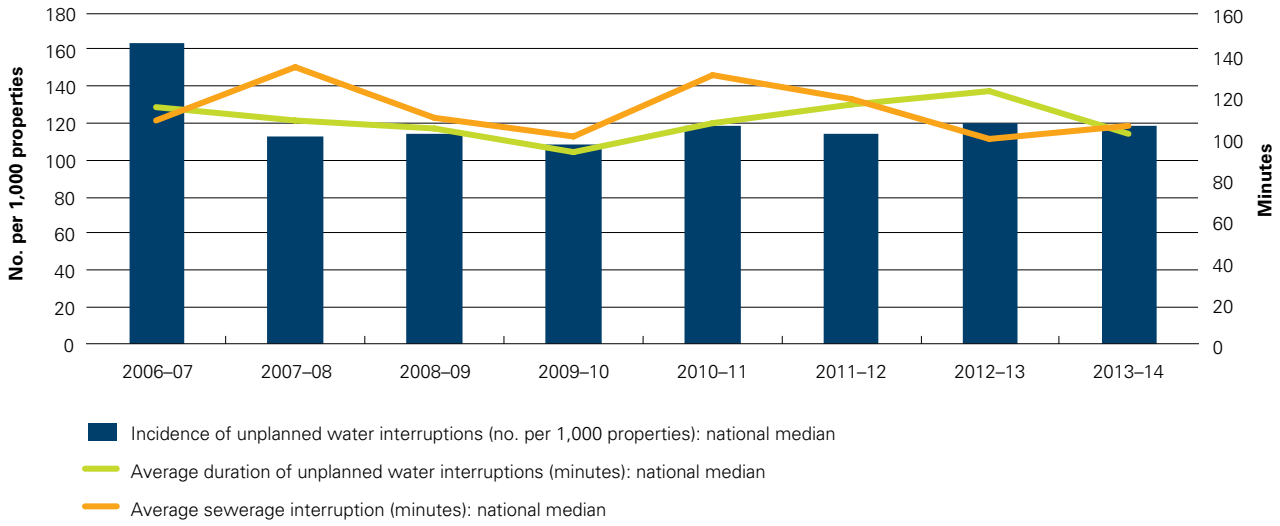

Figure ES4 Service reliability – national median frequency (C17) and average duration (C15) of unplanned water interruption and median sewerage interruption (C16)

Increasing customer satisfaction with water and sewerage supply services

The number of complaints received by utilities is a reflection of customer satisfaction. The national median total number of complaints (Indicator C13) for all utilities reporting within a given year and a breakdown by business area (Indicators C9, C10, C11 and C12) is presented in Figure ES5 for the last eight years.

An overall 9% decrease in national median of total water and sewerage complaints in 2013–14 suggests increasing customer satisfaction with service providers. On a utility size basis, the largest decrease in total complaints (22%) was reported by the 100,000+ connected property group. In the individual complaint categories, water quality and sewerage service complaints decreased, continuing the trend from previous reporting periods.

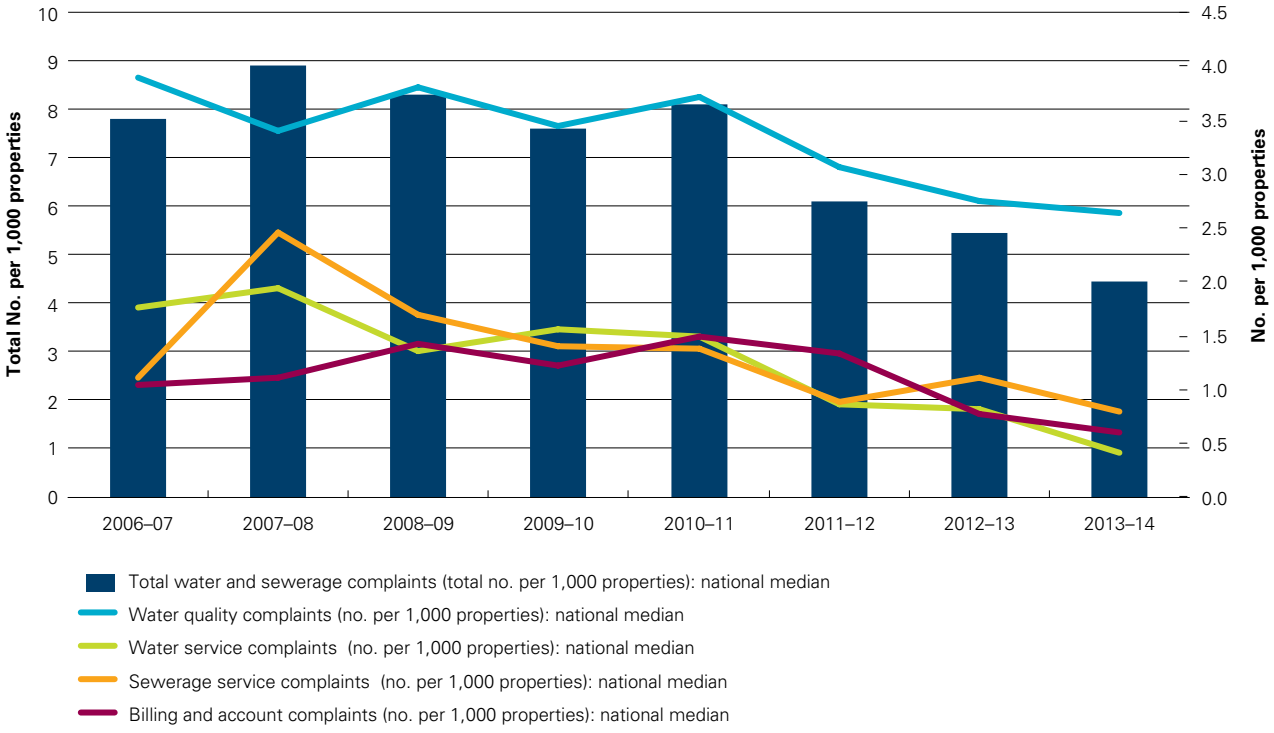

Figure ES5 Median number of complaints per 1000 properties for each complaint category (C9, C10, C11, C12), 2006–07 to 2013–14

Continued improvement in water quality

Water quality continued to improve across Australia in 2013–14. Water quality is a measure of the percentage of the population serviced by the utility for which microbiological compliance was achieved. Compliance is assessed against the *Australian drinking water guidelines 2004* (NHMRC 2004) or licence conditions imposed on the utility. Typically, utilities record very high (often 100%) compliance, but occasionally there are unforeseen events that result in lower compliance. The cause of non-compliance is not always traceable.

In the 2013–14 reporting year, the median percentage of population for which microbiological compliance was achieved was 100% for each size group. As shown in Figure ES6, a small number of utilities reported 99% compliance. The improvement in compliance from previous years is in part attributable to capital works programmes to address known water quality issues.

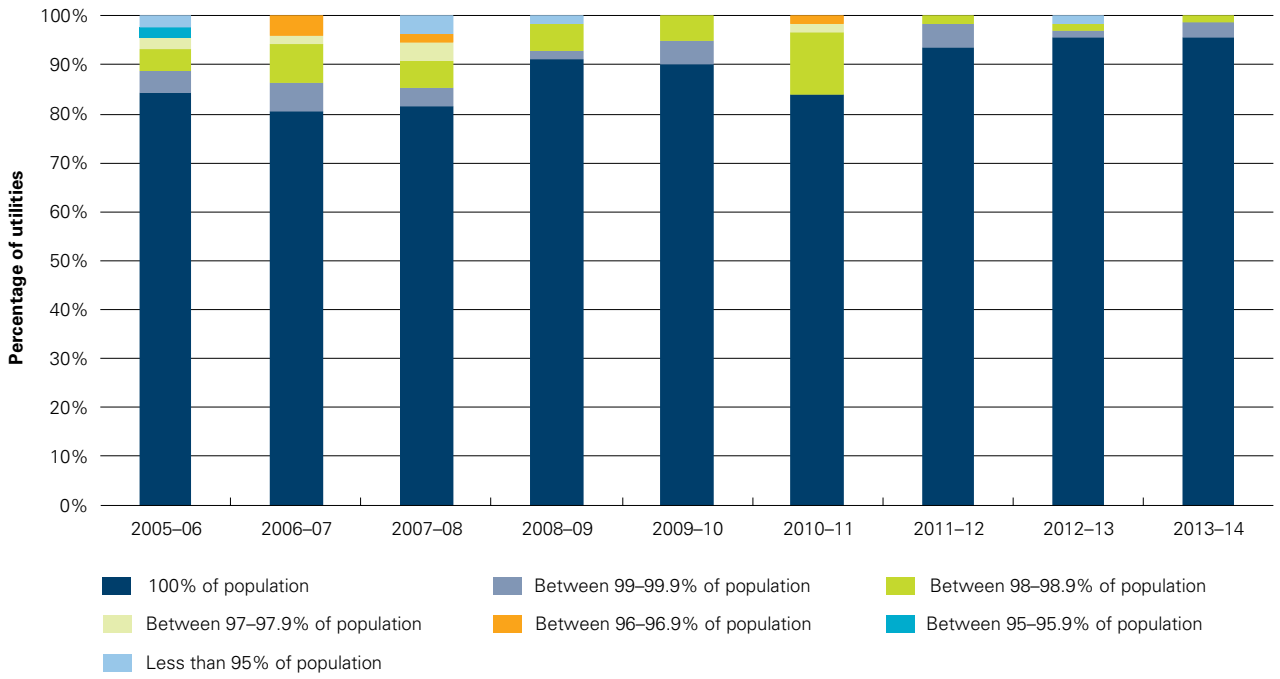

Figure ES6 Percentage of utilities in each compliance category, 2005–06 to 2013–14

1 Introduction

1.1 Context and overview

The *2014 Urban NPR* is the ninth in the series of national performance reports and the first to be produced by the Bureau. With the closure of the National Water Commission,[1] the Bureau, in an agreement with all States and Territories, took on the role of coordinating and preparing the *2014 Urban NPR* to support the commitments made under the National Water Initiative (NWI) to report publicly and independently on the performance of water utilities (NWI clauses 75–76).

The number of utilities reporting on urban water services has changed since 2012–13 in some jurisdictions. This is a result of both institutional amalgamations and changes to reporting frameworks. In order to compare reports between years, where possible, analysis has been undertaken in a manner that mitigates the impacts of these changes. In all cases, the assumptions or methods used are clearly noted.

The *2014 Urban NPR* provides a comparison of urban water performance for 78 water utilities across all Australian States and Territories. These utilities provide urban water services to over 20 million people.

The commentary and analysis contained in the *2014 Urban NPR* covers 30 key indicators for retail/distribution utilities and nine indicators for bulk water utilities.[2] These indicators are the same as those in the *2013 Urban NPR* and are a subset of the full 150 indicators reported by urban water utilities. Data on the complete set of indicators for all reporting years are available in Part B of this report.

As with previous reports, the analysis and commentary provides a context for each indicator, discusses changes in reporting methodologies, and highlights trends within or among different utility groups (arranged by the number of customers). In contrast with the *2013 Urban NPR*, this year's report does not contain a key themes chapter.

The commentary and analysis contained within is not intended to be a comprehensive explanation of every reported indicator. It has been prepared to explain some of the more apparent trends or differences between years and utilities. Much of the information is sourced from publicly available documents, such as annual reports, regulatory decisions, and the utilities' websites.

1.2 Utilities reporting

The 78 utilities that have provided urban water data for the *2014 Urban NPR* are listed in Appendix C. A summary of utility type by jurisdiction is shown in Table 1.1.

The *2014 Urban NPR* reflects some changes to the basis of reporting by Tasmania, South Australia, and Queensland. The changes are as follows:

- On 1 July 2013, the three Tasmanian water utilities (Cradle Mountain Water, Ben Lomand Water, and Southern Water) were amalgamated to form one single statewide service provider, the Tasmanian Water and Sewerage Corporation Pty Ltd (TasWater). All reporting is now to TasWater.
- SA Water Corporation has moved to reporting a single value for its entire urban business. In the past, reporting data was sourced from four separate regions across the State (Adelaide, Mount Gambier, Whyalla, and country SA). 2012–13 comparatives used in this report are based on this previously reported data and may not be fully comparable to 2013–14 data.

1 At the time of publication, the National Water Commission (Abolition) Bill 2014 was still before the Federal Senate.

2 Bulk utilities are those utilities that do not have end-use customers of their own. Instead, their primary purpose is to provide services to other water utilities.

- Gympie Regional Council, located approximately 80 km north of the Sunshine Coast in Queensland, has begun reporting for the first time, increasing the reporting base in the 10,000–20,000 utility group.

Of the 78 utilities included in this report, 7 are bulk water suppliers and 71 provide reticulated water supply and/or sewerage services. These utilities breakdown as:

- water supply and sewerage: 62 utilities;
- water supply only: 5 utilities; and
- sewerage only: 4 utilities.

Table 1.1 Utilities reporting in the *2014 Urban NPR* by type and jurisdiction

Jurisdiction	Bulk utility	100,000+	50,000–100,000	20,000–50,000	10,000–20,000	Total
Australian Capital Territory	0	1	0	0	0	1
New South Wales	4	2	2	10	14	32
Northern Territory	0	0	1	0	1	2
Queensland	2	4	3	3	1	13
South Australia	0	1	0	0	0	1
Tasmania	0	1	0	0	0	1
Victoria	1	4	5	5	2	17
Western Australia	0	1	0	1	9	11
Total	**7**	**14**	**11**	**19**	**27**	**78**

1.3 Locations of utilities

The administration boundaries of all utilities reporting data through the *2014 Urban NPR* are shown in figure 1.1. For further information about any of the utilities, please consult their respective website or contact their customer service support.

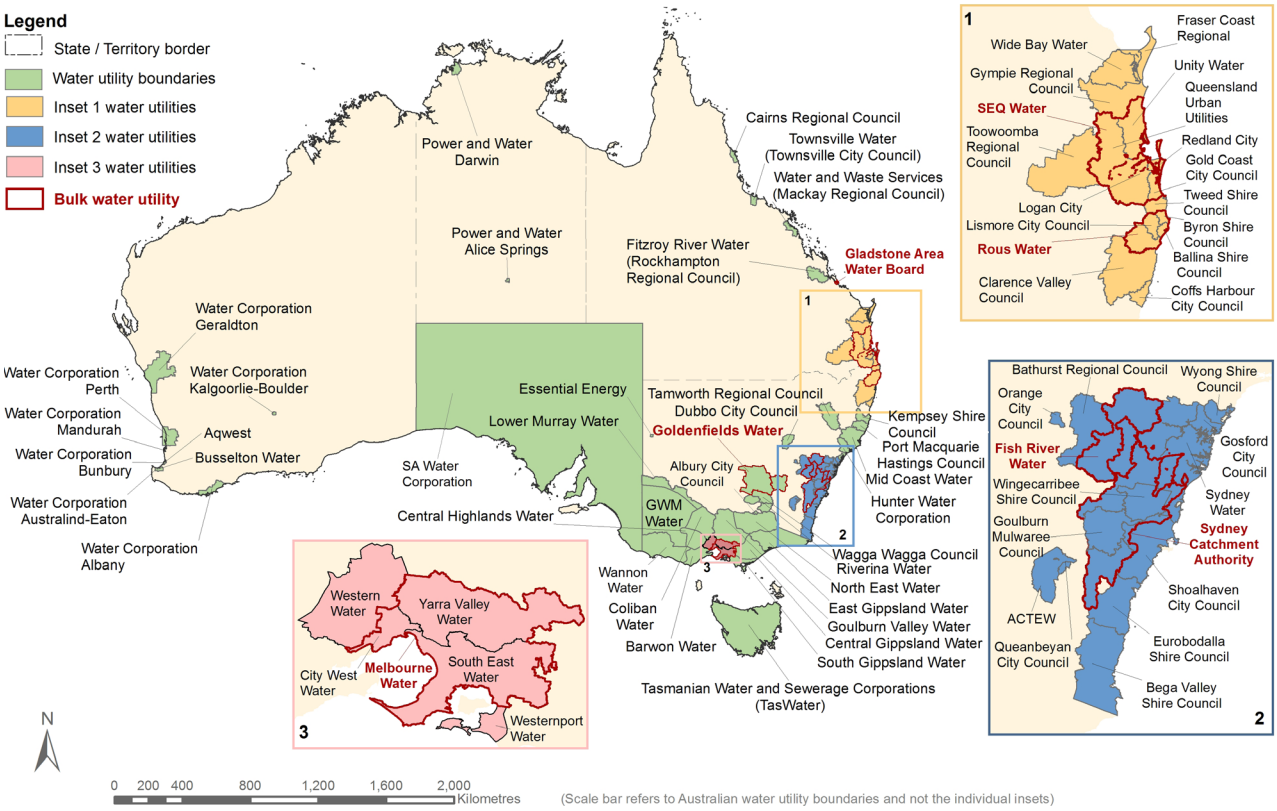

Figure 1.1 Administration boundaries of utilities reporting to the *2014 Urban NPR*

1.4 Notes on commentary

When interpreting the data and commentary in this report, the following matters should be considered:

- The length of historical time-series information presented is not uniform for all indicators in chapter 2 ('Drivers of performance'), and in chapter 3 ('Water resources') and in figures 3.1, 3.6, 4.1, 5.1, 5.6, 7.1, and 7.14. For example, for some indicators up to 90% of utilities reported in all previous eight years, while for others only 30% of utilities did so. To ensure that a reasonable comparison can be made of the median value through time, it is important that the sample of utilities reporting in the first year of the time series does not differ markedly from the last year of the time series (for example, it is potentially misleading to compare the median for a sample of 15 utilities in 2005–06 with the median for a sample of 60 utilities in 2013–14). Therefore, the number of utilities reporting in the first year of a time series is at least 50% of the number reporting in the last year.
- The indicator codes in the titles of each section, chart, and table are specific to each indicator and can be cross-referenced with the *National Performance Framework: 2013–14 urban water performance report indicators and definitions handbook*.
- The tables in chapters 3–9 have been limited to five years of historical information, while the figures have been limited to three years unless indicated otherwise.

- In keeping with the *2013 Urban NPR*, the *2014 Urban NPR* presents analysis based on median values. The median is the preferred metric for the Urban NPR dataset, as in many cases there are outlying results that can affect the mean. Using the mean in these cases can skew results towards the outliers. With the median, 50% of utilities fall above and 50% fall below the median value. In cases where mean results are presented in addition to the median, they should be interpreted in conjunction with the data itself.
- Individual performance indicators in this report should not be interpreted in isolation. A low ranking for a particular indicator does not necessarily mean that the utility is performing well or badly because a number of factors can influence performance. For example, a utility might have a low operating cost per property, but also poor drinking water quality and environmental performance and a high level of complaints.
- In discussions of indicators, the 'normaliser' has often been omitted to improve the flow of the commentary. For example, in the discussion of results for 'water main breaks per 100 km of water main', the commentary refers to a utility's 'water main breaks'. It is important to remember that it is not the absolute number of water main breaks that is being referenced, but rather the number of breaks per 100 km of water main.
- Utilities that form part of a city council, shire council, regional council, or similar local government entity are reported under only the town or city name (for example, Gosford City Council is referred to as 'Gosford' throughout the report).
- Single-service utilities are included in the 'Overview of results' tables only where comparisons can still be made on a like-for-like basis with utilities that provide both water and sewerage services. Otherwise, they have been excluded from calculations of the median values and high/low results. For example, the overview tables for water and sewerage operating expenditure per connected property and for typical residential bills do not include single-service providers, but the overview tables for sewer overflows per 100 km of sewer main include all utilities that provide sewerage services.
- Charts are presented in order of reported results, that is, from the utility with the highest result for the indicator to the utility with the lowest. Tables are sorted on the basis of percentage change in an indicator from the previous year with the utility with the largest percentage increase to the largest percentage decrease.
- Financial time-series information is given in real 2013–14 dollars, that is, the impact of inflation has been removed to ensure that years can be compared on a like-for-like basis.
- The '% change' column (the last column in most tables) is calculated from 2012–13 and 2013–14 unrounded figures rather than the figures presented in the tables, which have been rounded (usually) to the nearest integer. As a result, the '% change' may not be exactly equal to the percentage change in the numbers in the tables.
- For indicators P3 and P6 ('Typical residential bill'), the adjective 'typical' is used in this report, rather than 'average' because the average is affected by vacant lots that pay no usage charges and by pensioners, who generally receive a pensioner concession.

1.5 Audit framework

Auditing is intended to provide enhanced confidence in the accuracy, completeness, and reliability of reported information. Auditing promotes transparency and consistency in the process of collecting and reporting data across all urban water utilities, in order to report performance results that are relevant and useful and enable meaningful comparisons between utilities over time.

The National Water Commission, the Water Services Association of Australia, and representative NWI parties established the National Framework for Reporting on Performance of Urban Water Utilities Deed, which sets out how the parties will report on the performance of urban water utilities in accordance with the NWI. The deed requires parties to use all reasonable endeavours to ensure that a comprehensive audit of the data collected by each urban water utility under the National Performance Framework is undertaken at least once every three years.

The National Performance Framework 2013–14 auditing requirements and audit report template provide further detail about the requirements that a water utility must meet in order to report its results in the *2014 Urban NPR*.

The audit requirements state that:

- audits are to be conducted at a minimum of 3-year intervals;
- indicators that have failed an audit will not be published (they need to be re-audited before they are published);
- audits must be carried out by suitably qualified and independent auditors;
- the level of assurance to be provided is generally 'reasonable' assurance (although there are some instances in which 'limited' assurance is appropriate);
- audits must be conducted under Australian Standard ASAE 3000: Assurance Engagements Other than Audits or Reviews of Historical Financial Information; and
- Auditable indicators are those with the indicator codes W7, W8, W11, W11.1–W11.3, W12, W14, W18, W18.5, W19, W26, W27, A2, A3, A5, A6, A8–A11, A14, A15, E1–E8, E12, E12.1, E13, C2, C4, C8, C13, C14–C19, H2, H3, H4, H7, F1–F8, F11–F16, F20–F30, P7, and P8.

1.5.1 2013–14 Audit Status

Table 1.2 summarises the status of indicator audits undertaken within each jurisdiction.

Table 1.2 2013–14 Indicator audit status summary

Jurisdiction	Audit activities
Australian Capital Territory	The most recent audit conducted on the National Performance Report data was conducted in 2012–13. Audits are conducted every three years in accordance with the auditing requirements.
New South Wales	The 2013–14 financial performance indicators (F1–F30) have been audited for the regional NSW utilities.
Northern Territory	The Northern Territory utilities, Power and Water–Alice Springs and Power and Water–Darwin, did not provide audited data for the Urban NPR as it was cost prohibitive, and therefore failed to comply with the audit requirements.
Queensland	Auditing of Queensland utilities Urban NPR data for 2013–14 was carried out on a voluntary basis. As a result of changes to jurisdiction arrangements the Queensland Department of Energy and Water Supply (DEWS) now has the power to require service providers to conduct audits. This power will be used should the Queensland Water Supply Regulator deem that an audit of a water service provider's performance is necessary.
South Australia	No Urban NPR data audits were undertaken in 2013–14 in South Australia.
Tasmania	The auditing of TasWater's performance information began in the 2013–14 reporting period. Prior to 2013–14, the only independently audited financial and public health information relating to Tasmania's previous regional corporations that met the NPR audit requirements were the corporations' financial indicators and the public health indicators (audited by the Tasmanian Audit Office and Director of Public Health respectively). A first tranche of TasWater's performance indicators was audited by Deloitte in July 2014. A second tranche of TasWater's performance indicators is to be audited in mid-2015 calendar year, with the remaining third to be audited by mid-2016 calendar year.
Victoria	All Victorian water businesses reporting to the Urban NPR were audited in 2013–14.
Western Australia	All four reporting entities in Western Australia provided audit reports for their urban NPR data in 2013 (for the *2013 Urban NPR*). The next round of audits will cover the reporting years 2013–14, 2014–15 and 2015–16.

1.6 Interpreting the 'Overview of results' tables

Figure 1.2 below demonstrates how to interpret the 'Overview of results' table provided for each indicator. The indicator 'W12—Average annual residential water supplied per property' has been used for the purpose of this example.

The median value is the middle number from the range of results. For example, if there were five utilities reporting for this indicator and their results were 190,195, 206, 207, and 210, the median is 206 as it is the middle number.

For indicators that are not represented as an 'average' for the utility (e.g., average duration of water interruptions) or have been divided by the number of properties (per property), the summary tables presents the sum (or total) for the results.

The range shows the utility with the highest and lowest result for 2013–14 for each size group.

These columns show the number of utilities that reported an increase and those that reported a decrease from their 2012–13 result for each size group. Where a utility did not report in both years it will not be reflected in this column.

The % change in median shows the change from one year to the next, in this case from 2012–13 to 2013–14.

	Range		Number of utilities with increase/decrease from 2011–12		Median		% change in the median from 2011–12
Size group	**High**	**Low**	**Increase**	**Decrease**	**2011–12**	**2012–13**	
100,000+ connected properties	249	140	10	1	158	162	3%
	WC (Perth)	Logan					
50,000–100,000 connected properties	454	130	9	1	164	181	10%
	P&W (Darwin)	Toowoomba					
20,000–50,000 connected properties	479	143	17	1	175	201	15%
	Lower Murray water	MidCoast Water					
10,000–20,000 connected properties	490	80	19	5	174	179	3%
	Multiple utilities	Westernport Water					
All utility groups	**490**	**80**	**55**	**8**	**166**	**177**	**7%**
	P&W (Alice Springs)	**Westernport Water**					

'Multiple utilities' means that more than one utility recorded this value.

Figure 1.2 Example and explanation of an 'Overview of results' table

1.7 Interpreting the 'Summary of results' figures

Figure 1.3 demonstrates how to interpret the 'Summary of results' figure that is provided for indicators W12, W27, P8, F13, A8, and A10 only. The indicator 'P3 and P6—Typical residential bill (based on average residential water supplied)' has been used for the purpose of this example.

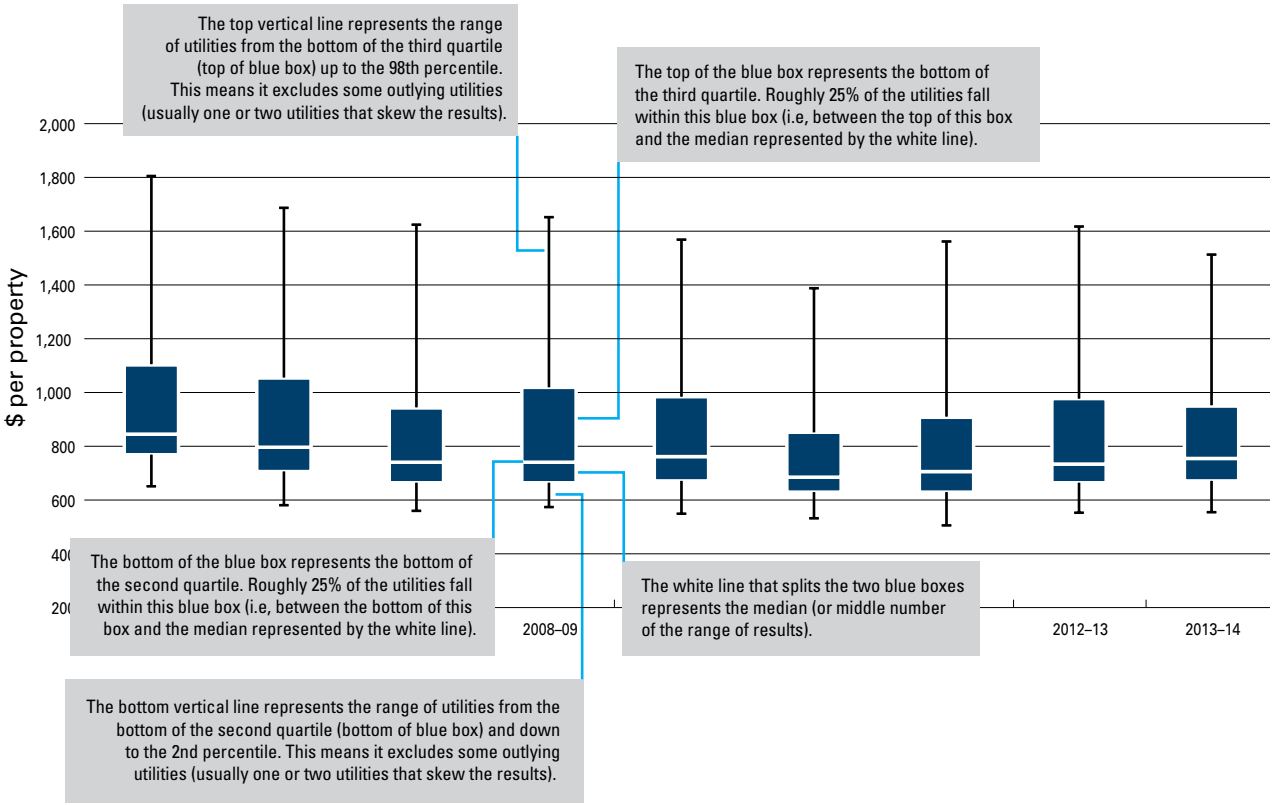

Figure 1.3 Example and explanation of the 'Summary of results' table provided for W12, W27, P8, F13, A8, and A10

2 Drivers of performance

This chapter discusses some of the key drivers of water utility performance results presented in the *2014 Urban NPR*. Rainfall, temperature, utility size, and sources of water are discussed. Many other factors that also affect the results, including network density, soil types, the age and condition of infrastructure, and Government policy and regulation, are not discussed.

As discussed in chapter 1, section 1.4, historical time-series information is not uniform for all indicators in this chapter. To ensure that a reasonable comparison can be made of median values through time, the criterion for determining the number of years in the time series is that there are at least 50% of utilities reporting in the previous year of the series compared to the current reporting year of 2013–14.

2.1 Rainfall

Figure 2.1 shows how rainfall has varied from the long-term average across Australia over the past nine years: white shows 'average'; blue shows 'above-average'; and red shows 'below-average' rainfall. Weather conditions have been extremely variable over this period in both the average rainfall over time and the distribution of rainfall within each year.

In 2013–14, rainfall across much of northwestern New South Wales and southern and central Queensland were below or very much below the long-term average, with some pockets recording their lowest rainfall on record. Of particular note was the re-emergence of dry conditions across many of the major east coast urban centres, including Brisbane and Sydney, as well as many of the larger eastern coastal and inland centres, including Port Macquarie, Tamworth, Coffs Harbour, Grafton, and Lismore, and also the Gold Coast and Sunshine Coast.

Drier-than-average conditions continued to persist in the west and southwest of Australia in the 2013–14 year. These conditions are consistent with observed rainfall trends showing a long-term decrease in rainfall in the southwest, in particular winter rainfalls which have declined by 17% since 1970 (Bureau 2015a). Reduced rainfall in the southwest has impacted heavily on streamflow. In the far southwest, streamflow has decreased by over 50% since the mid-1970s. The decline has impacted significantly on surface water storages operated by WA Water Corporation (WC) and has driven WC's ongoing investment in diversified water supply sources.

In 2013–14, average to above-average rainfall conditions returned across much of northern, central, and southern Australia, including the coastal fringes of southwestern Victoria and Tasmania. These regions include a number of major cities and urban centres, notably Darwin, Adelaide, Port Augusta, Whyalla, Warrnambool, and Launceston.

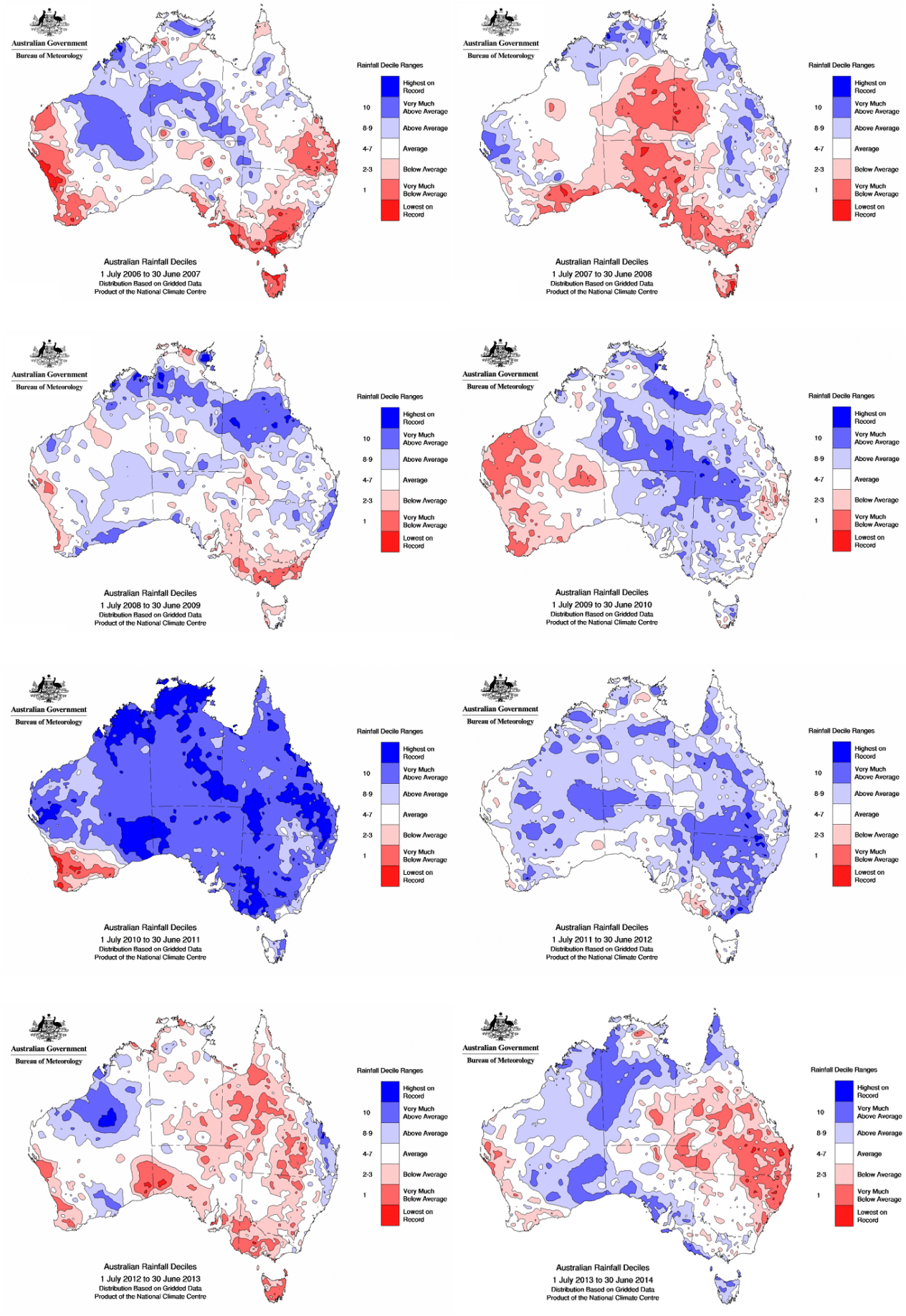

Figure 2.1 Australian 12-month rainfall deciles, 2006–07 to 2013–14

Rainfall can affect the performance results of utilities in many ways. These include:

- Significant droughts with prolonged periods of low rainfall can stress urban water supply systems. Depending on the severity of the drought, the security of the system, and the availability of climate-independent water sources (such as desalination or recycled water), the utility may need to impose water restrictions in order to conserve water and assure continuity of the water supply.
- Wet or dry conditions can affect demand for outdoor watering, resulting in a change in urban water and recycled water supplied to residents, councils, and golf courses (indicators W12, W26, and W27 relate to residential water supplied and recycled water). Changes in water consumption affect the revenue collected by water utilities, their profitability (F24, F3), and the strength of their water usage pricing signal (F4).
- Wet or dry conditions can also affect decisions about which water sources to use (W1–W7). For example, persistent dry conditions can trigger thresholds for production from desalination plants or for the use of particular groundwater or recycled water sources, affecting the operating costs of utilities (F11, F12, F13).
- Increased rainfall can result in infiltration of water into sewer systems. This can increase the volume of sewage to be pumped and treated, increasing the operating costs of utilities (F12 and F13) and also greenhouse gas emissions from sewage (E12). Additional rainfall and sewer infiltration can also result in additional sewer overflows (E13). This is especially the case during heavy rainfall.
- Extreme wet or dry conditions can cause expansion and shrinking of reactive clay soils in some parts of Australia, resulting in ground movements that can cause an increase in water or sewer main breaks (A8, A14, A15). This is especially the case when conditions fluctuate rapidly from wet to dry or vice versa. In periods of more even rainfall, the soils maintain more even moisture levels, resulting in less ground movement.

2.2 Temperature

State of the climate 2014 (Bureau 2015a) notes that seven of Australia's ten warmest years on record have occurred in the 13 years since 2002. Only one cooler-than-average year has occurred in the past decade (2011) and the 10-year mean temperature for 2005–2014 was 0.55 °C above-average, the highest on record (Bureau 2015a).

The 2013–14 reporting period saw above-average temperature conditions across the majority of Australia (Figure 2.2). Straddling the warmest and third warmest years since national temperature records began in 1910, the 2013–14 period saw average maximum and minimum temperatures well above the long-term means for much of the country (Bureau 2013, 2015a).

Heatwaves and warm spells, important because of their impacts on water use, affected central and eastern Australia from late December 2013 to early January 2014. In addition, southeast Australia experienced prolonged periods of above-average temperatures during mid-January, as well as the second half of May 2014 when much of Australia experienced significant extended warmer conditions.

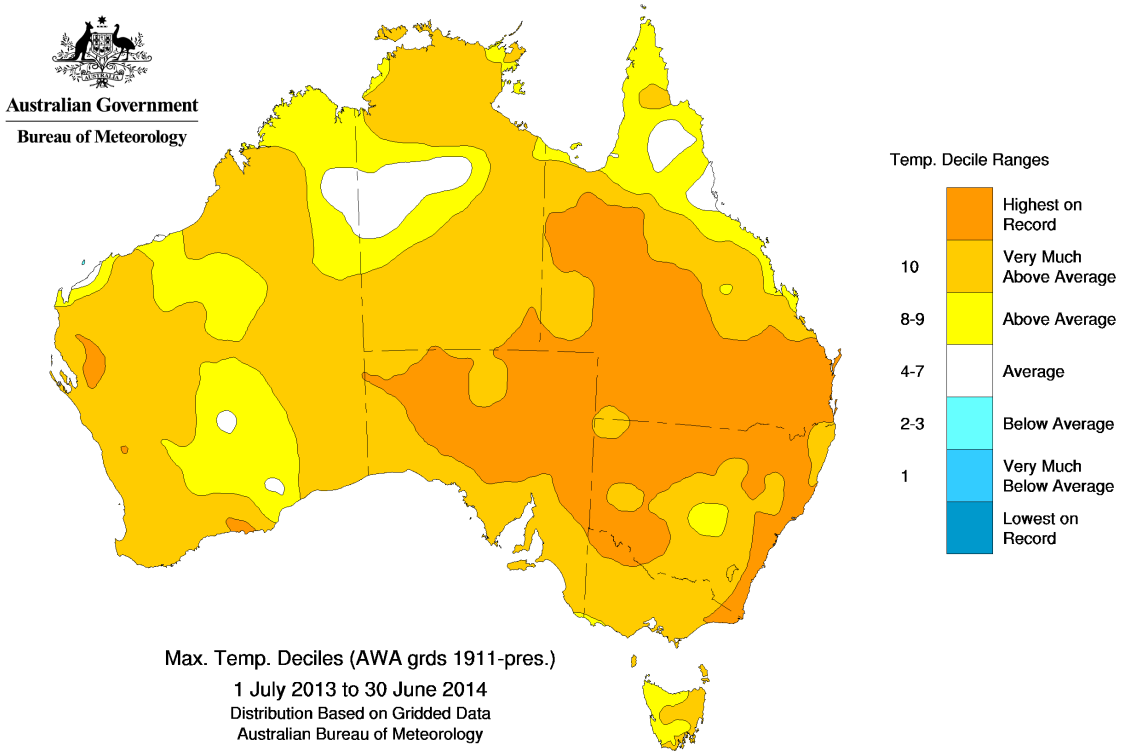

Figure 2.2 Australian 12-month maximum temperature deciles for 2013–14

The many relationships between temperature and the performance of utilities include:

- There is a relationship between demand and temperature, in particular residential and non-residential outdoor demand. Increased temperature, in particular prolonged periods above long-term averages, can result in increased potable and recycled water supplied to residents, councils, and golf courses (indicators W12, W26 and W27 relate to residential water supplied and recycled water). Changes in water consumption affect the revenue collected by water utilities, their profitability (F24, F3), and the strength of their water-usage pricing signal (F4).
- Hot weather can increase the risk of bushfires. This risk can result in the deployment of resources to protect water supply catchments and mitigate the impacts of a bushfire should it occur. Such deployments can affect the operating expenditure of a utility (F11, F12, F13), in particular if responding to an actual bushfire event. In addition, temporary water restrictions that ensure the availability of supply to meet firefighting requirements can be implemented during extreme fire weather. Such restrictions can impact on the volume of water supplied by a utility and in turn affect their operating cost and revenue.
- Extended periods of heat or cold can impact the quality of water sources and supplies and therefore affect decisions about which water sources to be used (W1–W7) and the treatment required. For example, a heatwave contributes to the decline in dissolved oxygen levels within a water body and can trigger the need to supply water from an alternative source or increase the cost of treatment, in turn affecting the operating costs of utilities (F11, F12, F13).
- There is a relationship between temperature and the quality of treated water. In particular, biological processes are sensitive to extremes of heat or cold as well as rapid fluctuations in temperature. Such events can have important consequences for the quality of water supplied (H indicators), the effluent discharged (E4, E5, E7), and the operational costs of a utility (F11, F12, F13).
- Extended hot conditions give rise to dry soil conditions. Consequently, many plant species will seek out moisture, and their roots can enter the sewer system causing blockages and/or breaks (A14, A15), as well as increasing water main breaks (A8).

2.3 Utility size

While many factors influence performance, there appears to be a relationship between the size of the utility's customer base and its performance on a number of indicators. This relationship may be causal, coincidental, or due to a related matter (e.g., larger utilities are subject to price regulation, while many smaller utilities are not).

The following charts show apparent relationships between utility size and the following factors:

- *Complaints (per 1,000 properties)*: Historically, the two groups of utilities that service in excess of 50,000 properties have received significantly fewer complaints than the other two size groups. Recently, however, this difference has become less pronounced because of a decline in the number of complaints against smaller utilities (Figure 2.3). Individual utility comparisons for complaints are included in chapter 6, section 6.2.1.

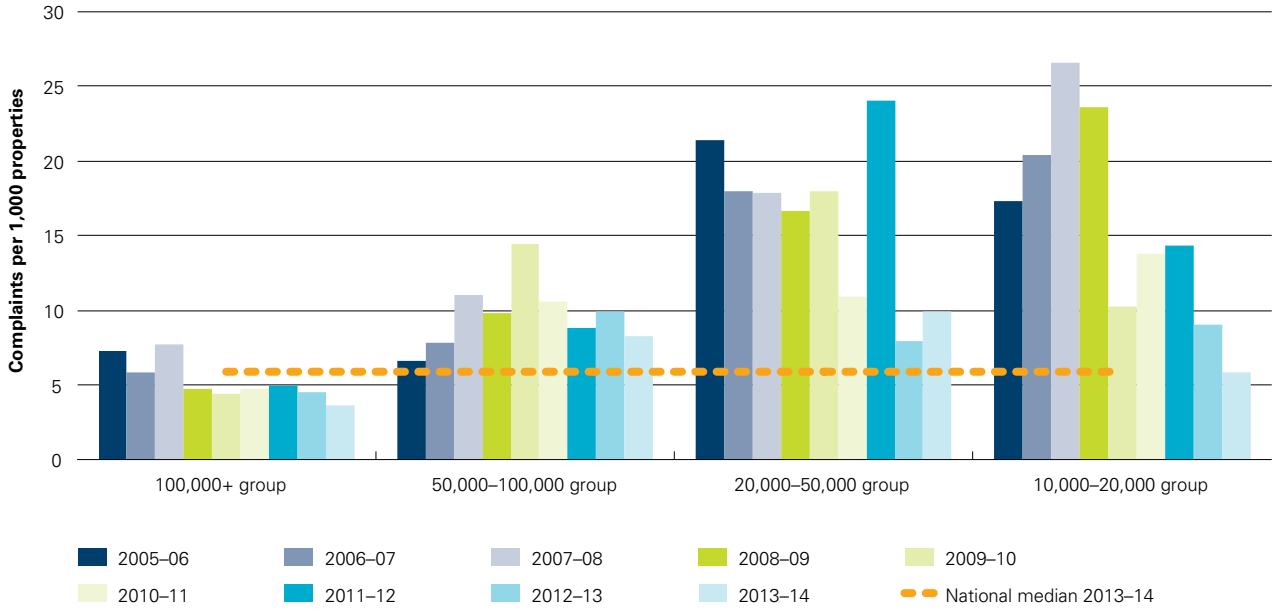

Figure 2.3 C13—Median total water and sewerage complaints per 1,000 properties, 2005–06 to 2013–14, for each utility group

Net profit after tax (NPAT) ratio: The median values for NPAT ratios for utilities with more than 100,000 properties are notably higher than for all other utility groups across the whole time series (Figure 2.4). Individual utility comparisons for NPAT are included in Chapter 5, section. 5.4.

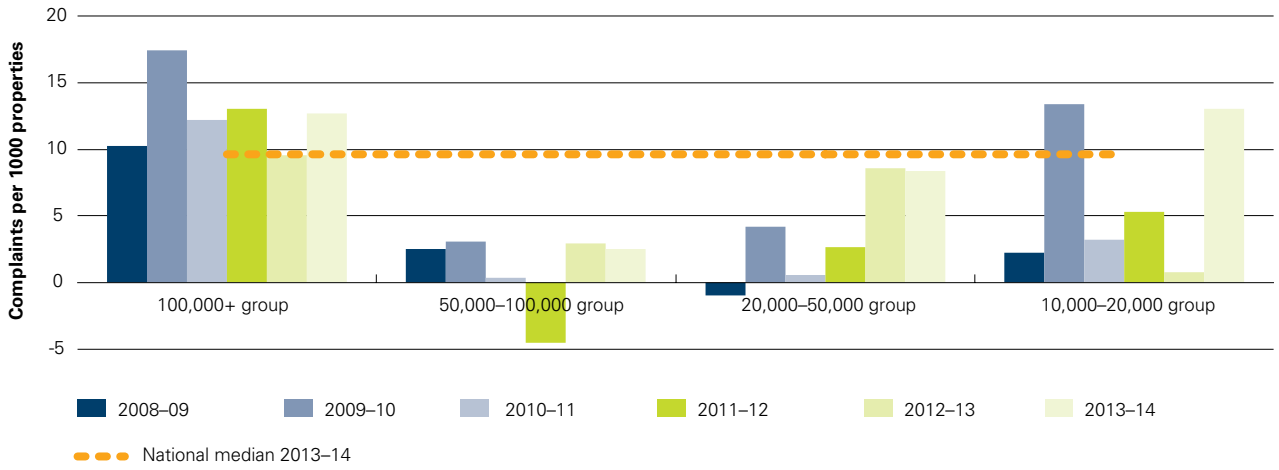

Figure 2.4 F30—Median NPAT ratio, 2008–09 to 2013–14

Net debt to equity ratio: The two larger utility size groups have relatively higher debt compared to equity than the national median (the 100,000+ size group significantly so), while the other two size groups are below the median (Figure 2.5).

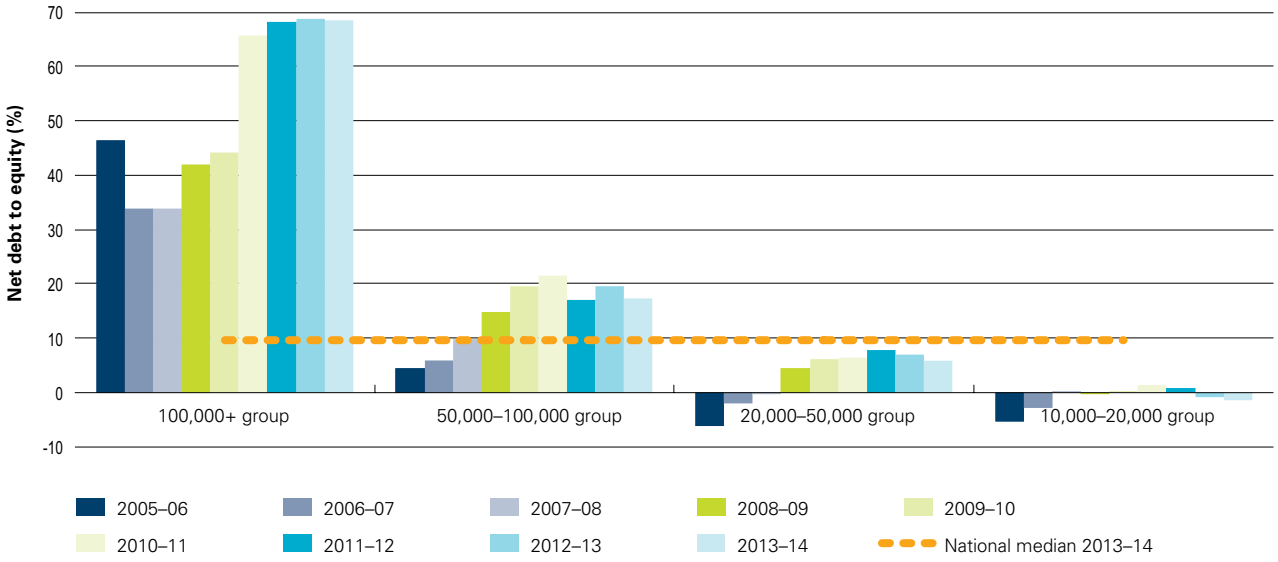

Figure 2.5 F22—Median net debt to equity ratio, 2008–09 to 2013–14, for each utility group

2.4 Sources of water

The sources of water used by a utility and the geographical relationship between the source and the urban centre it supplies are two important drivers of performance. The combination and interaction of these drivers serve to create widely varying engineering, operational, and social challenges for each utility across the country.

Traditionally, Australians have relied on surface and, to a lesser extent, groundwater sources to meet their urban consumptive needs. Increased demand driven by factors such as population growth and changes to the reliability of existing sources (predominantly driven by water quality and climatic variability), have resulted in a need to further develop water supply sources to ensure supply is maintained. Financial, environmental, and social considerations mean a reduced number of opportunities exist to develop more of these traditional supply sources. As a result, utilities and bulk water suppliers across the country are developing non-traditional (alternative) supply sources such as desalination and recycling, as well as continuing to explore options for stormwater and rainwater harvesting.

This diversification has important consequences for the performance of urban water utilities. It impacts how much it costs to treat source water to an acceptable standard and supply multiple water types to end-users while meeting regulatory requirements.

For example, water from a dam in a protected (or 'closed') catchment is typically of a higher quality than that of an 'open' catchment and therefore requires less treatment, hence reducing the cost of supply. Groundwater sources can also vary significantly. The type and depth of an aquifer as well as the quality of the water it contains all have a significant impact on the extraction and treatment of the water. Water from recycled sources typically requires a dual-pipe supply system to separate it from potable water, representing a greater infrastructure cost.

Figure 2.6 shows the breakdown of sourced water for each State and Territory for the five years from 2009–10 to 2013–14. The charts show the following:

- Water sourced from surface water (W1), from rivers, streams, and dams, is the dominant water source in all States and Territories except Western Australia, where most of the water supplied is sourced from groundwater (W2).
- The importance of desalination (W3) as a reliable source of water continues to grow, in particular for the States of Western Australia and South Australia, where constraints on traditional water sources have driven diversification. In 2013–14, desalination within the two States supplied 35% and 28% respectively of the reported total water sourced. This is up from 30% and 23% in 2012–13.

- Reliance on desalination in other States and Territories remains sporadic, with neither New South Wales nor Victorian utilities sourcing any water from their desalination plants in 2013–14. Similarly, Queensland sourced less than 1% of its total water from desalination sources because of the availability of surface water.
- With the exception of Queensland, the volume of water sourced from recycling, on the basis of a percentage of total water sourced, remained consistent with 2012–13. Despite the dryer than average conditions experienced in southeast Queensland the reported 2% decline in recycled water sourced is consistent with the strong position of surface water resource in the region.

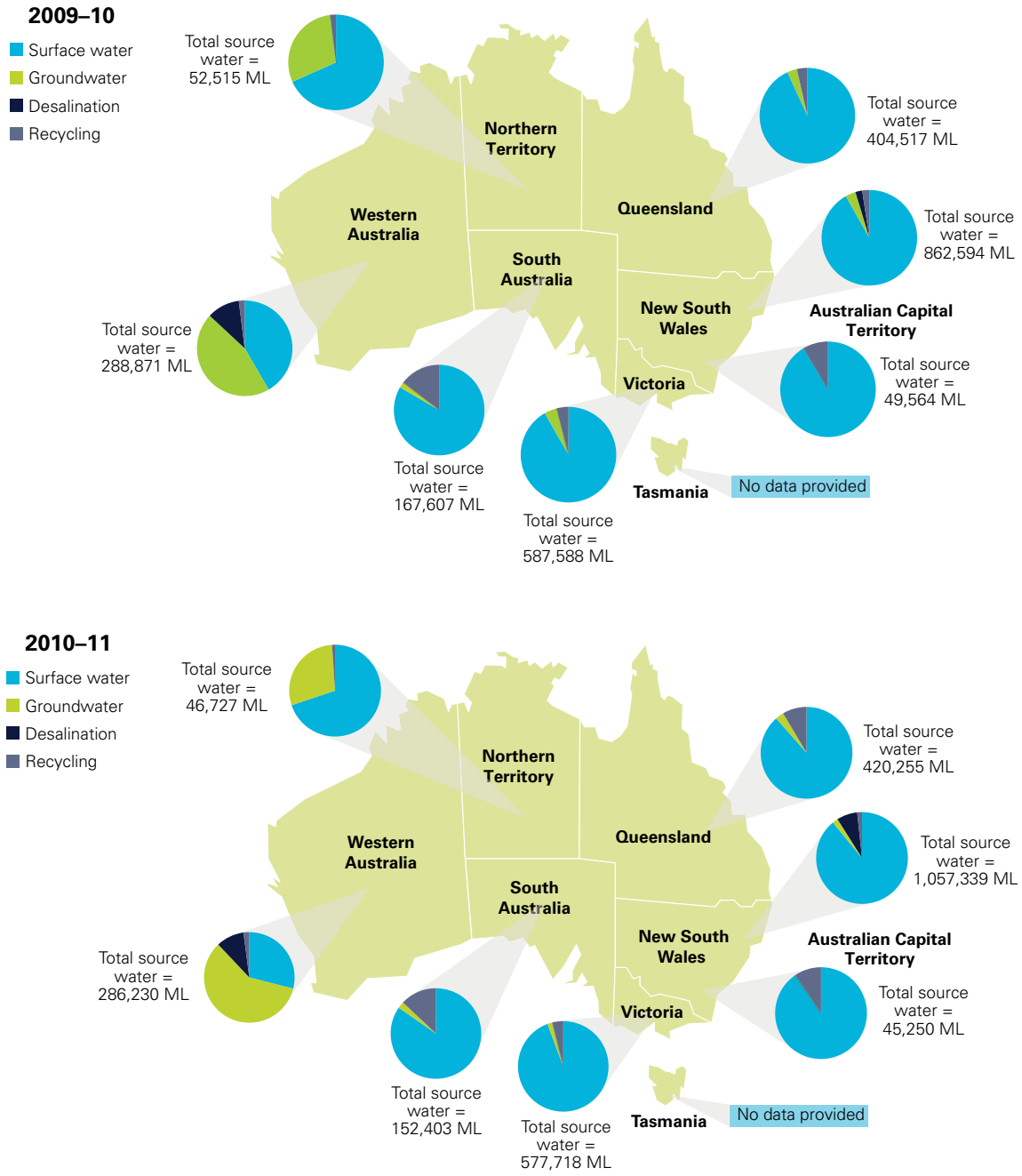

Figure 2.6 Water source breakdown (W1, W2, W3, W4) in each State and Territory, 2009–10 to 2013–14

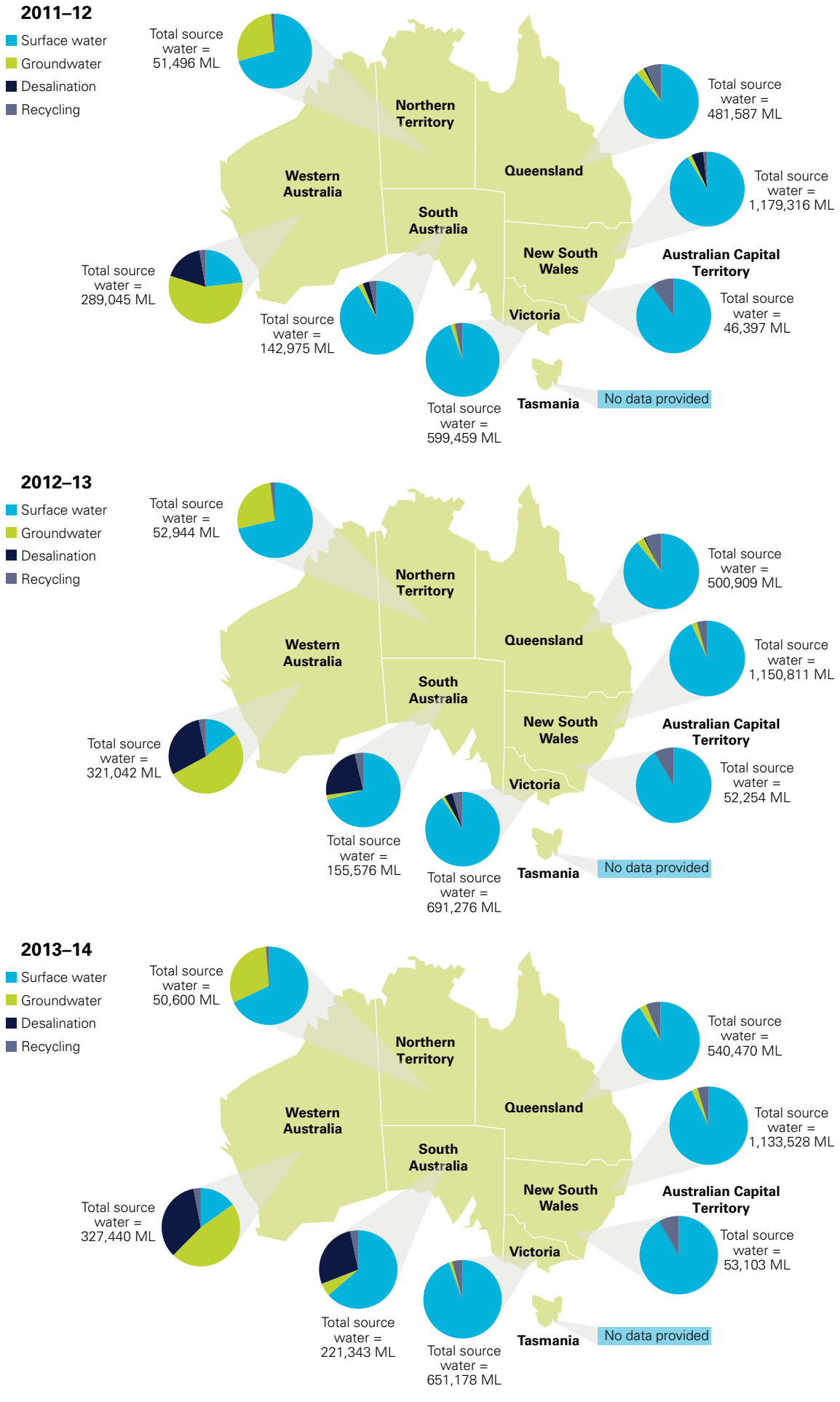

Figure 2.6 Water source breakdown (W1, W2, W3, W4) in each State and Territory, 2009–10 to 2013–14 (continued)

3 Water resources

3.1 W12—Average annual residential water supplied (kL/property)

3.1.1 Introduction

This indicator reports the average volume of water metered, and estimated non-metered potable and nonpotable water supplied to residential properties during the 2013–14 reporting year. It is derived by dividing the total volume of residential water supplied (Indicator W8) by the number of connected residential water properties (C2).

This average volume is influenced by a number of factors, including climate, rainfall, water restriction policies of the utility, water conservation measures in place, the available water supply, housing density, and the price of water. Of these, rainfall is arguably the most influential factor affecting residential consumption. All things being equal, an increase in rainfall will reduce demand, and a decrease in rainfall will increase demand. A decrease in rainfall, however, and a consequent runoff into storages can trigger demand-management measures, such as restrictions to curb demand, if the decrease is significant.

The 2013–14 reporting year straddled the hottest (2013) and third hottest (2014) calendar years since national temperature records began in 1910. While nationally near-average rainfall was recorded, there was significant variation across the country. Populated areas of South Australia, Tasmania, northern and northwestern Northern Territory, central Western Australia, and Cape York in northern Queensland experienced higher than average rainfall. Conversely, much of central Queensland, coastal and northeastern New South Wales, central Australia, and southeastern Western Australia received below-average rainfall.

In 2013–14, 34 utilities reported an increase in the volume of water supplied, down from 56 in 2012–13 (Table 3.1). This was reflected in a slowdown of the growth in the national median for residential water supplied, from 6% in 2012–13 to 3% in 2013–14 (Figure 3.1). While median water use (185 kL/property), remained well below the high of 2005–06 (216 kL/property), 2013–14 is the third consecutive year of growth, a trend that is consistent with the observed hotter temperatures, average or below-average rainfalls, and eased restrictions across Australia.

Table 3.1 Overview of results: W12—Average annual residential water supplied (kL/property)[1]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	254	145	9	4	162†	164†	1%
	WC (Perth)	City West Water					
50,000–100,000 connected properties	407	144	4	7	181	182	0%
	P&W (Darwin)	Toowoomba					
20,000–50,000 connected properties	450	140	8	9	201	202	0%
	Lower Murray Water	Wannon Water					
10,000–20,000 connected properties	466	80	13	10	180	194	8%
	P&W (Alice Springs)	Westernport Water					
All size groups (national)	466	80	34	30	179†	185†	3%
	P&W (Alice Springs)	Westernport Water					

Table Notes:

[1] Median average annual residential water supplied (kL/property) is calculated using data from all utilities providing water supply services that reported data for W12 in both the 2012–13 and 2013–14 reporting years.

† As a result of changes to reporting boundaries for SA Water, the 2012–13 average annual residential water supplied uses the average of data for metropolitan Adelaide, Whyalla, and Mount Gambier (weighted by connected residential properties), while the 2013–14 figure uses the whole of SA Water data.

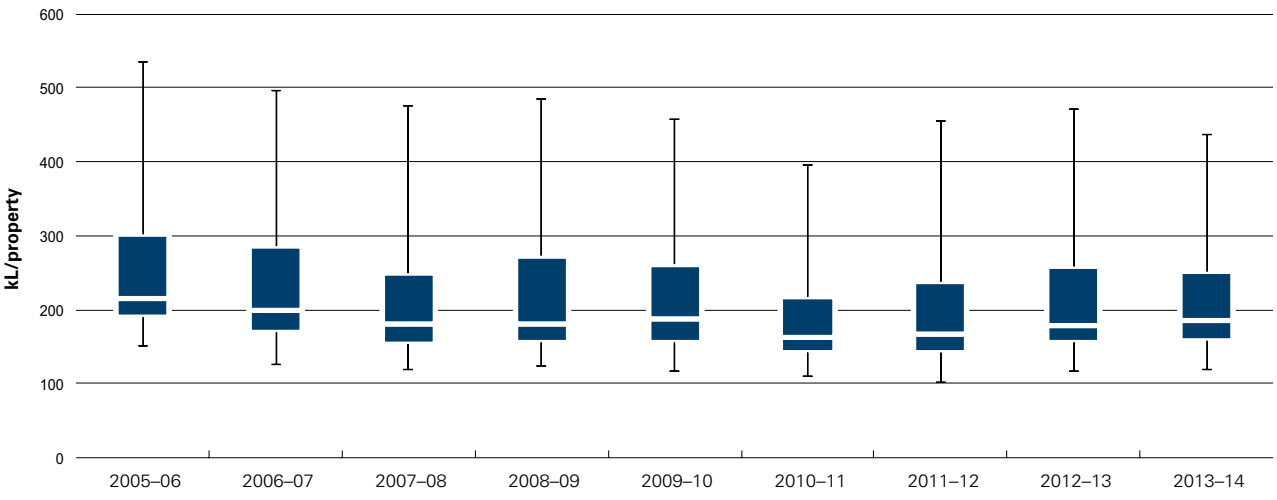

Figure 3.1 W12 – Average annual residential water supplied, 2005–06 to 2013–14 (kL/property)

3.1.2 Results and analysis

100,000+ group

With the exception of three Victorian utilities (Yarra Valley Water, Barwon Water, and City West Water) and SA Water, all utilities in this group reported increases in residential water supplied from 2012–13 to 2013–14. While the majority of these increases were moderate (<5%), Gold Coast and Logan reported increases of 15% and 12% respectively (Table 3.2 and Figure 3.2).

Water Corporation (Perth) continued to supply the highest average volumes of residential water in this group. This is consistent with the prevailing drier-than-average conditions being experienced in Western Australia and the observed historic water use trends for Perth.

Notably, water use across Victorian utilities in this size group remains amongst the lowest across the 5-year time series.

Table 3.2 W12, 2009–10 to 2013–14 (kL/property), for utilities with 100,000+ connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Gold Coast Water	182			162	187	15%
Logan	159			140	157	12%
Sydney Water	205	197	193	198	206	4%
Hunter Water	184	175	163	176	181	3%
WC (Perth)	276	264	250	249	254	2%
ACTEW	199	177	180	199	203	2%
Queensland Urban Utilities		138	139	154	156	1%
Unitywater		149	158	163	164	1%
South East Water	141	136	139	148	149	0%
Yarra Valley Water	144	139	144	156	153	–2%
City West Water	140	139	143	150	145	–4%
Barwon Water	150	142	153	160	151	–5%
SA Water				192†	178†	–7%

Table notes

† As a result of changes to reporting boundaries for SA Water, the 2012–13 average annual residential water supplied (kL/property) uses the average of data for metropolitan Adelaide, Whyalla, and Mount Gambier (weighted by connected residential properties), while the 2013–14 figure uses whole of SA Water data.

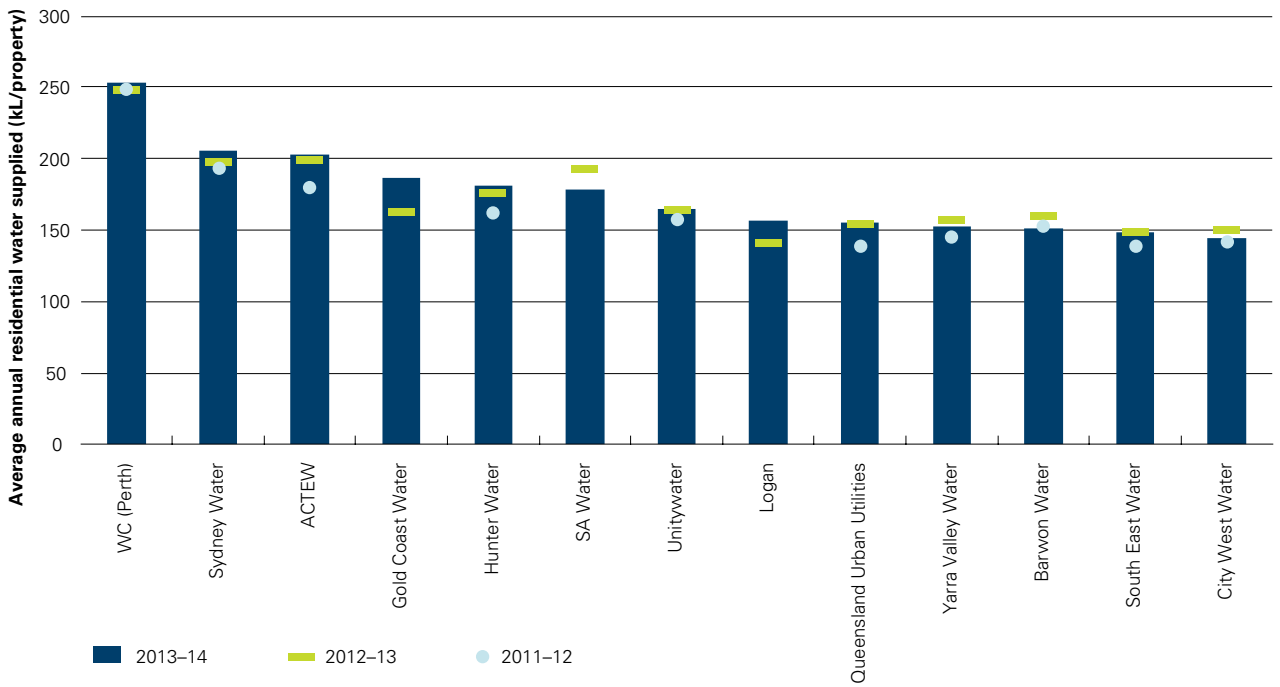

Figure 3.2 W12, 2011–12 to 2013–14 (kL/property), for utilities with 100,000+ connected properties

50,000–100,000 group

Figures for average annual water supplied for this group in 2013–14 are shown in Table 3.3 and Figure 3.3. They highlight a turnaround in the significant changes of 2012–13. Across the utilities, the average change dropped from a 10% increase in 2012–13 to a 1% reduction in the 2013–14 year. Power and Water (Darwin) lead this trend, with a 10% reduction in the 2013–14 year on the back of a 4% reduction in 2012–13 (Table 3.3).

Going against this trend, Toowoomba reported a 10% growth in water supplied in the 2013–14 reporting year on the back of a 28% increase in 2012–13. Toowoomba's average, however, of 144kL was the lowest in this group.

Table 3.3 W12, 2009–10 to 2013–14 (kL/property), for utilities with 50,000–100,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Toowoomba			101	130	144	10%
Townsville	434	287	362	383	404	6%
Gosford	146	148	145	157	161	3%
Western Water	166	158	169	181	182	0%
Central Highlands Water	126	125	138	150	150	0%
Coliban Water	160	144	165	194	190	–2%
Gippsland Water	179	162	163	176	171	–3%
Goulburn Valley Water	261	199	234	276	266	–4%
Wyong	154	160	151	166	158	–5%
Cairns	262	231	245	258	243	–6%
P&W (Darwin)	458	405	471	454	407	–10%

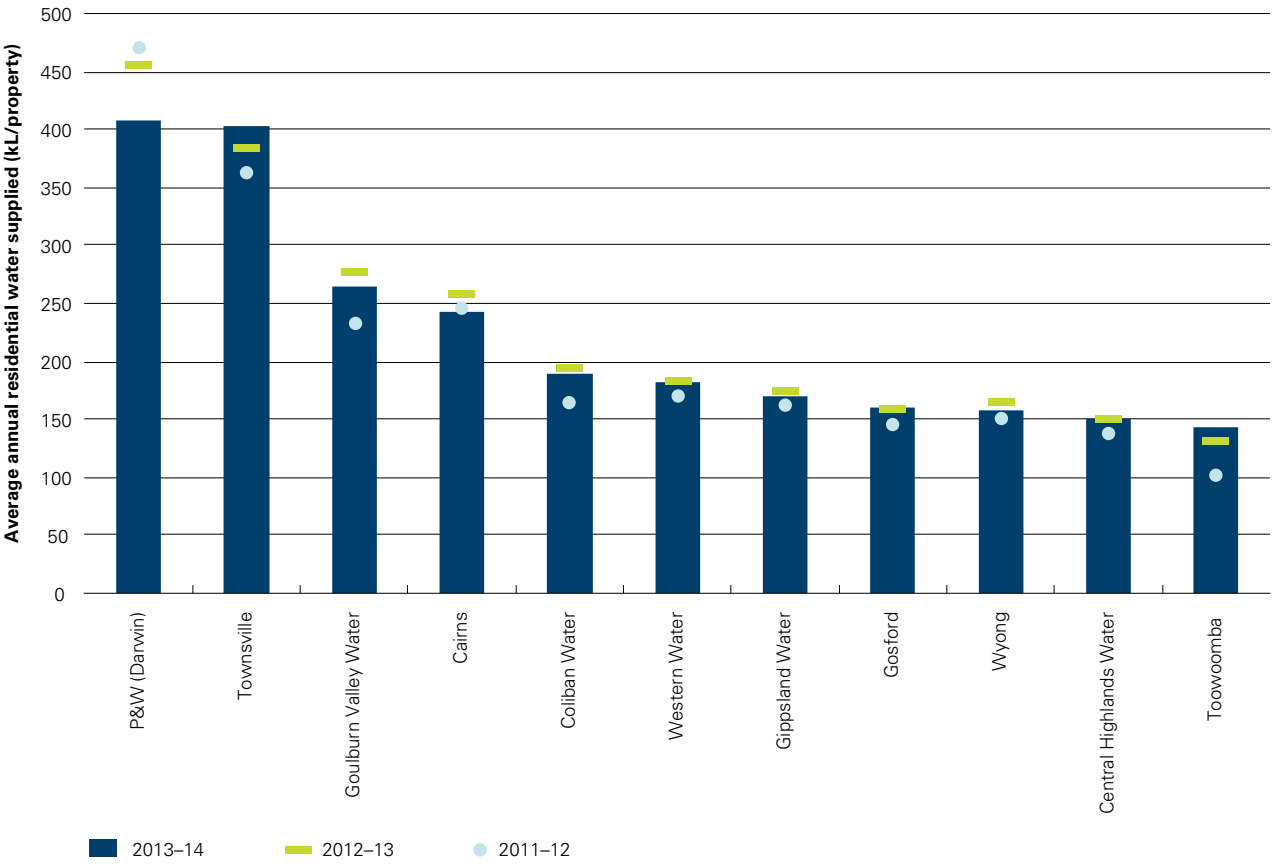

Figure 3.3 W12, 2009–10 to 2013–14 (kL/property), for utilities with 50,000–100,000 connected properties

20,000–50,000 group

The median and mean values for annual residential water supplied across this group were stable across the 2012–13 and 2013–14 years. This highlights a significant decrease in average growth across the category, down to just under 1% from the 2012–13 result of 13% (Table 3.4).

With the exception of Tamworth, all utilities that reported growth in water supply greater than 20% in 2012–13 (Albury, Riverina Water, Tamworth, North East Water, and Lower Murray Water) reported a reduction in water supply in the 2013–14 reporting year. Tamworth's average water supplied per residential property grew by 10% in 2013–14, down from 28% in 2012–13.

The largest increases in the 2013–14 reporting year were reported by Fitzroy River Water in Queensland, and Tamworth and Clarence Valley in New South Wales. These utilities correlate with regions experiencing above-average temperatures and below-average rainfall across the 2013–14 reporting year. Despite its reported decrease in 2013–14, Lower Murray Water continued to lead the group, consistently supplying the highest average volumes of residential water over the last three years (Figure 3.4).

Table 3.4 W12, 2009–10 to 2013–14 (kL/property), for utilities with 20,000–50,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Fitzroy River Water	450	254	288	311	348	12%
Tamworth	256	216	204	261	287	10%
Clarence Valley	174	142	139	148	161	9%
Wide Bay Water		160	170	186	197	6%
Coffs Harbour	186	162	156	161	169	5%
MidCoast Water	154	139	131	143	150	5%
Tweed	176	167	163	177	184	4%
WC (Mandurah)	269	252	239	239	241	1%
Mackay Water	238	186	231	216	216	0%
Port Macquarie Hastings	166	147	144	157	157	0%
Shoalhaven	145	136	130	149	148	–1%
GWMWater	200	161	208	236	226	–5%
North East Water	213	167	179	216	206	–5%
East Gippsland Water	167	145	138	158	151	–5%
Lower Murray Water	411	313	391	479	450	–6%
Riverina Water (W)	330	225	256	347	324	–7%
Wannon Water	154	134	148	152	140	–8%
Albury	220	180	203	255	232	–9%

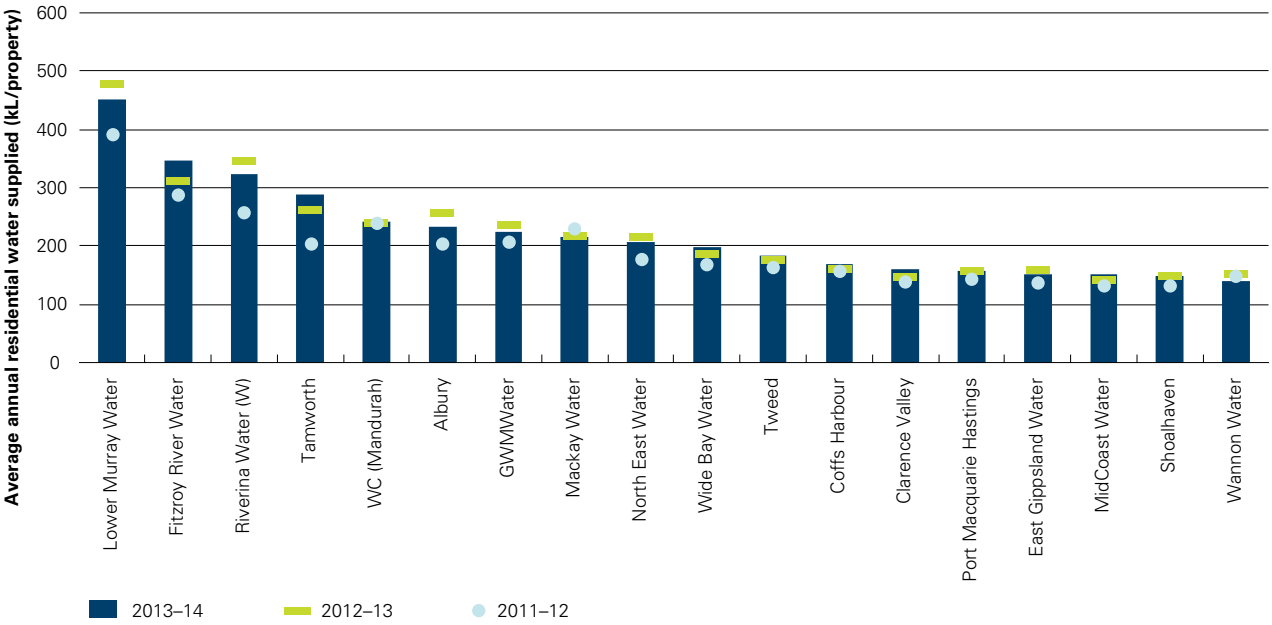

Figure 3.4 W12, 2009–10 to 2013–14 (kL/property), for utilities with 20,000–50,000 connected properties

10,000–20,000 group

The median increase in water use in this group in the 2013–14 reporting year was 8%, compared with 3% in 2012–13.

Decreases for a number of the utilities with average annual water supply volumes lying at the higher end of the distribution (Figure 3.5) resulted in a decrease in the average annual growth of water supplied, down from an average of 10% in 2012–13 to just over 1% in 2013–14 (Table 3.5).

Bathurst and Dubbo reported the most significant turnarounds in water supplied, arresting increases in excess of 40% in 2012–13 and reporting reductions in average supply volumes of 13% and 5% respectively.

Ballina and Goulburn Mulwaree in New South Wales reported the largest increases in supply volume for the 2013–14 reporting year. Both recorded a 10% increase on 2012–13 figures. These increases are consistent with the drier-than-average conditions experienced in the region (Figure 2.1).

Table 3.5 W12, 2009–10 to 2013–14 (kL/property), for utilities with 10,000–20,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Ballina	188	162	166	177	194	10%
Goulburn Mulwaree	136	133	138	150	165	10%
Goldenfields Water (R)	259	176	199	265	287	8%
Wingecarribee	190	159	157	186	200	8%
Lismore	168	152	143	145	155	7%
Busselton (W)	297	285	280	272	287	5%
Aqwest–Bunbury (W)	270	266	255	254	267	5%
WC (Albany)	209	190	188	179	188	5%
Byron	194	159	168	176	181	3%
Eurobodalla	116	109	104	116	119	3%
Queanbeyan	200	191	185	175	178	2%
Westernport Water	71	69	72	80	80	1%
Kempsey	177	156	143	156	157	1%
WC (Australind-Eaton)			334	338	337	0%
South Gippsland Water	119	114	114	119	118	-1%
Essential Energy	280	219	237	285	281	-1%
WC (Geraldton)	369	357	343	327	321	-2%
Orange	148			180	174	-3%
Bega Valley	165	129	130	139	134	-4%
P&W (Alice Springs)	538	403	470	490	466	-5%
Dubbo	329	263	249	368	350	-5%
WC (Kal–Boulder) (W)	360	348	310	335	306	-9%
Bathurst	252	182	180	260	227	-13%
Gympie					215	

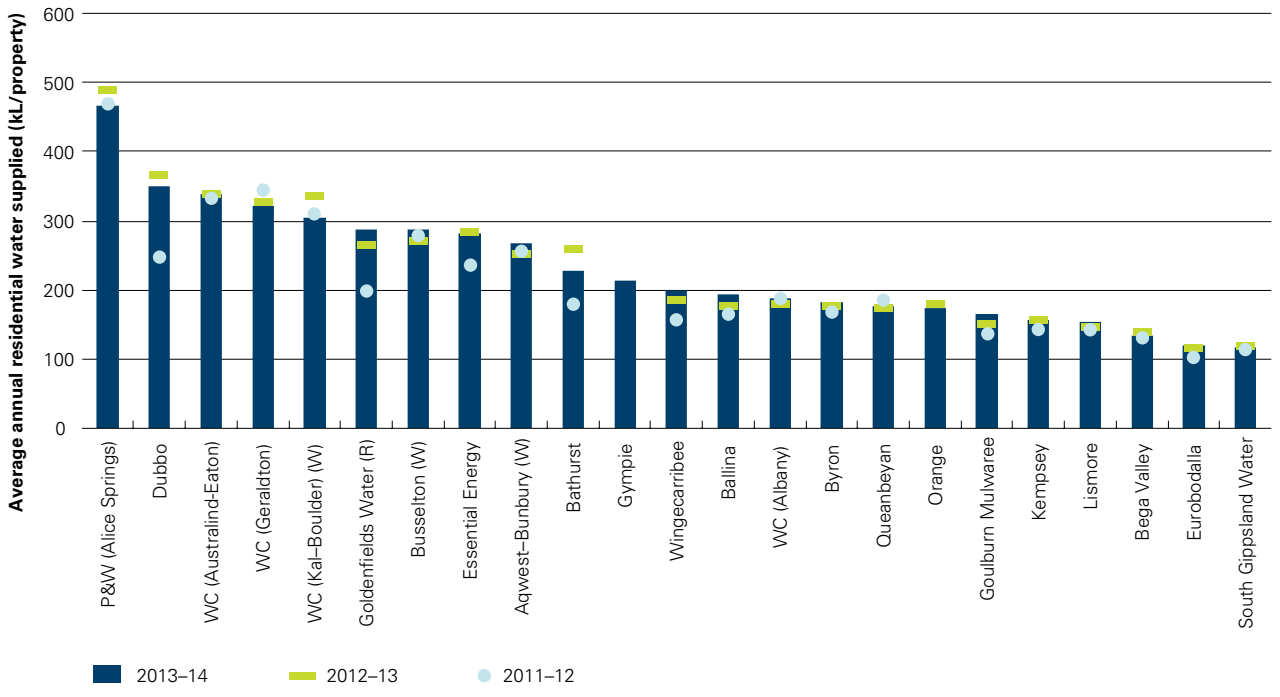

Figure 3.5 W12, 2009–10 to 2013–14 (kL/property), for utilities with 10,000–20,000 connected properties

3.2 W26—Total recycled water supplied (ML) and W27—Recycled water (% of effluent recycled)

3.2.1 Introduction

Total recycled water supplied (Indicator W26) is the sum of all treated sewage effluent that is used by either the utility or businesses supplied by the utility, or supplied through a third-pipe system for urban reuse. The percentage of effluent recycled (W27) is derived by dividing the total recycled water volume by the volume of treated sewage effluent (W18.5).

The volume and percentage of recycled water are affected by a number of factors, including the availability of potable water, the size of the utility, its proximity to potential customers (such as agricultural users, major industrial customers, and recreational facilities), fluctuations in sewage received and therefore effluent available for recycling, and Government policy. The smaller regional centres often recycle a greater proportion of effluent than larger metropolitan areas because discharge to inland rivers and streams often requires higher treatment, making recycling more cost-effective. Regional centres also often have greater access to willing buyers, such as agricultural businesses, and there are fewer alternative water supply sources inland than on the coast.

Most recycling in Melbourne is undertaken by Melbourne Water, and therefore not included in this chapter; however, the three Melbourne retailers (South East Water, Yarra Valley Water, and City West Water) undertake recycling from their own treatment plants and are included in this chapter.

Comparing data for all utilities reporting total recycled water volumes in both the 2012–13 and 2013–14 reporting years shows that nationally supplied volumes decreased by 2%: 32 utilities reported an increase while 30 reported a decrease (Table 3.6).

Table 3.7 presents an overview of the recycled water as a percentage of total effluent (Indicator W27). Nationally, the median percentage of effluent recycled remained stable, rising by only 2%. This was despite a significant increase in the median within the 50,000–100,000 group.

TasWater and Gympie reported total recycled water volumes and percentage of effluent recycled for the first time in the 2013–14 reporting year. As there is no comparative data for 2012–13, the volumes reported have been excluded from the overview results analysis.

Table 3.6 Overview of results: W26—Total recycled water supplied (ML)[1]

	Range		Number of utilities with increase/decrease from 2012–13		Total		% change in the total from 2012-–13
Size group	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	46,943	138	5	8	127,445†	127,335†	01%
	Sydney Water	City West Water					
50,000–100,000 connected properties	6,594	32	5	6	27,075	25,804	–5%
	Goulburn Valley Water	Gosford					
20,000–50,000 connected properties	5,523	119	10	8	42,109	40,048	–5%
	Wagga Wagga (S)	WC (Mandurah)					
10,000–20,000 connected properties	3,942	0	12	8	19,788	19,758	0%
	Bathurst	Queanbeyan					
All size groups (national)	46,943	0	32	30	216,417†	212,944†	–2%†
	Sydney Water	Queanbeyan					

Table notes

[1] Total recycled water supplied (ML) is calculated using data from all utilities who reported data for W26 in both the 2012–13 and 2013–14 reporting years.

† As a result of changes to reporting boundaries for SA Water, the 2012–13 total recycled water supplied utilises the summation of data for metropolitan Adelaide, Whyalla and Mount Gambier while the 2013–14 figure uses whole of SA Water data.

Table 3.7 Overview of results: W27—Recycled water (% of effluent recycled)[1]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	29 Yarra Valley Water	1 City West Water	8	5	12%†	11%†	–10%
50,000–100,000 connected properties	100 Goulburn Valley Water	0 Gosford	5	5	12%	15%	28%
20,000–50,000 connected properties	103 Wide Bay Water	2 WC (Mandurah)	10	8	26%	27%	2%
10,000–20,000 connected properties	100 Multiple utilities	1 Multiple utilities	10	8	17%	16%	-4%
All size groups (national)	103 Wide Bay Water	0 Gosford	33	26	16%†	17%†	2%

Table notes

[1] Median recycled water (% of effluent recycled) is calculated using data from all utilities that reported data for W27 in both the 2012–13 and 2013–14 reporting years.

† As a result of changes to reporting boundaries for SA Water, the 2012–13 recycled water (% of effluent recycled) figure uses data for W26 and W18.5 for metropolitan Adelaide, Whyalla, and Mount Gambier, while the 2013–14 figure uses whole of SA Water data.

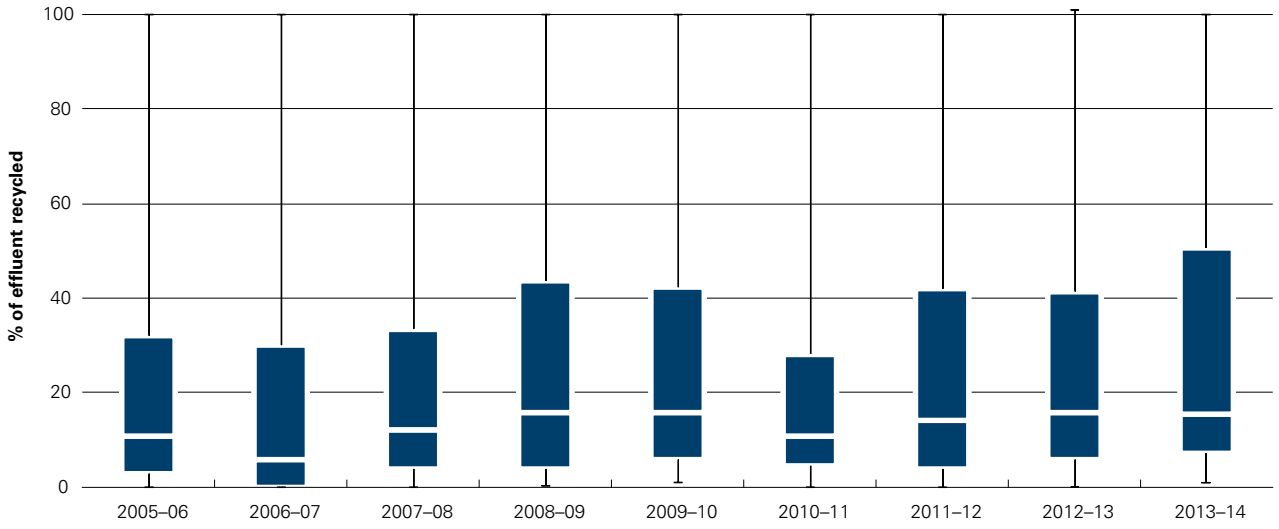

Figure 3.6 Summary of results: W27—Recycled water, 2005–06 to 2013–14

3.2.2 Results and analysis

100,000+ group

In 2013–14, the total volume of recycled water supplied by utilities in this group (excluding TasWater, which reported on W26 for the first time) remained consistent with that of 2012–13, despite an average 6% decrease in recycled water volumes supplied across the group. Individual declines within the group were balanced by strong growth reported by Gold Coast, Yarra Valley, and Hunter Water.

A significant 22% increase reported by Gold Coast Water was attributed to the commissioning of a steady long-term release system for excess recycled water across the supply region (City of Gold Coast 2014: 60).

The significant decreases in recycled water supply volumes reported by City West Water (87%) are attributed to the temporary shutdown of the recycled water facility attached to the Altona sewage treatment plant and also decreased demand from irrigation customers in 2013–14.

A small reduction in the Water Corporation (Perth) recycled water supply volume (2.4%) was in part attributed to lower production by the Groundwater Replenishment Trial. Part of this total decrease was offset by increased industrial usage of recycled water.

Table 3.8 W26 (ML) and W27 (%), 2011–12 to 2013–14, for utilities with 100 000+ connected properties[1]

	W26 Total recycled water supplied			W27 (% of effluent recycled)		
Utility	**2011–12**	**2012–13**	**2013–14**	**2011–12**	**2012–13**	**2013–14**
Yarra Valley Water	2,319	2,687	3,135	21%	26%	29%
SA Water		28,848[†]	28,048[†]		32%[†]	28%[†]
Gold Coast Water		7,307	8,931		12%	21%
Barwon Water	3,483	4,790	5,008	15%	20%	18%
ACTEW	4,607	4,416	4,372	13%	15%	15%
South East Water	2,277	3,091	2,967	17%	12%	15%
Queensland Urban Utilities	10,104	9,961	9,760	13%	10%	11%
Sydney Water	45,929	46,951	46,943	8%	10%	10%
TasWater			5,239			9%
Hunter Water	4,664	4,269	4,895	6%	6%	8%
WC (Perth)	10,370	10,272	10,029	8%	8%	7%
Logan		2,000	1,372		9%	7%
Unitywater	1,328	1,713	1,737	2%	3%	4%
City West Water	1,216	1,140	138	24%	18%	3%

Table notes

[1] As a result of changes to reporting boundaries for SA Water, the figure for total recycled water supplied for the 2012–13 reporting year uses the summation of data for metropolitan Adelaide, Whyalla, and Mount Gambier, while the 2013–14 reporting year figure uses the whole of SA Water data.

[†] As a result of changes to reporting boundaries for SA Water, the 2012–13 recycled water (% of effluent recycled) figure uses data for W26 and W18.5 for metropolitan Adelaide, Whyalla, and Mount Gambier, while the 2013–14 figure uses the whole of SA Water data.

50,000–100,000 group

In 2013–14, five utilities in this group reported an increase and six reported a decrease in the total recycled water volume supplied (Table 3.9), compared with 2012–13. The total recycled water volume supplied across the group showed a 3% decrease from 2012–13. Of note for this group was the observed 28% increase in total recycled water as a percentage of the volume of treated sewage. This result was driven by increases from Toowoomba, Western Water, and Wyong.

Toowoomba reported the largest volume increase of 470 ML (39%), reflecting the drier-than-average conditions in 2013–14.

Gippsland Water reported the largest decrease, 547 ML or 33%. As a result of storage levels in Moondarra Reservoir, Gippsland Water's Water Factory was not required to produce recycled water.

Table 3.9 W26 (ML) and W27 (%), 2011–12 to 2013–14 for utilities with 50,000–100,000 connected properties

	W26 Total recycled water supplied			W27 (% of effluent recycled)		
Utility	**2011–12**	**2012–13**	**2013–14**	**2011–12**	**2012–13**	**2013–14**
Goulburn Valley Water	6,824	7,344	6,594	81%	97%	100%
Western Water	4,814	4,880	5,701	59%	58%	75%
Coliban Water	3,893	3,346	2,658	33%	41%	32%
Toowoomba	1,338	1,213	1,683	15%	12%	21%
Central Highlands Water	1,628	1,971	1,683	15%	18%	18%
Townsville	2,806	3,166	2,740	14%	18%	15%
Cairns	3,065	2,101	2,300	14%	11%	11%
Wyong	465	877	962	3%	6%	7%
Gippsland Water	1,128	1,651	1,104	4%	5%	4%
P&W (Darwin)	376	499	347		3%	2%
Gosford	271	28	32	2%	0%	0%

20,000–50,000 group

This group, like the 50,000–100,000 group, also recorded an overall 5% decrease in total recycled water volumes in the 2013–14 reporting year compared with 2012–13; ten of the 18 utilities in the group reported increases and eight reported decreases (Table 3.10).

Fitzroy River Water in Queensland reported the largest percentage decrease of 62%, compared with 2012–13, while Mackay Water also reported a 47% decrease in 2013–14.

MidCoast Water (MCW), Coffs Harbour, and Port Macquarie Hastings reported significant increases for 2013–14 of 79% (639 ML), 70% (591 ML), and 50% (121 ML) respectively. In part, these increases are explained by the above-average temperature and low average rainfall experienced during 2013–14.

The increase reported by MCW is attributed to its completion of a major $22 million recycled water programme. The programme comprised four schemes located at Hawks Nest, Tuncurry, Bulahdelah, and Harrington that are now operational and can supply more that 430 million litres of treated water for reuse (MCW: 2).

Table 3.10 W26 (ML) and W27 (%), 2011–12 to 2013–14, for utilities with between 20,000–50,000 connected properties.

	W26 Total recycled water supplied			W27 (% of effluent recycled)		
Utility	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
Wide Bay Water	2,624	4,061	4,794	37%	61%	103%
Tamworth	3,656	3,595	4,128	67%	79%	100%
Wagga Wagga (S)	5,971	5,543	5,523	97%	97%	97%
East Gippsland Water	2,469	2,959	2,903	86%	99%	96%
GWMWater	2,291	2,366	2,302	105%	101%	58%
Lower Murray Water	2,456	2,491	3,202	44%	41%	56%
Albury	5,287	2,733	2,468	99%	59%	54%
Mackay Water	4,409	8,314	4,412	46%	79%	50%
Shoalhaven	744	1,992	2,352	9%	27%	28%
MidCoast Water	282	848	1,439	4%	13%	26%
Coffs Harbour	489	801	1,436	8%	11%	26%
North East Water	1,959	2,203	1,895	20%	25%	20%
Wannon Water	1,248	1,490	1,251	13%	16%	12%
Fitzroy River Water	2,175	1,807	681	24%	17%	9%
Tweed	386	431	604	5%	6%	9%
Clarence Valley	109	128	176	3%	4%	7%
Port Macquarie Hastings	294	242	363	3%	3%	4%
WC (Mandurah)	119	104	119	2%	2%	2%

10,000–20,000 group

Total recycled water volumes reported by this group for the 2013–14 were consistent with 2012–13 results: 12 utilities reported an increase in total recycled water in 2013–14 and eight reported decreases (Table 3.11).

Kempsey reported the largest percentage increase of 1,000% (100 ML). This increase was driven by the commencement of operations of its South West Rocks Recycled Water Scheme (Kempsey Shire Council: 86). Ballina and Orange also reported increases of 141 ML (107%) and 1,266 ML (75%) respectively.

Water Corporation–Bunbury (sewerage) reported a 35% increase in total recycled water volume supplied in 2013–14 from that of 2012–13. This was attributed to an increase in on-site plant process requirements.

South Gippsland Water reported the largest percentage decrease (35%; 59 ML) in 2013–14 followed by decreases reported by Byron (20%; 118 ML) and Power and Water–Alice Springs (also 20%; 199 ML).

Table 3.11 W26 (ML) and W27 (%), 2011–12 to 2013–14, for utilities with 10,000–20,000 connected properties.

	W26 Total recycled water supplied			W27 (% of effluent recycled)		
Utility	**2011–12**	**2012–13**	**2013–14**	**2011–12**	**2012–13**	**2013–14**
Dubbo	1,396	2,178	1,958	48%	83%	100%
WC (Albany)	1,929	2,051	2,114	100%	100%	100%
Bathurst		4,788	3,942		103%	100%
WC (Australind-Eaton)	1,257	1,350	1,378	100%	100%	100%
Goulburn Mulwaree	1,540	1,567	1,593	90%	95%	98%
Orange	2,218	1,681	2,947	49%	41%	78%
Kal–Boulder (S)	1,817	1,793	1,410	100%	72%	56%
Essential Energy	416	629	709	26%	46%	51%
Gympie			1,243			49%
Bega Valley	485	680	626	21%	38%	31%
P&W (Alice Springs)	707	1,034	835		36%	21%
Westernport Water	129	238	273	8%	18%	18%
Byron	511	596	478	16%	13%	15%
WC (Busselton) (S)		261	245		17%	15%
WC (Geraldton)	223	235	237	14%	14%	13%
Ballina	164	132	273	4%	3%	10%
Eurobodalla	86	189	216	3%	6%	7%
Kempsey	0	10	110	0%	0%	6%
WC (Bunbury) (S)	111	110	148	4%	4%	5%
Wingecarribee	35	98	124	1%	3%	4%
South Gippsland Water	87	168	108	2%	6%	3%

4 Pricing

4.1 P3—Typical residential bill—water ($) and P6—Typical residential bill—sewerage ($)

4.1.1 Introduction

The typical residential bills presented in this chapter are the sum of (a) fixed charges, and (b) volumetric usage charges for water (and sewerage in some utilities) that are billed to a residential customer. They are based on each utility's average annual volume of residential water supplied (Indicator W12). Prices, which are presented in real 2013–14 dollars, may be set by Government or, in some jurisdictions, a regulator.

The size of the customer base has some influence on bills. In the past, the typical residential bill for larger utilities has been lower than for smaller utilities. In recent years, however, bills have been rising faster for the larger utilities, so this difference has largely disappeared. The typical residential bill is also influenced by the mix of fixed and usage charges and the level of water consumption. Therefore, when drawing comparisons between utilities, it is important to note that a change in the average bill may be the result of both a change in average consumption and a change in the price of water.[3]

All utilities now have some form of two-part (that is, fixed and volumetric usage) charge for the water component of the bill, and most have a fixed charge only for the sewerage component; however, four utilities (the three Melbourne retailers and Byron Shire Council) also have a volumetric component in their sewerage charges.

Nationally, the median typical annual residential water bill increased by 1% in real terms in the 2013–14 year, rising from $1,229 in 2012–13 to $1,238. This is the smallest increase in the median typical bill across the National Performance Report time series, noting that median typical bills dropped in 2006–07 and 2007–08. These decreases were attributed to reductions in average volume of water supplied per property.

For the 2013–14 year, 43 utilities reported an increase in their typical bill while 17 utilities recorded decreases (Table 4.1). The largest change to the median typical bill occurred in the 10,000–20,000 group, which reported a 4% increase in the median.

3 For this reason, the bill for 200kL (section 4.2) is included in this report so that the effect of price on a hypothetical bill can be observed, while holding consumption constant. The typical residential bill (based on average volume of residential water supplied and representing the bill paid by the average water user for each utility) best indicates the financial impact on customers.

Table 4.1 Overview of results: P3 and P6 ($)[1]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	1,517	965	9	4	1,142†	1,142†	0%
	Gold Coast Water	City West Water					
50,000–100,000 connected properties	1,784	869	6	5	1,201	1,232	3%
	P&W (Darwin)	Goulburn Valley Water					
20,000–50,000 connected properties	1,506	869	13	4	1,226	1,254	2%
	Mackay Water	Lower Murray Water					
10,000–20,000 connected properties	1,892	905	15	4	1,252	1,303	4%
	P&W (Alice Springs)	Orange					
All size groups (national)	1,892	869	43	17	1,229†	1,238†	1%
	P&W (Alice Springs)	Goulburn Valley Water					

Table notes

[1] The typical residential bill is calculated using data from all utilities supplying both water and sewerage services who reported data for P3 and P6 in both the 2012–13 and 2013–14 reporting years.

† As a result of changes to reporting boundaries for SA Water, the 2012–13 median typical bill uses the data from metropolitan Adelaide while the 2013–14 figure uses whole of SA Water data.

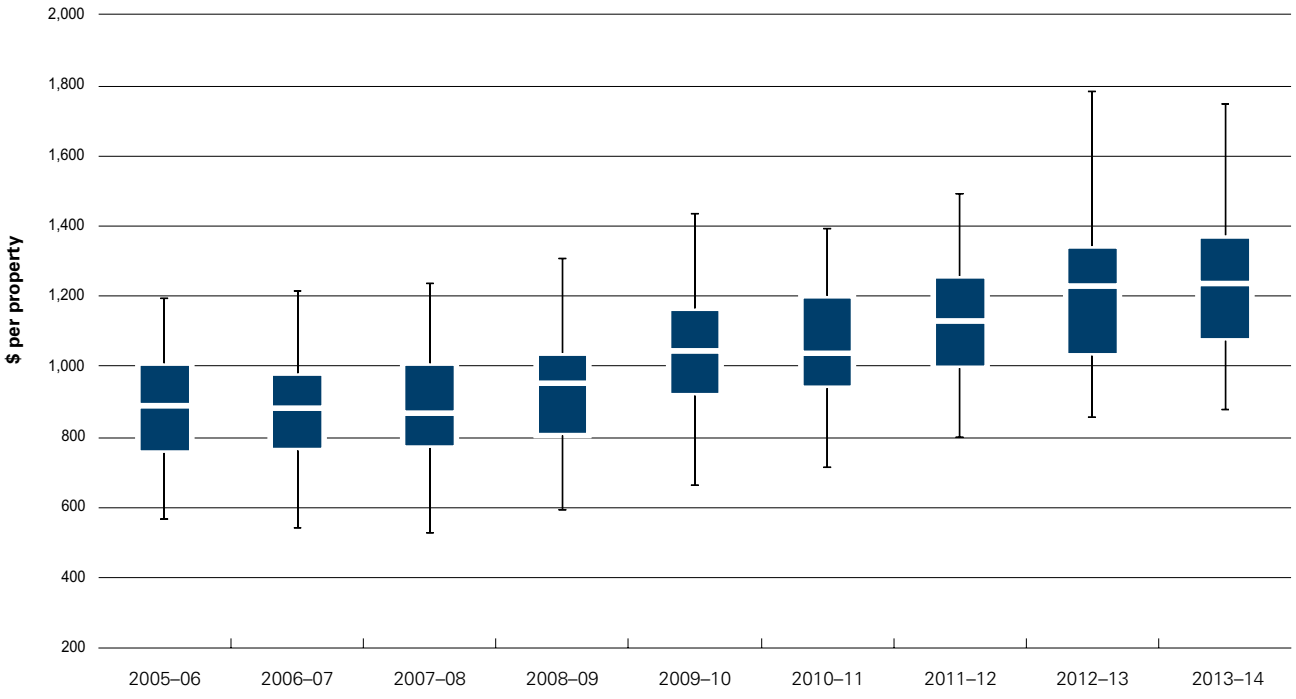

Figure 4.1 Summary of results: P3 and P6, 2005–06 to 2013–14

4.1.2 Results and analysis

100,000+ group

The 2013–14 reporting year saw an average increase in the typical bill of 3% for this group, with the median typical bill remaining unchanged at $1,142. It should be noted, however, that underlying these modest growth figures there were large changes to typical bills over the year within this group (Table 4.2).

Most significant were the 22%, 20%, and 18% increases reported by South East Water, City West Water, and Yarra Valley Water respectively. Noting the relative stability in average water supplied per property across these utilities, it can be concluded that these rises have resulted primarily from price increases attributed to costs associated with the Wonthaggi desalination plant (Essential Service Commission Victoria [ESCV] 2013). The price increase is also amplified by a price freeze applied by the Victorian Government in 2012–13 (ESCV 2012).

Three utilities (SA Water, ACTEW, and Logan) reported significant decreases in typical residential bills (10%, 9%, and 8%). These reductions are attributed to a combination of price reductions and decreases in average water supplied. It should be noted that in the case of SA Water the observed reduction may appear greater than the actual because of the use of metropolitan Adelaide data for 2012–13 and whole of SA Water for 2013–14. This is because of the typically higher nature of metropolitan bills.

Table 4.2 P3 and P6, 2009–19 to 2012–13 ($), for utilities with 100,000+ connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
South East Water	686	776	872	879	1,072	22%
City West Water	661	738	834	835	1,000	20%
Yarra Valley Water	719	820	956	982	1,154	18%
Gold Coast Water	1,235			1,455	1,517	4%
WC (Perth)	1,079	1,132	1,185	1,238	1,287	4%
Queensland Urban Utilities		1,035	1,065	1,102	1,117	1%
Unitywater		1,308	1,344	1,357	1,374	1%
Hunter Water	914	904	930	1,002	1,008	1%
Sydney Water	1,091	1,117	1,146	1,142	1,142	0%
Barwon Water	863	906	999	1,095	1,055	–4%
Logan	1,126			1,324	1,224	–8%
ACTEW	1,066	1,034	1,127	1,206	1,099	–9%
SA Water				1,399[†]	1,259[†]	–10%

Table notes

[†] As a result of changes to reporting boundaries for SA Water, the 2012–13 median typical bill utilises the data from metropolitan Adelaide while the 2013–14 figure utilises whole of SA Water data.

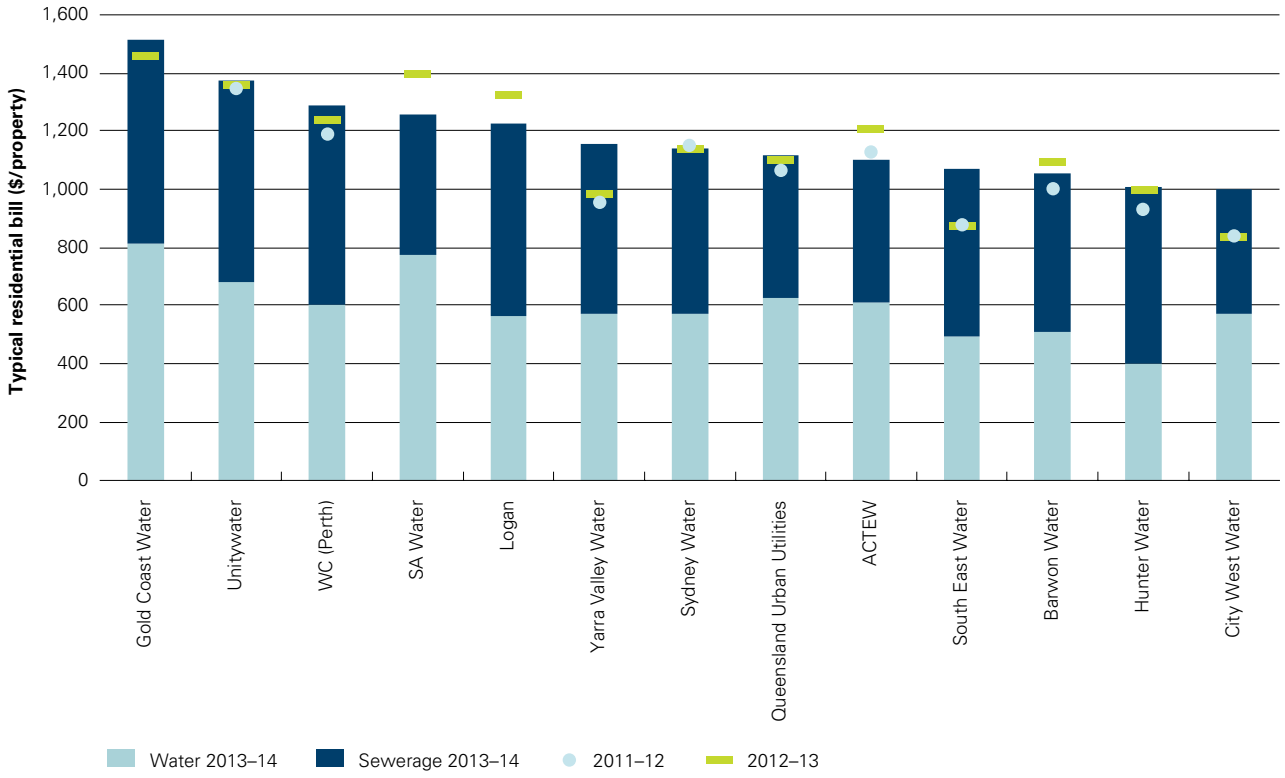

Figure 4.2 P3 and P6, 2011–12 to 2013–14, for utilities with 100,000+ connected properties

50,000–100,000 group

The average increase in the typical bill for this group was 1% in real terms, while the median typical bill increased by 3% to $1,232 (Table 4.3). Overall, six utilities reported increases while five reported modest reductions in typical bills.

Gippsland Water reported the largest percentage decrease in the typical residential bill. The 4% reduction reflected a pricing drop in line with the ESCV's price determination (2013b) and a small reduction in the average volume of water supplied per property.

Table 4.3 P3 and P6, 2008–09 to 2012–13 ($), for utilities with 50,000–100,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Coliban Water	862	943	1,016	1,093	1,234	13%
Gosford	922	933	953	1,009	1,051	4%
Townsville	1,407	1,325	1,386	1,419	1,473	4%
Toowoomba			899	1,268	1,303	3%
Western Water	900	930	1,005	1,003	1,026	2%
Central Highlands Water	1,054	1,083	1,151	1,201	1,218	1%
Cairns	1,160	1,157	1,202	1,233	1,232	0%
Goulburn Valley Water	724	712	798	887	869	–2%
P&W (Darwin)	1,083	1,199	1,490	1,825	1,784	–2%
Wyong	910	933	953	1,001	976	–3%
Gippsland Water	1,163	1,180	1,246	1,295	1,242	–4%

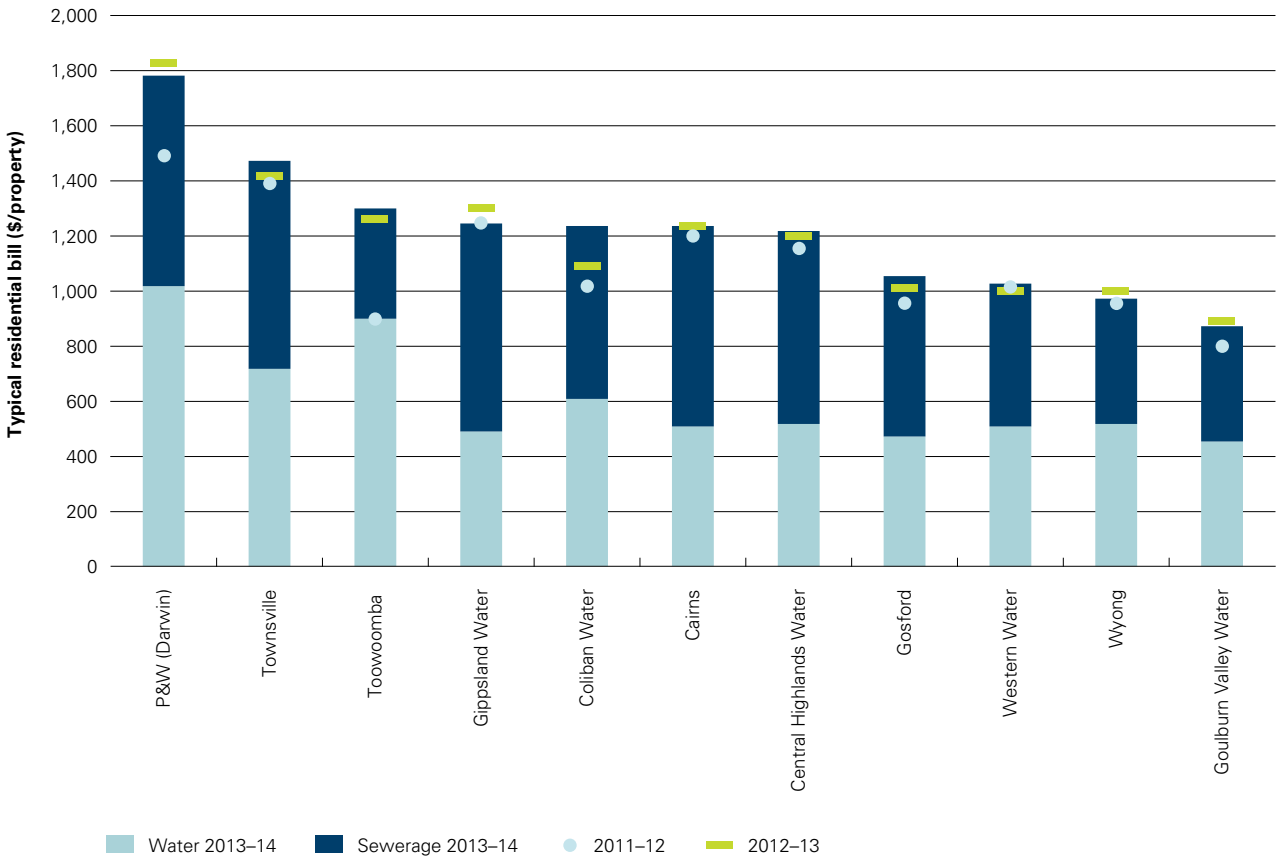

Figure 4.3 P3 and P6, 2011–12 to 2013–14, for utilities with 50,000–100,000 connected properties

20,000–50,000 group

In this group, 14 utilities reported an increase in the typical residential bill while five reported decreases. This weighting towards modest increases saw an average 2% increase in the typical residential bill along with a 2% increase in the median typical bill, rising $28 dollars in real terms to $1,254 (Table 4.4).

Clarence Valley and Mackay Water both reported the largest percentage increases since 2012–13, with increases of 8% each in 2013–14. Notably, this was the first significant increase in the typical residential bill for Mackay Water since 2010–11 and was driven by price increases. In contrast, reported data suggests Clarence Valley's increase was driven by a combination of price increases and a growth in average residential water volume supplied. Wannon Water reported the largest percentage decrease (5%) in the typical residential bill, which was driven by a strong price reduction in line with the ESCV's price determination (2013c).

Table 4.4 P3 and P6, 2008–09 to 2012–13 ($), for utilities with 20,000–50,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Mackay Water	1,208	1,389	1,391	1,391	1,506	8%
Clarence Valley	1,083	1,090	1,135	1,241	1,334	8%
Fitzroy River Water	1,117	946	1,000	1,032	1,106	7%
Tweed	989	1,021	1,081	1,171	1,244	6%
Albury	700	698	728	865	910	5%
Wide Bay Water		1,359	1,356	1,403	1,458	4%
Riverina Water (W)	403	304	361	515	532	3%
Tamworth	1,256	1,236	1,256	1,336	1,376	3%
WC (Mandurah)	1,166	1,203	1,252	1,300	1,334	3%
Port Macquarie Hastings	1,184	1,139	1,164	1,226	1,254	2%
Lower Murray Water	797	743	809	854	872	2%
Coffs Harbour	1,328	1,269	1,281	1,330	1,352	2%
GWMWater	1,042	1,018	1,152	1,244	1,262	1%
Shoalhaven	929	954	965	1,017	1,031	1%
MidCoast Water	1,382	1,394	1,434	1,491	1,485	0%
Wagga Wagga (S)	421	436	456	446	434	–3%
North East Water	795	790	844	947	911	–4%
East Gippsland Water	972	1,002	1,069	1,166	1,115	–4%
Wannon Water	920	970	1,096	1,195	1,140	–5%

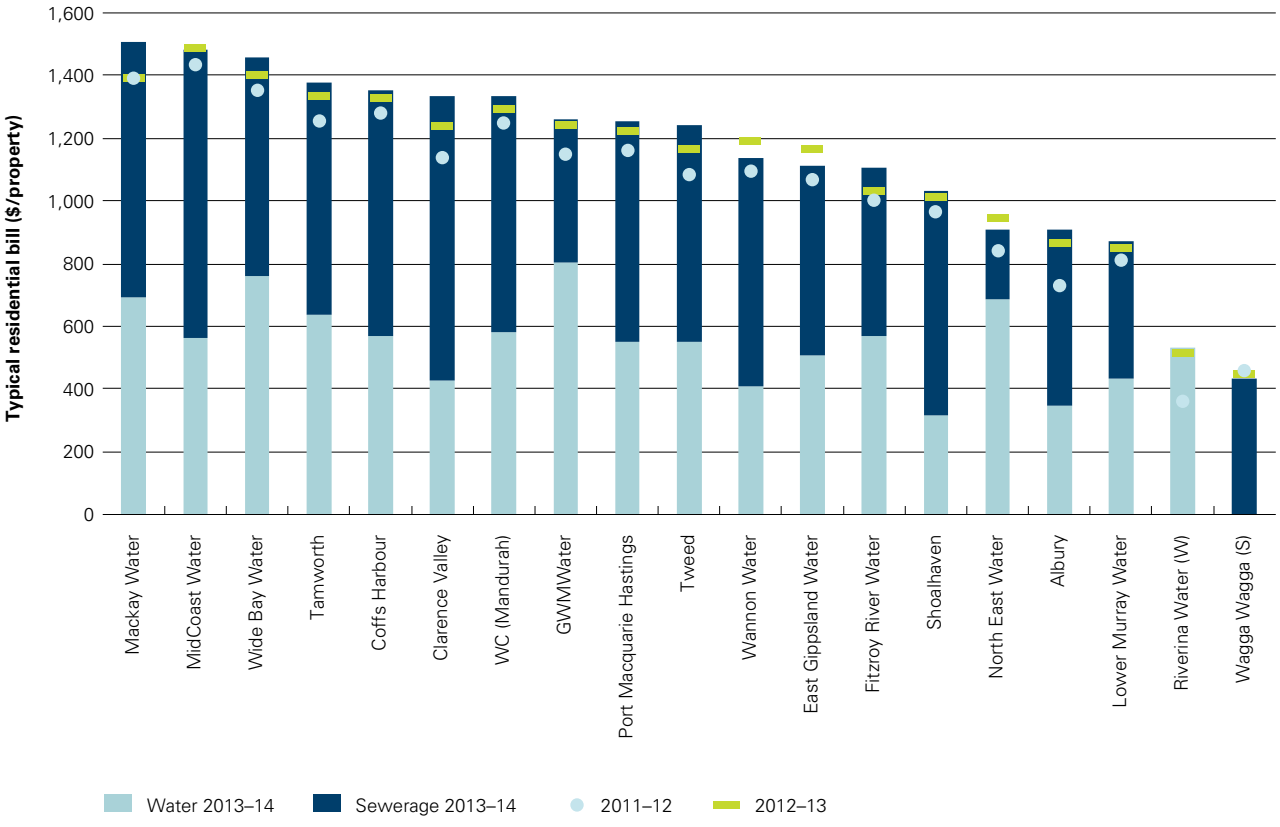

Figure 4.4 P3 and P6, 2011–12 to 2013–14, for utilities with 20,000–50,000 connected properties

10,000–20,000 group

Of the 20 utilities providing both water and sewerage services in this group, 15 reported increases in their typical bill while four reported decreases, and one (Gympie) reported typical bill data for the first time (Table 4.5).

Across this group, the typical bill rose by an average of just under 4% and the median bill increased $51 to $1,303, an increase of almost 4%.

Aqwest (22%), Goldenfields Water (R) (9%) and Queanbeyan (9%), reported the largest increases in typical residential bills. With the exception of Goldenfields, which recorded an 8% growth in average residential supply volume, these increases can be attributed to price increases.

Table 4.5 P3 and P6, 2008–09 to 2012–13 ($), for utilities with 10,000–20,000 connected properties[1]

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Aqwest–Bunbury (W)	293	305	309	329	401	22%
Goldenfields Water (R)	570	430	540	677	738	9%
Queanbeyan	1,089	1,086	1,097	1,129	1,229	9%
Ballina	943	1,008	1,118	1,184	1,283	8%
Busselton (W)	391	394	409	433	469	8%
Eurobodalla	1,321	1,298	1,310	1,365	1,475	8%
Lismore	1,102	1,159	1,222	1,260	1,344	7%
Kempsey	1,183	1,173	1,195	1,233	1,303	6%
Goulburn Mulwaree	1,143	1,249	1,274	1,308	1,377	5%
WC (Albany)	1,172	1,180	1,226	1,246	1,303	5%
Wingecarribee	1,000	974	1,021	1,133	1,185	5%
WC (Busselton) (S)				704	731	4%
WC (Bunbury) (S)	632	644	668	697	721	3%
Orange	706	813	835	878	905	3%
Dubbo	1,038	1,200	1,207	1,444	1,488	3%
WC (Geraldton)	559[1]	1,350	1,402	1,464	1,509	3%
WC (Australind-Eaton)			1,463	1,537	1,580	3%
Byron	1,436	1,349	1,482	1,568	1,610	3%
P&W (Alice Springs)	1,162	1,197	1,495	1,890	1,892	0%
Bega Valley	1,627	1,554	1,539	1,600	1,601	0%
Westernport Water	978	998	1,038	1,070	1,064	–1%
Bathurst	931	818	826	972	959	–1%
Essential Energy	1,007	1,001	1,111	1,252	1,220	–3%
South Gippsland Water	961	974	1,007	1,030	992	–4%
WC (Kal–Boulder) (W)	577	672	655	798	712	–11%
Gympie					1,162	
Kal–Boulder (S)	410	364	445		429	

Table notes

[1] In 2010–11, Water Corporation (Geraldton) began providing both water and sewerage services; prior to 2010–11 it provided only water services.

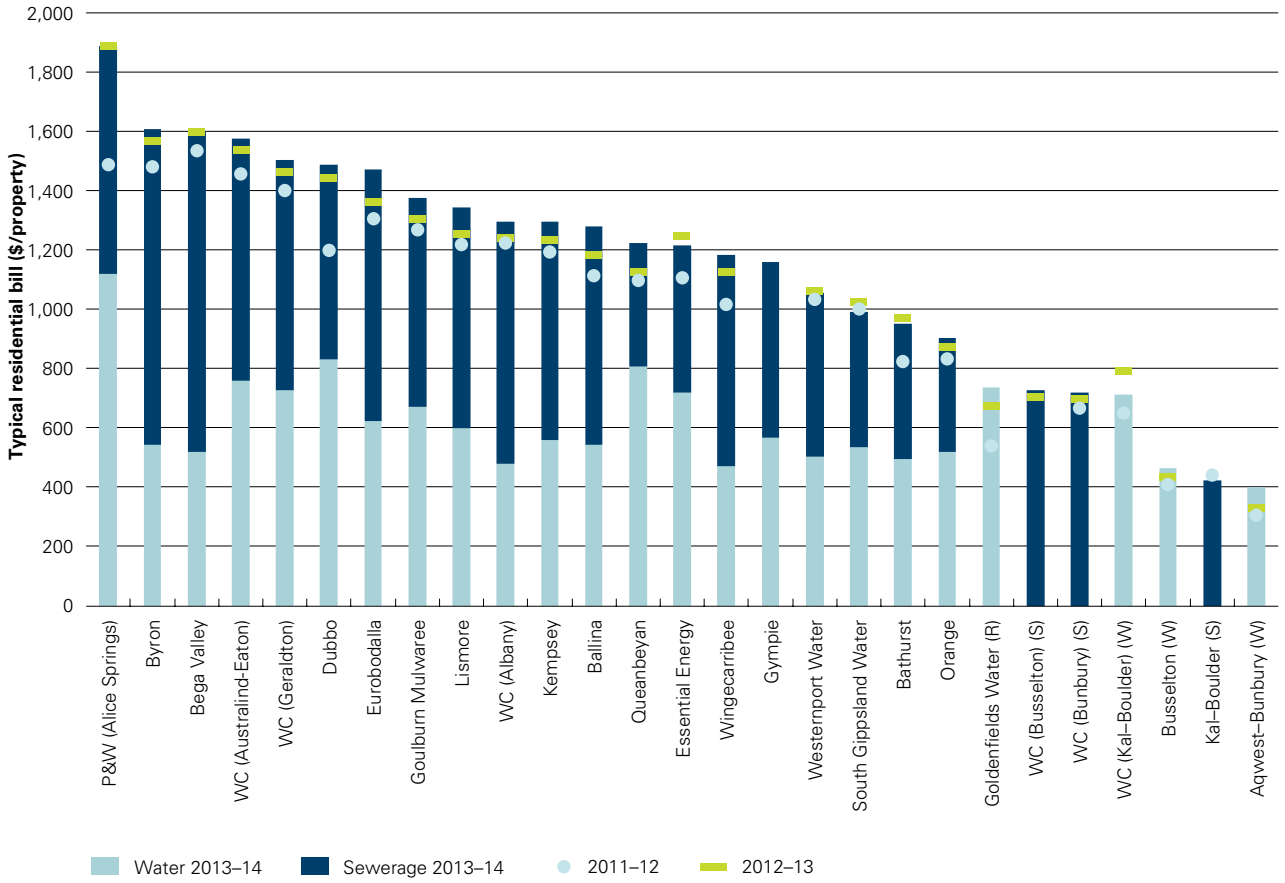

Figure 4.5 P3 and P6, 2011–12 to 2013–14, for utilities with 10,000–20,000 connected properties

4.2 P2—Annual bill based on 200kL—water ($) and P5—Annual bill based on 200kL—sewerage ($)

4.2.1 Introduction

These indicators are similar to the indicators presented in the preceding section (4.1); however, they remove the impact of differences in the volumes of residential water supplied to the customers of different utilities. For these indicators, all utilities report the annual bill for a hypothetical residential customer using 200kL per year.

These indicators aid comparisons between utilities' annual bills (for the particular usage volume of 200kL) and improve the transparency of price increases; however, the typical residential bill (indicators P3 and P6) remains the best guide to the impact of pricing on a utility's customers, as it is based on the typical bill paid by those customers.

The median bill based on a usage of 200kL rose by just under 4% nationally in real terms in 2013–14 (compared with 6% in 2012–13), taking the median bill for 2013–14 to $1,280. Median 200kL bills rose across all size groups, with the largest increases occurring in the 100,000+ and 50,000–100,000 groups.

Table 4.6 Overview of results: P2 and P5, based on 200kL/a, ($)[1]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	1,657 Logan	1,049 Hunter Water	8	5	1,185[†]	1,267[†]	7%
50,000–100,000 connected properties	1,473 Townsville	797 Goulburn Valley Water	8	3	1,170	1,256	7%
20,000–50,000 connected properties	1,614 MidCoast Water	712 Lower Murray Water	12	5	1,235	1,258	2%
10,000–20,000 connected properties	1,760 Bega Valley	914 Bathurst	16	3	1,277	1 309	2%
All size groups (national)	1,760 Bega Valley	712 Lower Murray Water	45	15	1,229[†]	1,280[†]	4%

Table notes

[1] The 200kL residential bill is calculated using data from all utilities who reported data for P2 and P5 in both 2012–13 and 2013–14

[†] As a result of changes to reporting boundaries for SA Water, the 2012–13 200kL bill uses the data from metropolitan Adelaide while the 2013–14 figure uses whole of SA Water data.

4.3 Results and analysis

100,000+ size group

In this group, eight utilities reported increases in standardised bills, while five reported decreases (Table 4.7). Following a price freeze in 2012–13 (ESCV 2012: 2), which resulted in minor reductions of standardised bills, the three Victorian utilities in this group reported significant increases in 2013–14. South East Water, Yarra Valley Water, and City West Water reported increases of 23%, 23%, and 20% respectively. ACTEW reported the largest decrease in its standardised bill, with a decrease of almost 10% driven by the ACT's Independent Competition and Regulatory Commission's (ICRC) price decrease (ICRC 2013).

Table 4.7 P2 and P5, 2009–10 to 2013–14 ($), for utilities with 100,000+ connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
South East Water	841	967	1,074	1,049	1,291	23%
City West Water	810	911	1,012	989	1,213	23%
Yarra Valley Water	869	1,008	1,157	1,136	1,366	20%
Logan	1,229			1,526	1,657	9%
Unitywater		1,353	1,420	1,445	1,549	7%
WC (Perth)	1,005	1,047	1,104	1,150	1,188	3%
Gold Coast Water	1,280			1,586	1,615	2%
Queensland Urban Utilities		1,181	1,223	1,251	1,267	1%
Hunter Water	941	950	1,004	1,054	1,049	0%
Sydney Water	1,082	1,123	1,161	1,146	1,130	–1%
Barwon Water	953	1,018	1,100	1,185	1,164	–2%
SA Water				1,424†	1,329†	–7%
ACTEW	1,068	1,084	1,174	1,219	1,102	–10%

Table notes

† As a result of changes to reporting boundaries for SA Water the 2012–13 median typical bill utilises the data from metropolitan Adelaide while the 2013–14 figure utilises whole of SA Water data.

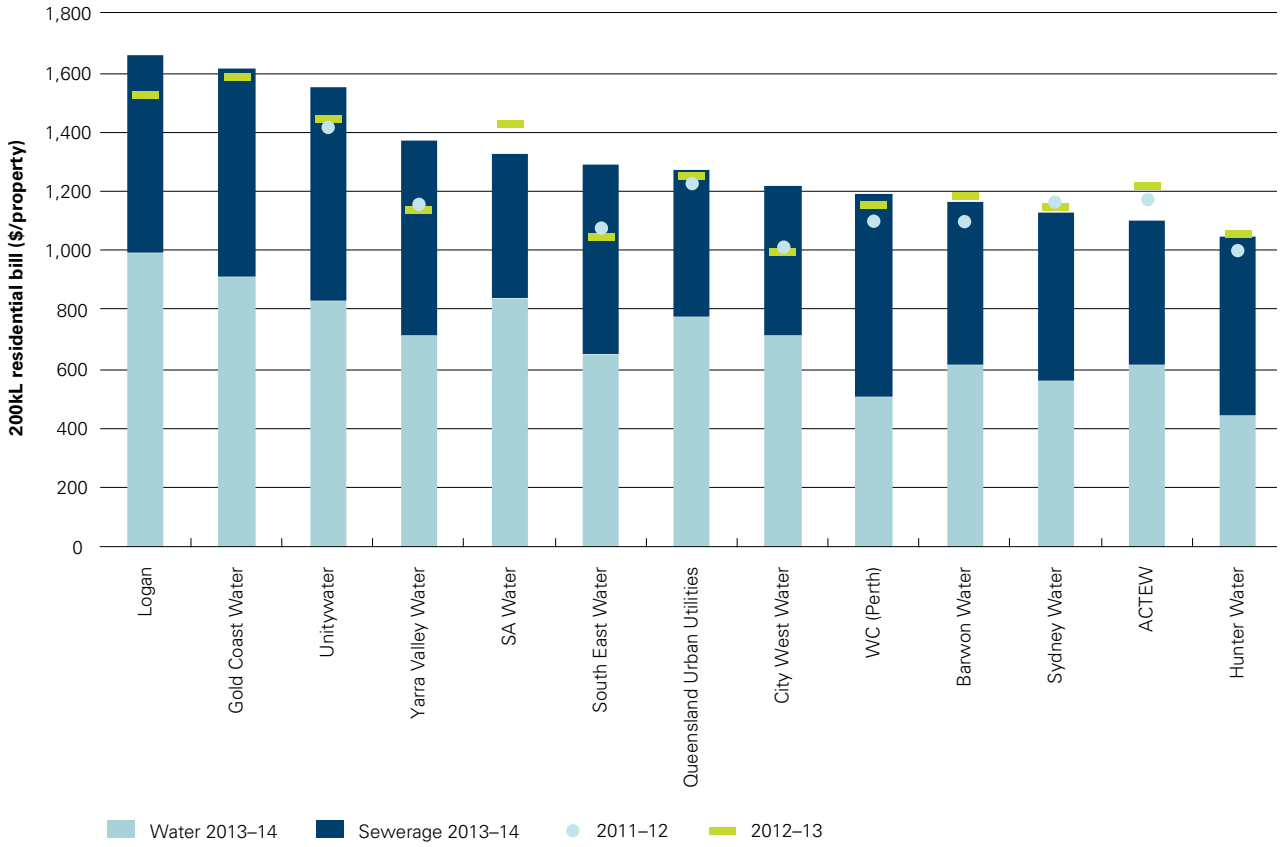

Figure 4.6 P2 and P5, 2009–10 to 2013–14 ($), for utilities with 100,000+ connected properties

50,000–100,000 size group

The median standardised bill for this group increased from $1,170 to $1,256, a rise of 7% (Table 4.6). Of the 11 utilities in the group, eight reported bill increases while two utilities reported slight decreases (Table 4.8).

Gippsland Water and Goulburn Valley Water reported slight decreases, with their 200kL bills falling 3% and 1% respectively. Results for Central Highland Water remained constant over the 2012–13 and 2013–14 reporting years. Townsville reported the highest 200kL bill for the group, up 4% from 2012–13 to $1,473.

Table 4.8 P2 and P5, 2009–10 to 2013–14 ($), for utilities with 50,000–100,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Coliban Water	927	1,065	1,092	1,106	1,256	14%
Townsville	1,407	1,313	1,386	1,419	1,473	4%
Gosford	1,028	1,036	1,068	1,103	1,136	3%
P&W (Darwin)	825	961	1,127	1,375	1,407	2%
Western Water	953	999	1,062	1,037	1,059	2%
Wyong	999	1,018	1,055	1,098	1,120	2%
Cairns	1,099	1,125	1,155	1,170	1,185	1%
Toowoomba			1,188	1,419	1,430	1%
Central Highlands Water	1,184	1,219	1,270	1,291	1,290	<–1%
Goulburn Valley Water	674	713	764	804	797	–1%
Gippsland Water	1,199	1,248	1,316	1,342	1,297	–3%

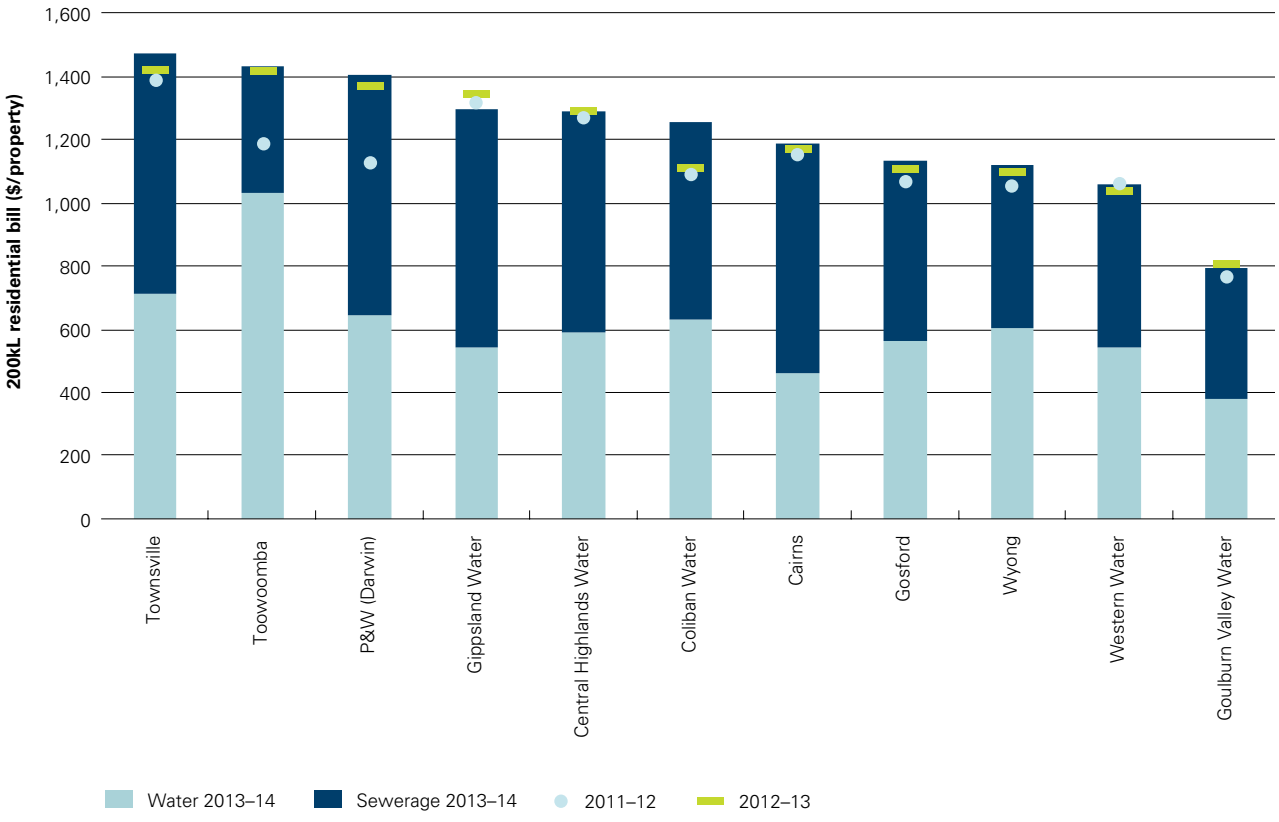

Figure 4.7 P2 and P5, 2011–12 to 2013–14 ($), for utilities with 50,000–100,000 connected properties

20,000–50,000 group

Across this group, the median 200kL bill for utilities providing both water and sewerage services rose by just under $23 to $1,258. This change was the result of an average increase in standardised bills across these utilities of 2% (Table 4.6).

This group had the largest variation in standardised bills, with 13 utilities reporting increases.

The largest increase was reported by Albury, which recorded an 11% increase in its standardised bill. This increase was a result of rising sewerage and water supply changes to fund infrastructure improvements and maintenance of ageing infrastructure.

Riverina Water (which supplies water only) reported a 9% increase in its standardised bill. This rise, attributed to the construction of a replacement water treatment plant in Wagga Wagga (Riverina Water 2013: 16), came on the back of a 15% rise in 2012–13. If considering only the water component of the 200kL bill, however, Riverina Water remained one of the lowest charging utilities in the group, ranking third lowest after Albury ($308) and Lower Murray ($272).

Table 4.9 P2 and P5, 2009–10 to 2013–14 ($), for utilities with 20,000–50,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Albury	688	712	725	784	869	11%
Riverina Water (W)	279	280	305	349	382	9%
Clarence Valley	1,126	1,179	1,233	1,324	1,399	6%
Tweed	1,029	1,079	1,153	1,220	1,279	5%
GWMWater	1,042	1,074	1,139	1,187	1,220	3%
Fitzroy River Water	896	912	923	956	981	3%
Port Macquarie Hastings	1,259	1,253	1,290	1,326	1,359	2%
WC (Mandurah)	1,099	1,134	1,189	1,230	1,258	2%
Mackay Water	1,137	1,271	1,287	1,344	1,372	2%
Lower Murray Water	688	690	700	700	712	2%
Shoalhaven	1,008	1,054	1,075	1,098	1,115	2%
Tamworth	1,190	1,216	1,251	1,252	1,256	0%
Coffs Harbour	1,361	1,358	1,390	1,429	1,432	0%
Wide Bay Water		1,359	1,403	1,454	1,453	0%
North East Water	772	862	892	909	897	–1%
MidCoast Water	1,485	1,537	1,606	1,637	1,614	–1%
East Gippsland Water	1,018	1,083	1,167	1,235	1,207	–2%
Wagga Wagga (S)	421	436	456	446	434	–3%
Wannon Water	993	1,083	1,195	1,294	1,260	–3%

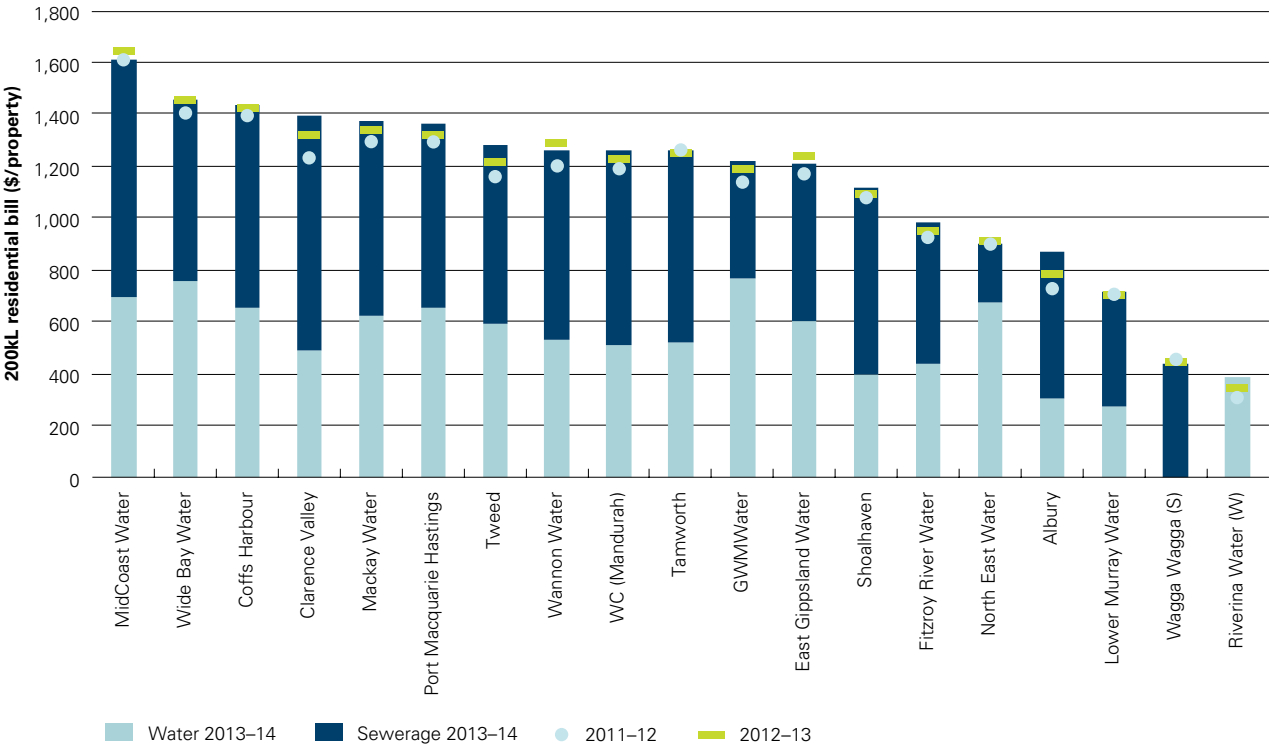

Figure 4.8 P2 and P5, 2011–12 to 2013–14 ($), for utilities with 20,000–50,000 connected properties

10,000–20,000 group

With the exception of Gympie, the median standardised bill for utilities providing both water and sewerage services in this group rose by just under $32 to $1,309 in 2013–14. This change resulted from an average increase in standardised bills across these utilities of 2% (Table 4.10). Gympie reported data for the first time in 2013–14, hence earlier years' figures were not available for comparison.

In 2012–13, Power and Water (Alice Springs) reported a significant increase of 22%, to its 200kL bill, as a result of servicing debt (Power and Water Corporation 2013), compared with a small rise of 2% in 2013–14.

Busselton and Aqwest–Bunbury Water (both water supply only utilities) reported significant increases in standardised bills, recording growth of 21% and 17% respectively.

Table 4.10 P2 and P5, 2009–10 to 2013–14 ($), for utilities with 10,000–20,000 connected properties[1]

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Busselton (W)	308	316	330	350	425	21%
Aqwest–Bunbury (W)	231	241	255	273	319	17%
Eurobodalla	1,504	1,533	1,603	1,624	1,752	8%
Queanbeyan	1,088	1,114	1,147	1,214	1,309	8%
Dubbo	904	1,095	1,127	1,162	1,228	6%
Ballina	961	1,071	1,177	1,225	1,294	6%
Kempsey	1,213	1,242	1,295	1,319	1,390	5%
Bathurst	858	843	854	872	914	5%
Lismore	1,169	1,271	1,364	1,401	1,467	5%
WC (Geraldton)	391[1]	1,134	1,164	1,228	1,282	4%
Goulburn Mulwaree	1,250	1,364	1,383	1,412	1,473	4%
Orange	796	886	906	915	953	4%
WC (Busselton) (S)				704	731	4%
WC (Bunbury) (S)	632	644	668	697	721	3%
WC (Australind-Eaton)			1,242	1,277	1,320	3%
WC (Kal–Boulder) (W)	391	425	465	489	505	3%
WC (Albany)	1,161	1,193	1,245	1,283	1,325	3%
Wingecarribee	1,014	1,033	1,090	1,156	1,185	2%
P&W (Alice Springs)	825	961	1,127	1,375	1,407	2%
Goldenfields Water (R)	475	474	542	557	569	2%
Byron	1,456	1,488	1,601	1,674	1,694	1%
Bega Valley	1,707	1,721	1,705	1,748	1,760	1%
Westernport Water	1,190	1,218	1,261	1,284	1,286	0%
Essential Energy	915	976	1,054	1,114	1,085	–3%
South Gippsland Water	1,075	1,103	1,145	1,167	1,129	–3%
Gympie					1,120	

Table notes

[1] In 2010–11, Water Corporation (Geraldton) began providing both water and sewerage services, prior to 2010–11 it provided only water services.

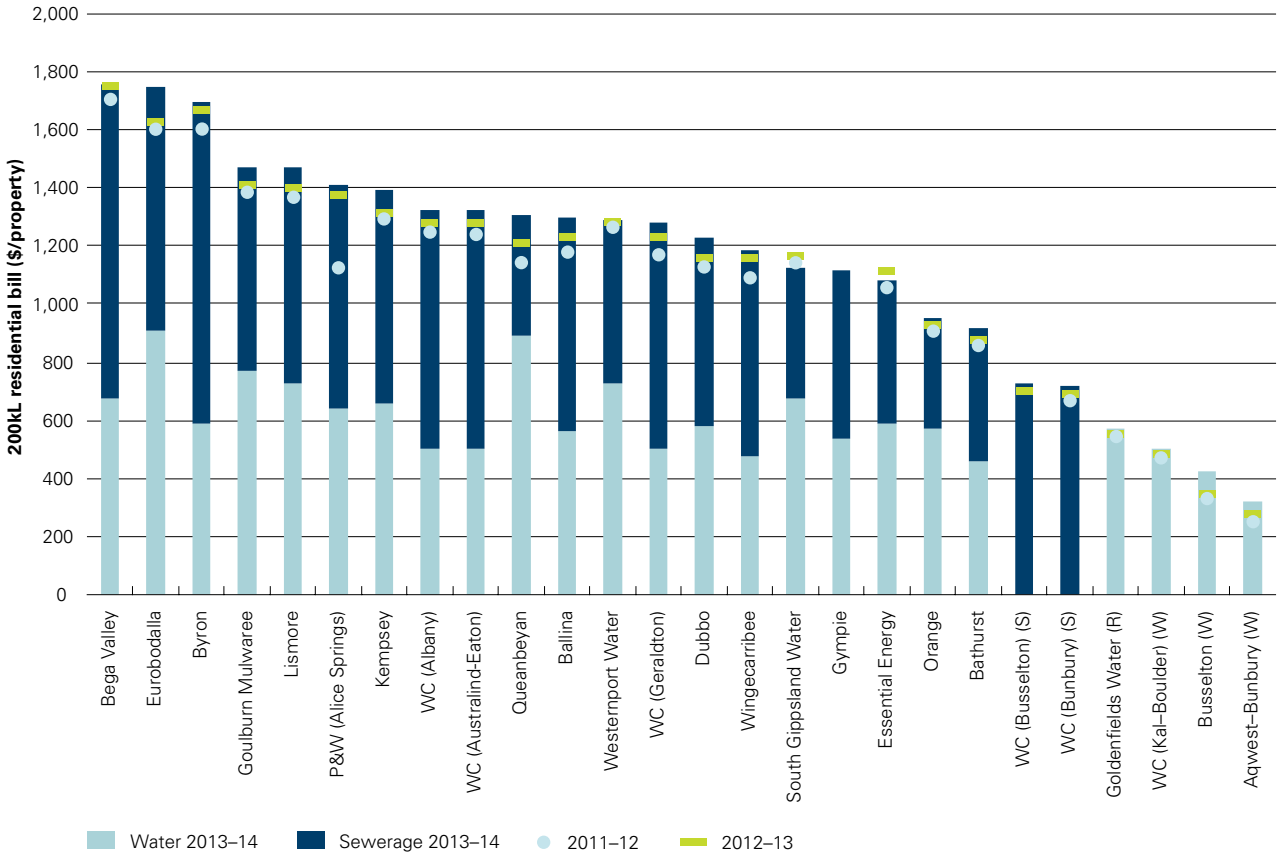

Figure 4.9 P2 and P5, 2011–12 to 2013–14 ($), for utilities with 10,000–20,000 connected properties

5 Finance

5.1 F14—Total water supply capital expenditure ($000s), F15—Total sewerage capital expenditure ($000s), and F16—Total capital expenditure for water and sewerage ($000s)

5.1.1 Introduction

This chapter presents total capital expenditure in real dollar terms. It provides the total level of capital investment by each utility and an indication of the size of the utility and its capital responsibilities.

It is difficult to compare utilities for total capital expenditure because the figures are not normalised. Further analysis for individual utilities is in section 5.2, which indicates the level of investment by each utility relative to its customer base.

A number of factors influence capital expenditure, many of which also affect operating expenditure (see section 5.3). In addition, capital expenditure programmes are influenced by the age of the current infrastructure and the stage of the each asset's lifecycle. An individual utility's capital expenditure will be 'lumpy' over time, as many projects are 'one-off' and can take several years to complete.

In 2013–14, total water and sewerage capital expenditure declined for the fifth consecutive year to $2.5 billion, falling from a peak of $8 billion in 2008–09 (Figure 5.1). Of the 60 utilities reporting capital expenditure in 2012–13 and 2013–14, 44 utilities reported a decrease (Table 5.1). These reductions translated into a $910 million decrease. This reflects the winding down and completion of a number of major water and sewerage construction and development projects.

Table 5.1 Overview of results: F16, 2012–13 and 2013–14 ($000)[1]

Size group	Range ($000)		Number of utilities with increase/decrease from 2012–13		Total ($000)		% change in the total from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	586,511 Sydney Water	43,916 Gold Coast Water	2	11	3,154,971[†,‡]	2,374,300[†,‡]	–25%
50,000–100,000 connected properties	44,955 Gippsland Water	14,100 Central Highlands Water	3	8	397,197	321,293	–19%
20,000–50,000 connected properties	47,086 Mackay Water	5,745 Albury	6	11	318,331	289,611	–9%
10,000–20,000 connected properties	28,117 Orange	1,951 Byron	5	14	163,397	138,967	–15%
All size groups (national)	586,511 Sydney Water	1,951 Byron	16	44	4,033,897[†,‡]	3,1240,171[†,‡]	–23%

Table notes

[1] Total water and sewerage capital expenditure ($000) is calculated using for all utilities who reported data for F14 and F15 in both 2012–13 and 2013–14.

[†] As a result of the amalgamation of the previous regional corporations to form TasWater, the 2012–13 total water and sewerage capital expenditure ($000) uses combined data for Southern Water, Ben Lomond Water, and Cradle Mountain Water while the 2013–14 figure uses whole of TasWater data.

[‡] As a result of changes to reporting boundaries for SA Water, the 2012–13 total water and sewerage capital expenditure ($000) uses data for metropolitan Adelaide and country SA while the 2013–14 figure uses whole of SA Water data.

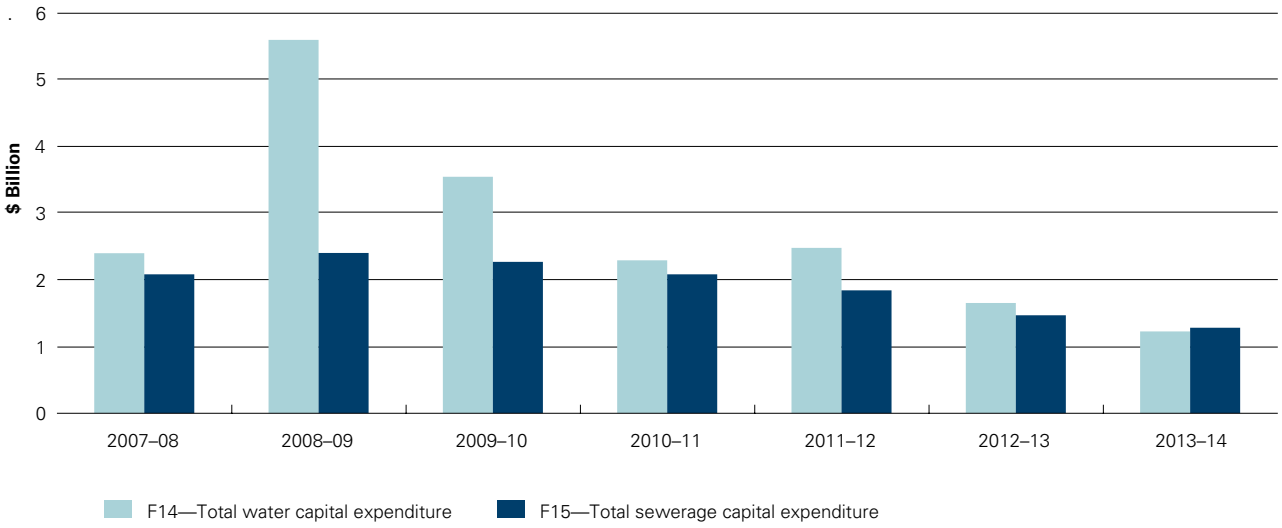

Figure 5.1 Summary of results: F14 and F15 capital expenditure, 2008–09 to 2013–14
Note: Total is for utilities that reported all seven years

5.1.2 Results and analysis

100,000+ group

Capital expenditure in 2013–14 within this group decreased for the third consecutive year following the peaks of 2008–09 and 2009–10. As a result, expenditure has more than halved from these peaks, with the 2013–14 results being the lowest in the entire National Performance Report time series.

With the exception of South East Water, Hunter Water, and Unitywater, all utilities in the 100,000+ group reported significant decreases in capital expenditure across their water and sewerage businesses. Both South East Water and Hunter Water reported increases (22% and 21% respectively), while Unitywater reported a modest 5% decrease (Table 5.2).

Completion of a number of major projects, including the enlarged Cotter Dam and the Murrumbidgee–Googong Water Transfer project, has seen a second significant fall in ACTEW's capital expenditure. It decreased 59% in 2013–14 off the back of a 39% decrease in 2012–13. In Western Australia, completion of works associated with the Southern Seawater Desalination Plant has seen a 48% reduction in the Water Corporation's capital expenditure for 2013–14. In Victoria, completion of pipe construction and storage tanks associated with the West Werribee Dual Water Supply Scheme have contributed to a 45% decrease in City West Water's capital expenditure (City West Water 2014: 22).

South East Water's construction of one of Australia's largest pressure sewer systems along with upgrades to its existing water and sewer mains are the key drivers of its reported 22% increase in capital expenditure (South East Water 2014: 3).

Strong investment in water supply by Hunter Water saw a reported 21% growth in its total water and sewerage capital expenditure. This was despite a 46% decrease in sewerage-related capital expenditure following the completion of a number of major projects (including the Newcastle wet weather system upgrade, Williamtown/Tomago wastewater transfer system, and two wastewater treatment plants).

Table 5.2 F16, 2009–10 to 2013–14 ($000), for utilities with 100,000+ connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
South East Water	156,319	207,035	182,372	174,005	212,542	22%
Hunter Water	177,208	172,087	120,289	90,091	108,904	21%
Unitywater		156,437	144,793	148,857	141,298	–5%
TasWater				80,193†	74,161†	–8%
Yarra Valley Water	303,260	235,200	242,444	226,762	197,020	–13%
Sydney Water	1,391,482	762,776	757,916	683,289	586,511	–14%
Logan	59,797			69,943	58,699	–16%
Gold Coast Water	141,867			60,883	43,916	–28%
Queensland Urban Utilities		211,205	272,430	272,275	195,371	–28%
SA Water				398,004‡	265,771‡	–33%
Barwon Water	103,965	190,553	238,994	158,225	88,221	–44%
City West Water	127,642	122,373	120,290	155,576	85,345	–45%
WC (Perth)	912,813	688,815	540,938	495,975	258,141	–48%
ACTEW	201,625	252,441	226,951	140,896	58,400	–59%

Table notes

† As a result of the amalgamation of the previous regional corporations to form TasWater, the 2012–13 total water and sewerage capital expenditure ($ 000) uses combined data for Southern Water, Ben Lomond Water, and Cradle Mountain Water, while the 2013–14 figure uses whole of TasWater data.

‡ As a result of changes to reporting boundaries for SA Water, the 2012–13 total water and sewerage capital expenditure ($000) uses data for metropolitan Adelaide and country SA while the 2013–14 figure uses whole of SA Water data.

50,000–100,000 group

Nationally, this group saw an average 8% reduction in total capital expenditure in 2013–14. Seven utilities reported significant reductions, three reported increases, and one (Wyong Council) remained largely constant (Table 5.3).

Power and Water (Darwin), Toowoomba, and Townsville reported the largest percentage decreases, recording reductions of 60%, 55%, and 41% respectively. While these reductions are largely associated with the completion of major asset construction, upgrade, and renewal projects, Power and Water's review of its capital investment programme saw a number of projects deferred where current capacity and future demand allowed (Power and Water 2013: 12). Major capital investment projects completed included Townsville's 41ML water reservoir at Douglas and Toowoomba's expansion of its Wetalla sewerage scheme.

Western Water's investment in a number of major infrastructure projects saw it record the most significant increase of the group. The Gisborne Recycled Water Scheme, completion of the Rosslynne Water Filtration Plant upgrade, and the construction of the Romsey–Lancefield water supply interconnection were key drivers of the reported 56% increase.

Table 5.3 F16, 2009–10 to 2013–14 ($000), for utilities with 50,000–100,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Western Water	34,126	28,412	17,561	16,738	26,153	56%
Cairns	64,818	27,464	43,432	29,058	35,967	24%
Goulburn Valley Water	34,108	20,433	25,851	18,679	22,219	19%
Wyong	68,237	38,746	93,415	26,369	26,359	0%
Coliban Water	39,741	27,991	23,391	14,317	14,100	–2%
Central Highlands Water	30,035	38,427	39,110	42,292	41,378	–2%
Gosford	64,650	73,495	45,149	46,890	40,543	–14%
Gippsland Water	37,876	53,356	38,748	53,104	44,955	–15%
Townsville			52,129	41,787	24,704	–41%
Toowoomba				44,291	19,743	–55%
P&W (Darwin)	63,837	51,122	57,102	63,673	25,172	–60%

20,000–50,000 group

Despite significant variation in the results for this group, the average capital expenditure in real terms remained consistent with 2012–13 (Table 5.4) while the median was down 9%.

Of the eight utilities reporting reductions in 2013–14, MidCoast Water again recorded the largest decrease in expenditure, with a reduction of 49% off the back of a 74% reduction in 2012–13. This decrease was driven in part by the completion of a $22 million recycled water programme to deliver water to Hawks Nest, Tuncurry, Bulahdelah, and Harrington (MidCoast Water 2014: 5).

Completion of reticulated sewer systems servicing the townships of Tungamah, Milawa, Oxley, and Glenrowan drove a 47% decrease in North East Water's capital expenditure (North East Water 2014: 18). This drop comes after a 162% increase in 2012–13.

Of the utilities reporting growth in expenditure, Tamworth and East Gippsland Water reported the largest increases in this group. A 59% increase for Tamworth was driven by upgrade works at the Westdale Wastewater Treatment Plant and the renewal and replacement of infrastructure associated with pumping stations (Tamworth 2014: 67). The 49% increase reported by East Gippsland Water was attributed to the completion of a major upgrade to a key section of its water supply pipeline into Bairnsdale (East Gippsland Water 2014: 2) and Stage 1 of an upgrade to the Metung Wastewater Treatment Plant (East Gippsland Water 2014: 3).

Despite a 47% reduction in water supply capital expenditure resulting from the completion of the Southern Seawater Desalination Plant, a 92% increase in sewerage expenditure saw Water Corporation (Mandurah) report a modest 5% reduction in total expenditure for the year.

Table 5.4 F16, 2009–10 to 2013–14 ($000), for utilities with 20,000–50,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Tamworth	57,923	32,575	10,612	13,003	20,631	59%
East Gippsland Water	23,897	12,818	11,157	6,650	9,889	49%
Wagga Wagga (S)	12,641	5,918	6,479	3,696	4,720	28%
Coffs Harbour	21,617	9,462	6,936	8,711	10,306	18%
GWMWater	6,447	9,488	16,284	14,130	15,876	12%
Shoalhaven	46,914	18,519	27,592	21,523	23,675	10%
Riverina Water (W)	7,379	9,228	6,282	5,674	6,180	9%
Lower Murray Water	45,516	12,655	10,804	9,410	9,587	2%
Mackay Water	40,748	50,209	45,437	47,173	47,086	0%
Wide Bay Water		16,891	27,109	18,144	17,705	–2%
Albury		4,677	2,569	5,941	5,745	–3%
Tweed	102,041	8,547	38,527	13,643	13,080	–4%
WC (Mandurah)	46,968	39,587	27,630	23,383	22,261	–5%
Fitzroy River Water	57,049	42,434	36,794	30,220	28,591	–5%
Clarence Valley	28,771	12,840	31,333	12,057	10,846	–10%
Wannon Water	35,229	12,144	28,309	22,069	14,814	–33%
Port Macquarie Hastings	23,122	19,162	13,487	13,889	8,906	–36%
North East Water	11,191	11,141	13,925	36,466	19,328	–47%
MidCoast Water	45,814	27,540	83,646	21,919	11,284	–49%

10,000–20,000 group

This group reported the largest variations in net change in capital expenditure. Across the group an average 34% (33% excluding single service utilities) growth in capital expenditure was reported. This average is, however, dominated by three very large increases reported by Queanbeyan, Water Corporation (Kal–Boulder), and Orange (Table 5.5).

Queanbeyan's increase in capital expenditure was driven by a major sewage treatment plant upgrade (Queanbeyan 2014: 59) and repairs to the Morisset St pump station (Queanbeyan 2014: 63). The significant cost of these works and a 2012–13 capital expenditure that was almost one quarter of the long-term average for the council, combined to yield a 687% increase.

Like Queanbeyan, a 269% increase in Orange's expenditure resulted from a combination of below long-term average expenditure in 2012–13 and increased expenditure on projects such as the Macquarie River pipeline (Orange 2014: 20).

Water Corporation (Kal–Boulder) reported the largest net change in expenditure of the single service utilities. Its 331% increase in expenditure was attributed to expenditure relating to the Mundaring Water Treatment Plant.

Table 5.5 F16, 2009–10 to 2013–14 ($000), for utilities with 10,000–20,000 connected properties[1]

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Queanbeyan	1,881	1,089	2,315	902	7,092	687%
WC (Kal–Boulder) (W)	47,299	39,678	24,288	20,325	87,504	331%
Orange	4,947	5,389	4,493	7,621	28,117	269%
Bega Valley	5,446	23,634	6,989	4,427	8,166	84%
WC (Albany)	6,147	12,622	10,218	6,068	8,029	32%
South Gippsland Water	13,602	9,451	12,682	7,544	9,843	30%
Eurobodalla	26,674	19,867	17,426	6,805	6,742	–1%
Bathurst	3,476	3,672	6,032	6,833	6,621	–3%
Busselton (W)	2,331	3,582	6,319	1,634	1,577	–3%
Kempsey	12,427	6,781	3,831	6,950	6,507	–6%
WC (Bunbury) (S)	7,676	4,212	5,326	10,169	9,029	–11%
Goulburn Mulwaree	6,556	35,254	13,683	4,417	3,843	–13%
P&W (Alice Springs)	12,131	9,061	10,245	11,727	9,692	–17%
Byron	31,432	6,198	1,450	2,518	1,951	–23%
WC (Busselton) (S)				23,215	17,939	–23%
Essential Energy	30,237	7,634	4,316	5,484	4,105	–25%
Aqwest–Bunbury (W)	7,459	3,650	4,136	3,877	2,819	–27%
WC (Geraldton)	21,371[1]	13,712	8,697	12,954	8,216	–37%
Dubbo	7,651	6,222	5,694	7,544	4,474	–41%
Lismore	7,942	6,560	12,223	9,032	4,946	–45%
WC (Australind-Eaton)			29,603	6,961	3,398	–51%
Kal–Boulder (S)	198	2,582	1,789	1,604	764	–52%
Ballina	8,932	16,554	32,161	28,393	10,894	–62%
Westernport Water	3,332	5,141	12,125	13,065	3,413	–74%
Wingecarribee	17,781	7,291	18,430	14,150	2,918	–79%
Gympie					6,458	

Table notes

[1] In 2010–11, Water Corporation (Geraldton) began providing both water and sewerage services; prior to 2010–11 it provided only water services.

5.2 F28—Water supply capital expenditure ($/property) and F29—Sewerage capital expenditure ($/property)

5.2.1 Introduction

This indicator reports the utilities' capital expenditure on a per property basis. It gives an indication of the level of investment by each utility relative to its customer base.

In 2013–14, the national median per property capital expenditure on water and sewerage services decreased by 19% (Table 5.6). This result reflects the percentage decreases reported by over two thirds of the utilities in the reporting year.

Table 5.6 Overview of results: F28 and F29 ($/property)[1]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	623	193	2	11	512†	360†	–30%
	Barwon Water	Gold Coast Water					
50,000–100,000 connected properties	764	235	3	8	557	478	–14%
	Gippsland Water	Central Highlands Water					
20,000– 50,000 connected properties	1,181	254	6	11	561	482	–14%
	Mackay Water	Albury					
10,000–20,000 connected properties	1,638	178	5	14	477	427	–10%
	Orange	Wingecarribee					
All size groups (national)	1,638	178	16	44	525†	427†	–19%
	Orange	Wingecarribee					

Table notes

[1] Total water and sewerage capital expenditure ($/property) is calculated using all utilities who reported data for F28 and F29 in both 2012–13 and 2013–14.

† As a result of changes to reporting boundaries for SA Water, the 2012–13 total water and sewerage capital expenditure ($/property) uses data for metropolitan Adelaide and country SA, while the 2013–14 figure uses whole of SA Water data.

5.2.2 Results and analysis

100,000+ group

Repeating the trend of 2012–13, only two utilities in this group reported increases in their capital expenditure on a per property basis in 2013–14. A 19% increase by South East Water was driven by a 31% growth ($60 per property) in sewerage-related capital expenditure but offset by an 11% ($8 per property) reduction in water capital expenditure, resulting in a net increase of $52 per property (Table 5.7).

ACTEW reported the largest percentage (60%) and dollar ($532) decreases per property, followed, on a percentage basis, by Water Corporation (Perth) (48%) and City West Water (47%). The decreases reported by ACTEW and Water Corporation (Perth) were the result of decreases in both water supply and sewerage capital expenditure, while City West Water's decrease was due to a 56% decrease in water capital expenditure.

Table 5.7 F28 and F29, 2009–10 to 2013–14 ($/property), for utilities with 100,000+ connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
South East Water	251	326	282	265	317	19%
Hunter Water	817	790	541	400	469	17%
Unitywater		626	563	568	529	–7%
Sydney Water	465	353	354	324	278	–14%
Yarra Valley Water	793	432	426	377	323	–14%
Logan	651			757	616	–19%
Gold Coast Water	645			265	193	–27%
Queensland Urban Utilities		406	511	512	360	–30%
SA Water				576†	390†	–32%
Barwon Water	799	1,433	1,754	1,136	623	–45%
City West Water	359	333	319	400	212	–47%
WC (Perth)	1,310	952	736	664	344	–48%
ACTEW	1,382	1,684	1,475	893	361	–60%

Table notes

† As a result of changes to reporting boundaries for SA Water the 2012–13 total water and sewerage capital expenditure ($/property) uses data for metropolitan Adelaide and country SA while the 2013–14 figure uses whole of SA Water data.

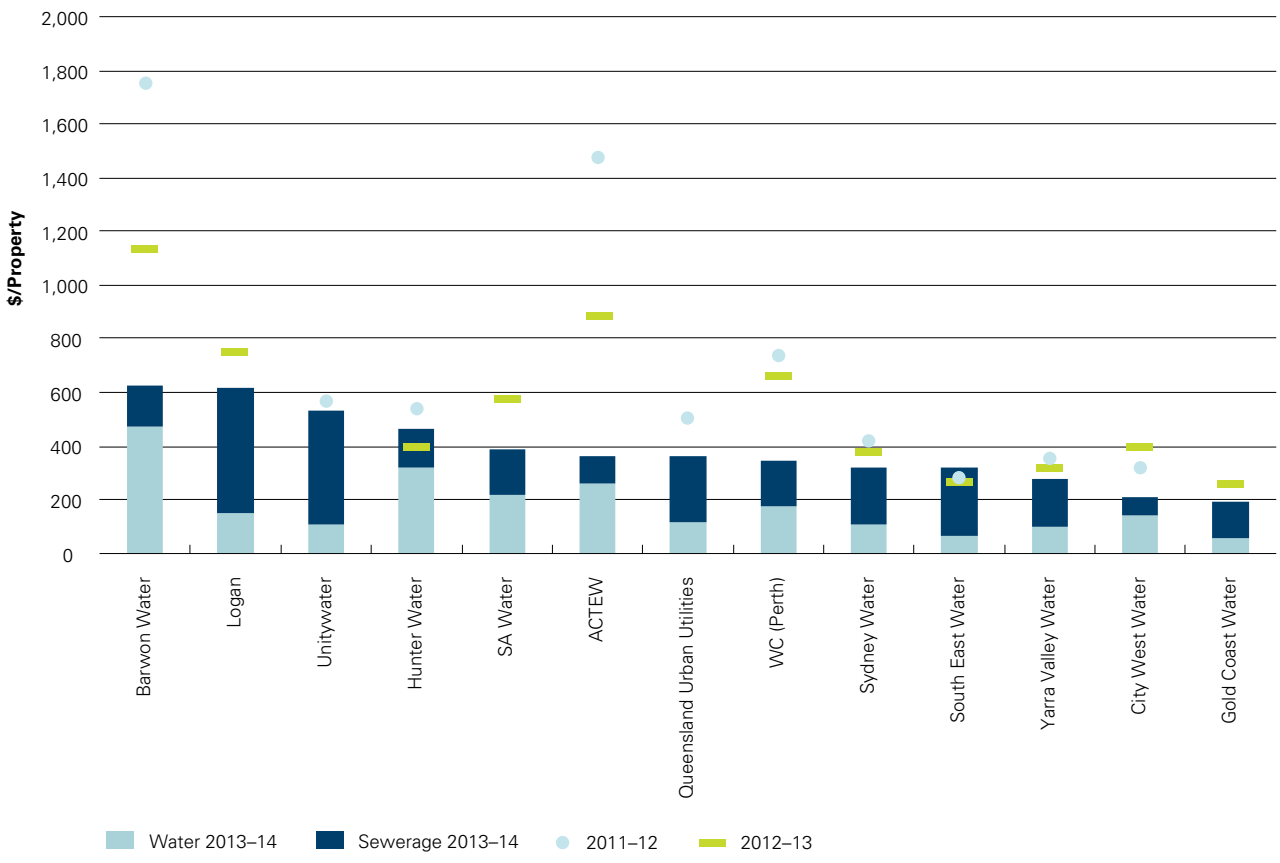

Figure 5.2 F28 and F29, 2011–12 to 2013–14 ($/property), for utilities with 100,000+ connected properties

50,000–100,000 group

In this group, eight utilities reported decreased capital expenditure. Power and Water (Darwin) reported the largest decrease on a percentage and dollar basis, recording a $778 reduction per property as a result of a significant decrease in water supply and sewerage capital expenditure (Table 5.8).

Three utilities reported increases in capital expenditure on a per property basis; the largest was reported by Western Water, which recorded a 51% growth due to increases in both water supply and sewerage capital expenditure.

Table 5.8 F28 and F29, 2009–10 to 2013–14 ($/property), for utilities with 50,000–100,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Western Water	732	579	348	327	492	51%
Cairns	872	375	569	382	521	37%
Goulburn Valley Water	669	395	491	359	422	17%
Wyong	1,143	644	1,544	439	431	–2%
Coliban Water	471	615	595	622	603	–3%
Central Highlands Water	667	490	404	254	235	–8%
Gosford	926	1,054	652	675	576	–15%
Gippsland Water	665	954	664	910	764	–16%
Townsville			744	557	335	–40%
Toowoomba				952	376	–61%
P&W (Darwin)	1,312	1,064	1,138	1,256	478	–62%

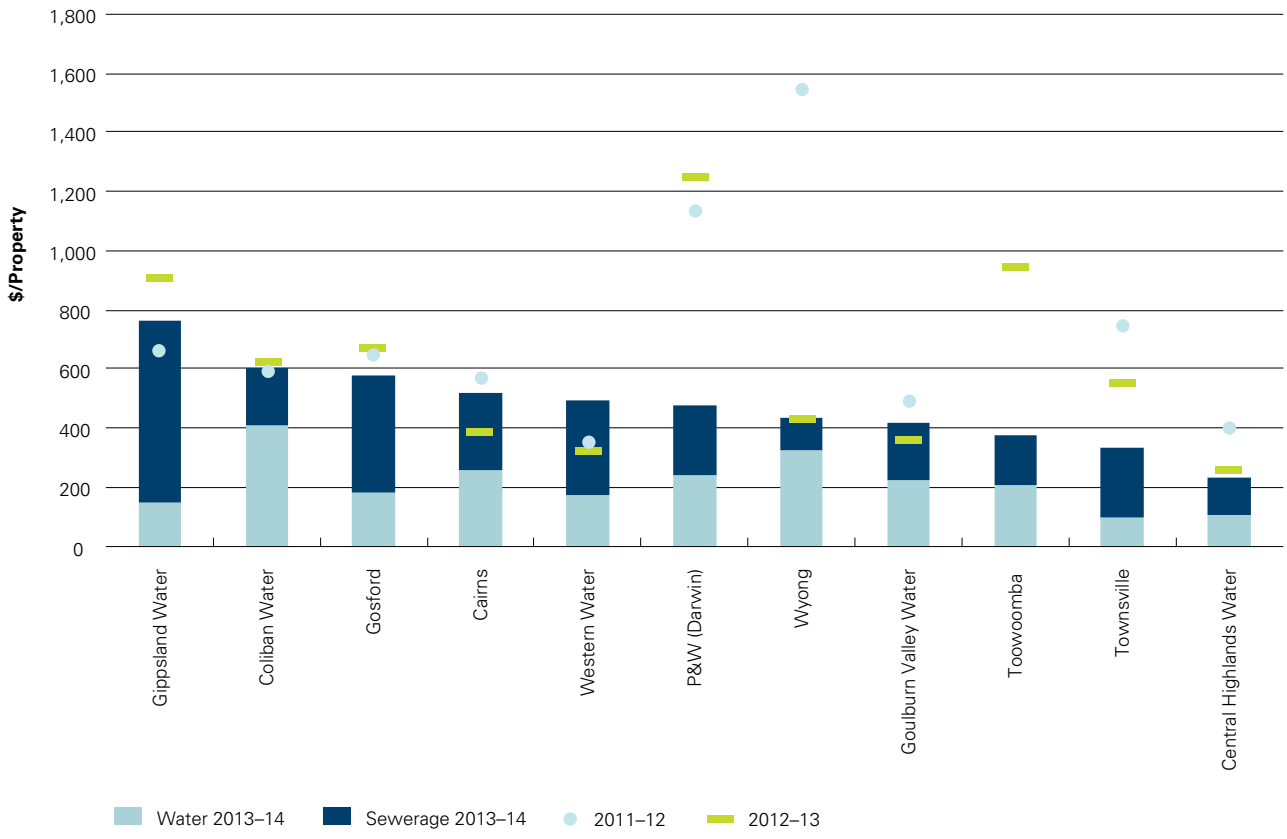

Figure 5.3 F28 and F29, 2011–12 to 2013–14 ($/property), for utilities with 50,000–100,000 connected properties

20,000–50,000 group

In this group, eight utilities (six excluding single service providers) reported an increase in their capital expenditure in 2013–14. Tamworth reported the largest increase of $387 per property. This increase was driven by a 59% growth in water supply expenditure and an even more significant 309% increase in sewerage capital expenditure on a property basis. As noted in Chapter 5, section 1.2, this was as a result of upgrade works and replacement of infrastructure (Table 5.9).

Of the remaining utilities in this size group ten decreased their capital expenditure on a per property basis; while Lower Murray Water remained unchanged at $314 per property. North East Water and MidCoast Water reported the largest percentage decreases, both recording a 49% reduction.

Table 5.9 F28 and F29, 2009–10 to 2013–14 ($/property), for utilities with 20,000–50,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Tamworth	3,091	1,714	528	624	1,011	62%
East Gippsland Water	1,165	659	573	329	482	47%
Fitzroy River Water		1,042	722	589	749	27%
Wagga Wagga (S)	503	234	256	142	180	27%
Coffs Harbour	935	396	294	365	434	19%
Riverina Water (W)	258	316	214	193	209	8%
GWMWater	228	348	593	488	525	8%
Shoalhaven	1,107	2,353	659	510	537	5%
Lower Murray Water	1,671	448	365	314	314	0%
Mackay Water	1,085	1,267	1,168	1,183	1,181	0%
WC (Mandurah)	1,465	1,045	962	753	735	–2%
Albury		214	112	263	254	–3%
Tweed	3,295	272	1,240	446	418	–6%
Wide Bay Water		477	779	561	524	–7%
Clarence Valley	1,930	776	2,100	770	694	–10%
Port Macquarie Hastings	862	689	472	490	317	–35%
Wannon Water	927	322	764	606	388	–36%
North East Water	255	249	306	830	422	–49%
MidCoast Water	1,292	787	2,279	599	303	–49%

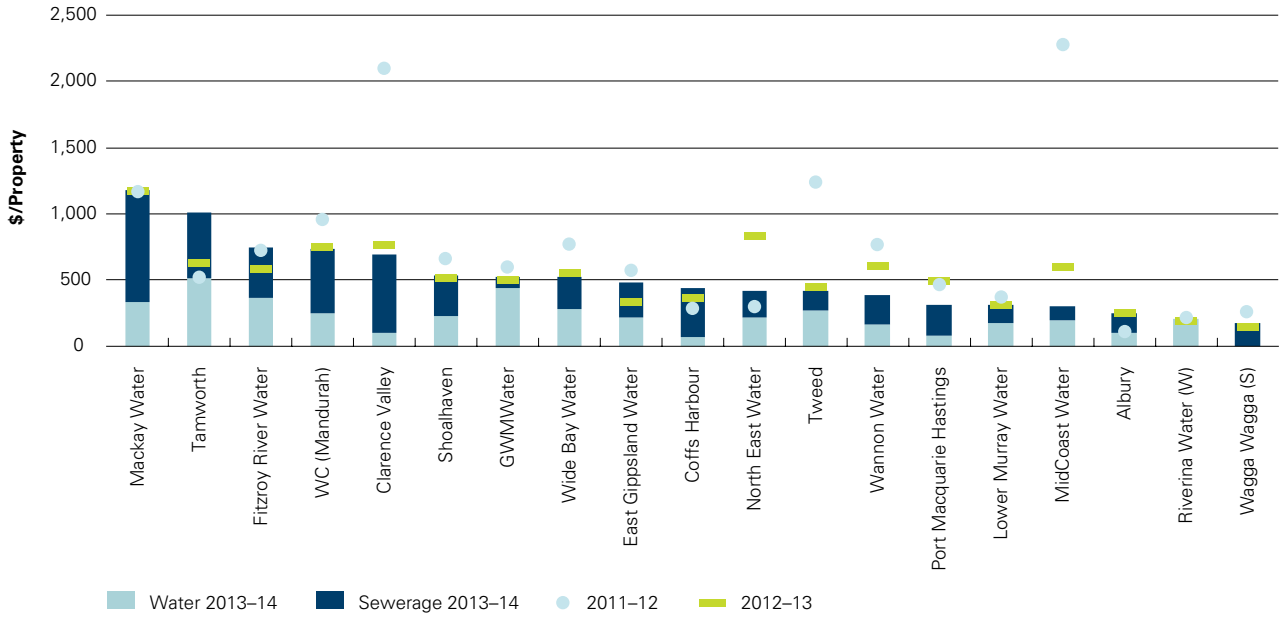

Figure 5.4 F28 and F29, 2011–12 to 2013–14 ($/property), for utilities with 20,000–50,000 connected properties

10,000–20,000 group

In the 10,000–20,000 connected properties group, Water Corporation (Kal–Boulder) reported the highest increase in capital expenditure of $4,637, equal to a 325% increase since 2012–13 (Table 5.10). The large increase from the previous year is due to commissioning of works associated with the Mundaring Water Treatment Plant. This was also the most significant dollar change in capital expenditure across all size groups. In percentage terms, however, Queanbeyan reported the largest increase of all utility groups with a reported growth in expenditure of 672%, equal to $372 per property.

Table 5.10 F28 and F29, 2009–10 to 2013–14 ($/property), for utilities with 10,000–20,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Queanbeyan	117	68	145	55	427	672%
WC (Kal–Boulder) (W)	3,399	2,825	1,721	1,428	6,065	325%
Orange	309	331	271	452	1,638	262%
Bega Valley	401	1,718	510	339	637	88%
South Gippsland Water	808	557	746	432	577	34%
WC (Albany)	473	1,075	872	477	636	33%
Eurobodalla	1,412	1,077	957	368	364	–1%
Bathurst	236	245	400	451	427	–5%
Busselton (W)	216	324	556	141	131	–7%
Kempsey	1,194	598	359	616	554	–10%
WC (Bunbury) (S)	502	267	328	613	536	–12%
P&W (Alice Springs)	1,077	803	909	1,059	877	–17%
Goulburn Mulwaree	654	3,323	1,277	450	368	–18%
Byron	3,100	593	138	236	183	–23%
WC (Busselton) (S)				2,200	1,653	–25%
Essential Energy	2,895	744	421	538	398	–26%
Aqwest–Bunbury (W)	466	228	258	234	169	–28%
WC (Geraldton)	1,290	826	545	792	558	–30%
Dubbo	468	393	355	458	272	–41%
Lismore	625	505	954	695	368	–47%
Kal–Boulder (S)	14	175	119	96	48	–50%
WC (Australind-Eaton)			2,895	816	367	—55%
Ballina	679	1,210	2,399	2,064	773	–63%
Westernport Water	234	355	846	843	228	–73%
Wingecarribee	1,184	465	1,217	926	178	–81%
Gympie					546	

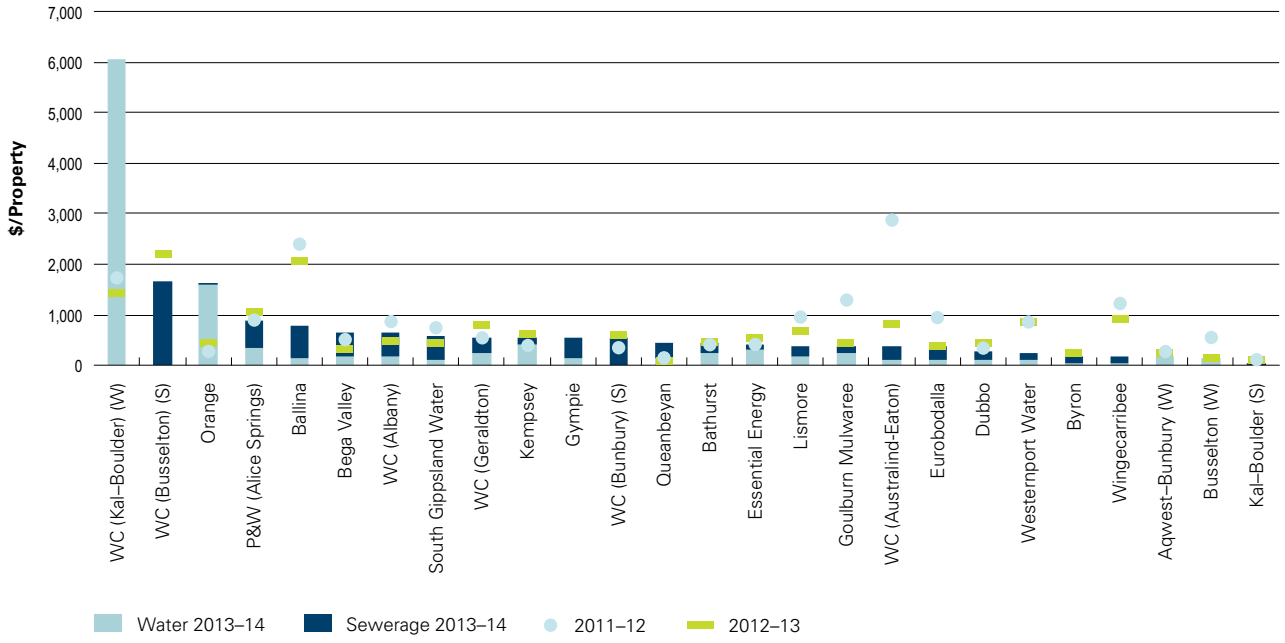

Figure 5.5 F28 and F29, 2011–12 to 2013–14 ($/property), for utilities with 10,000–20,000 connected properties

5.3 F11—Operating cost—water ($/property), F12—Operating cost—sewerage ($/property), and F13—Combined operating cost—water and sewerage ($/property)

5.3.1 Introduction

These indicators report the operating costs (for operation, maintenance, and administration) of each water utility in relation to the number of properties serviced. Operating costs are influenced by many factors, including:

- utility size;
- Government policy;
- climate and rainfall;
- the distance and way that water is transported (including whether it is required to be piped);
- the sources of water (including whether it is purchased from a bulk utility, and also whether it is sourced from dams or alternative sources, such as desalination);
- input cost escalation (for example, the costs of fuel, chemical, and labour);
- the level of water and sewage treatment required; and
- capital procurement strategies, such as public–private partnerships and build–own–operate–transfer (BOOT) schemes.

This chapter includes charts with 9-year time series and tables with 5-year time series. The charts show the total water operating cost per property (Indicator F11) and the total sewerage operating cost per property (F12); that is, they show straight additions of the two indicators. The tables (including the overview of results) are based on F13 (combined operating cost for the reporting utilities that provide both reticulated water supply and sewerage services), which is sometimes not a straight addition of F11 and F12, depending on the relative numbers of connected water properties and connected sewerage properties. For this reason, some figures presented in the charts and tables may differ from those based on a summation of F11 and F12.

Because economies of scale are possible, operating expenditure per property usually falls as the size of the utility increases, but has been increasing in recent years, particularly for larger utilities.

The national 2013–14 median operating expenditure (on a per property basis for utilities delivering both water and sewerage services) was $891 (Table 5.11; Figure 5.6). This figure equates to an increase of less than 1% in real terms and is less than a quarter of the National Performance Report long-term (9 years) data observed average growth in the median, which sits at 4%.

In a reversal of the 2012–13 results, the 100,000+ connected properties group was the only group to report an increase in median operating expenditure. All other groups recorded decreases in their medians. Nationally, 32 utilities across all groups reported decreases in their median operating expenditure per property, while 28 recorded decreases. Westernport Water had the lowest operating costs of all reporting utilities while Power and Water (Alice Springs) had the highest.

Table 5.11 Overview of results: F13—Combined operating cost—water and sewerage ($/property)[1]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	1,186	570	9	4	713†	937†	31%
	City West Water	Hunter Water					
50,000–100,000 connected properties	1,204	636	3	8	819	790	–4%
	Gippsland Water	Toowoomba					
20,000– 50,000 connected properties	1,475	564	9	8	893	880	–2%
	Mackay Water	Fitzroy River Water					
10,000–20,000 connected properties	1,699	471	7	12	1,060	988	–7%
	P&W (Alice Springs)	Westernport Water					
All size groups (national)	1,699	471	28	32	887†	891†	0%
	P&W (Alice Springs)	Westernport Water					

Table notes

[1] Combined operating cost—water and sewerage ($/property) is calculated using F11, F12, and F13 data from utilities who reported in both 2012–13 and 2013–14.

† As a result of changes to reporting boundaries for SA Water the 2012–13, operating costs for water and sewerage on a $/property basis uses data for metropolitan Adelaide and country SA while the 2013–14 figure uses whole of SA Water data.

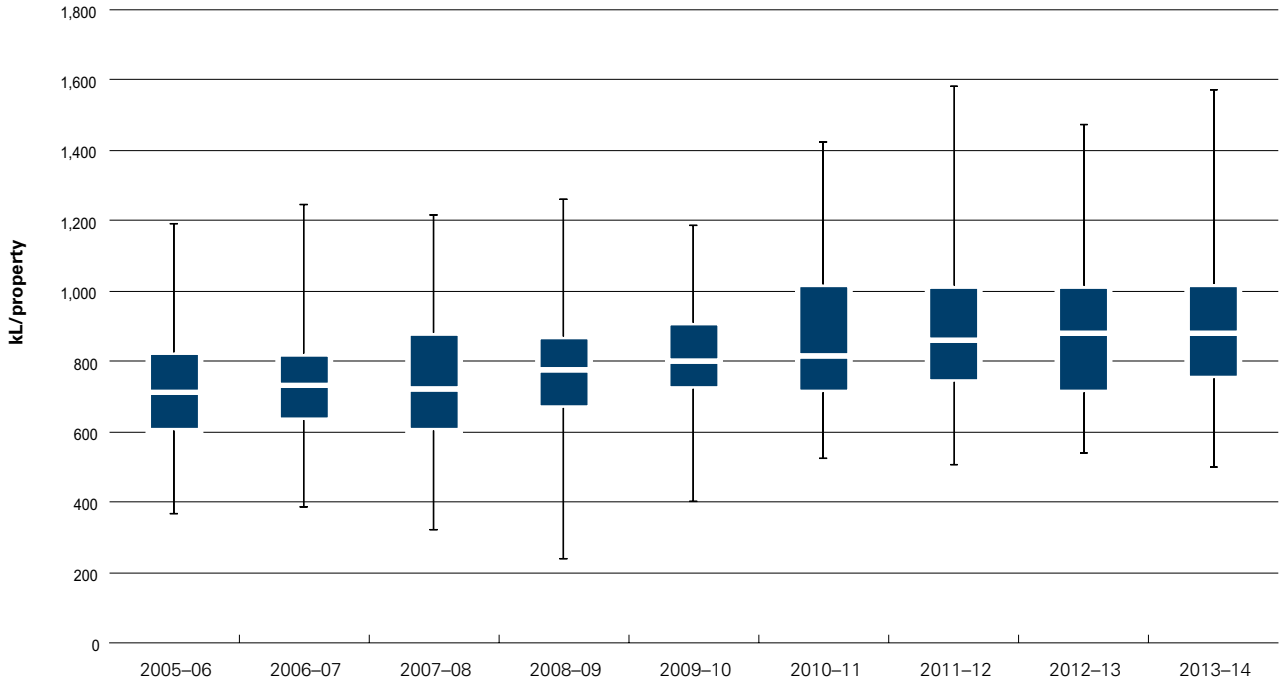

Figure 5.6 Summary of results: F13—Combined operating cost—water and sewerage ($/property)

5.3.2 Results and analysis

100,000+ group

With a median operating cost of $937 per property, this group reported an average increase of 9% from 2012–13. Additionally, across this group the water component of operating costs was higher than the sewerage component for all utilities, comprising on average almost two thirds of the combined costs (Table 5.12).

The increase was driven by large operating cost increases for the three Victorian major metropolitan utilities (South East Water, Yarra Valley Water, and City West Water). Bulk water charges paid to Melbourne Water by the metropolitan retailers represent the most significant component of their operating cost. Significant increases in bulk water prices, primarily associated with the cost of Victoria's desalination plant and the impact of the 2012–13 bulk water price freeze imposed on Melbourne Water by the Victorian Government, has driven the reported increases.

South East Water and Yarra Valley Water each reported a 36% and a 33% increase respectively in operating costs, despite achieving significant reductions against their 2013–14 operating budgets (South East Water 2014: 9; Yarra Valley Water 2014: 4). City West Water reported the highest operating cost in this size group ($1,186) and attributed its increase of 32% to increases in the bulk water price and higher-than-forecast bulk water purchases and sewage transfers (City West Water 2014: 14).

Table 5.12 F13, 2009–10 to 2013–14 ($/property), for utilities with 100,000+ connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
South East Water	605	653	761	711	967	36%
Yarra Valley Water	620	598	728	705	937	33%
City West Water	746	797	937	898	1,186	32%
Queensland Urban Utilities		778	884	1,014	1,113	10%
Gold Coast Water	930			993	1,084	9%
Logan	825			971	1,046	8%
Unitywater		856	930	920	964	5%
WC (Perth)	530	520	557	590	585	–1%
Barwon Water	664	644	700	612	629	3%
Sydney Water	616	622	646	675	665	–1%
SA Water				713†	696†	–2%
Hunter Water	549	552	539	608	570	–6%
ACTEW	786	756	825	796	740	–7%

Table note

† As a result of changes to reporting boundaries for SA Water the 2012–13, operating costs for water and sewerage on a $/property basis uses data for metropolitan Adelaide and country SA, while the 2013–14 figure uses whole of SA Water data.

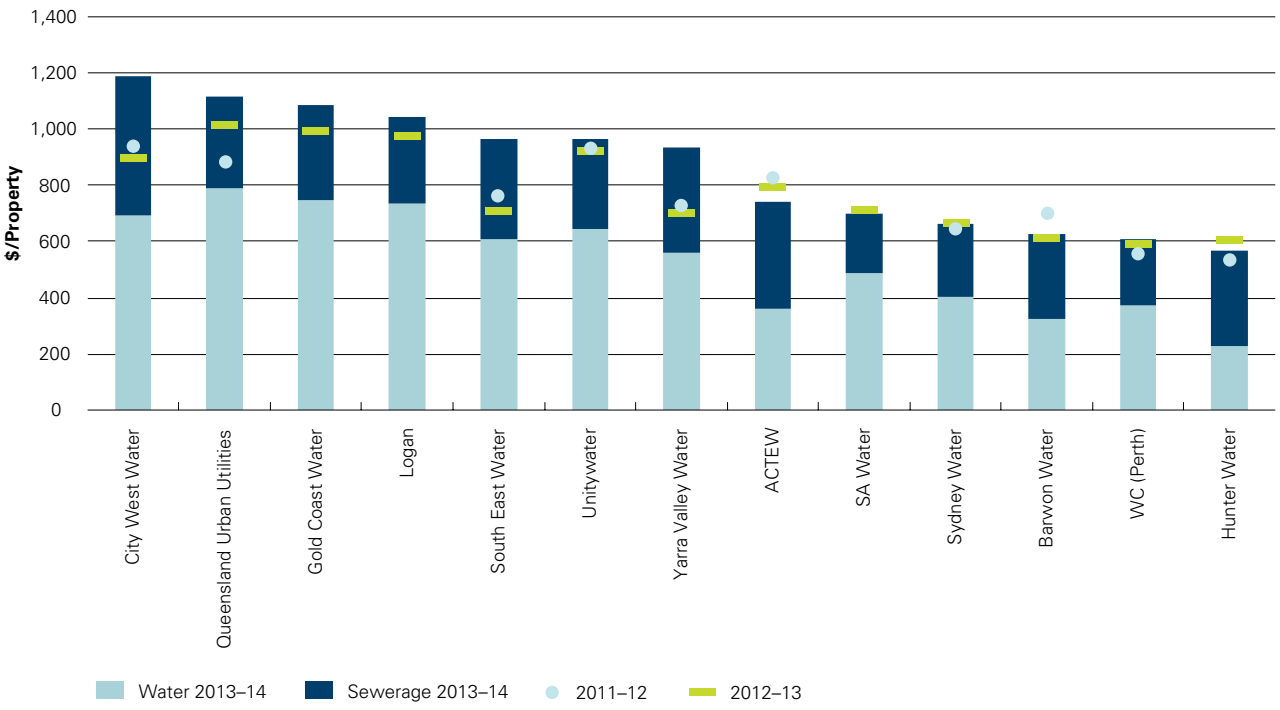

Figure 5.7 F13, 2011–12 to 2013–14 ($/property), for utilities with 100,000+ connected properties

50,000–100,000 group

Despite an average 1% decrease in median operating costs for this group, Townsville and Toowoomba both reported significant increases in operating costs (Table 5.13, Figure 5.8).

A 39% increase in operating cost for Townsville was attributed to increased electricity and insurance charges (Townsville 2014: 78), while Toowoomba's 21% increases was a result of a $4.3 million increase in the Wivenhoe bulk water access charges, as well as increases in electricity and chemical costs (Toowoomba 2014: 73).

Reporting the largest percentage decrease of the group, Western Water's 32% (or $109 per property) reduction in operating costs was primarily attributed to a decrease in the volume of bulk water purchased from Melbourne Water (Western Water 2014: 39).

While still leading the group on absolute costs, Gippsland Water achieved a 9% reduction in 2013–14, following two successive years of increases.

Table 5.13 F13, 2009–10 to 2013–14 ($/property), for utilities with 50,000–100,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Townsville			718	743	1,034	39%
Toowoomba			501	527	636	21%
Cairns	720	765	783	677	679	0%
Wyong	796	804	679	682	673	–1%
Goulburn Valley Water	768	770	835	803	790	–2%
Coliban Water	753	647	756	819	783	–4%
Central Highlands Water	808	545	875	838	794	–5%
Gosford	738	642	703	827	771	–7%
Gippsland Water	874	1,423	1,194	1,318	1,204	–9%
P&W (Darwin)	958	1,033	1,100	1,127	1,005	–11%
Western Water	1,014	1,078	1,162	1,208	826	–32%

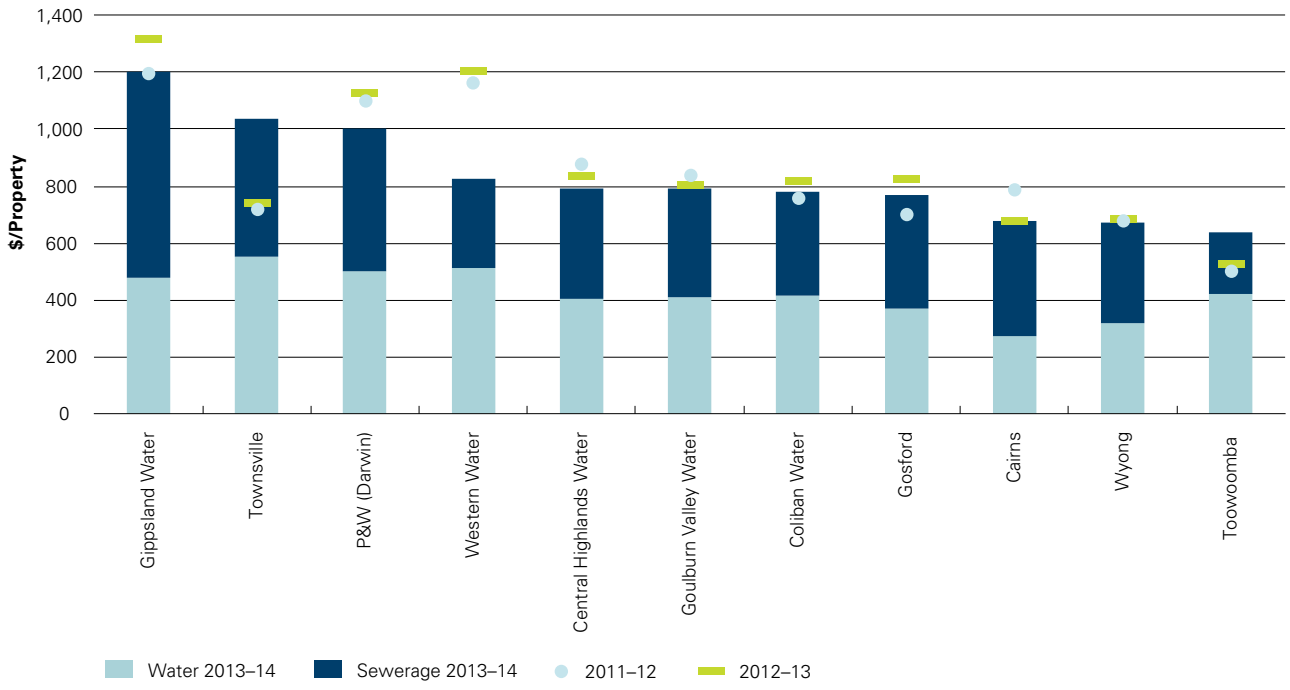

Figure 5.8 F13, 2010–11 to 2013–14 ($/property), for utilities with 50,000–100,000 connected properties

20,000–50,000 group

This group recorded the smallest change in median combined operational costs per property (2%) across all groups. The group also reported an average reduction across the group of just under 2%.

As a result of a successful process of ongoing continuous improvement, Wide Bay Water reported its second year-on-year reduction in operational costs. Combined costs on a per property basis were down by 26% to $305 (Table 5.14; Figure 5.9).

Mackay Water reported the largest increase in operating costs. A 14% increase after a year of little growth in 2012–13 placed it well above the national median of $902.

Table 5.14 F13, 2009–10 to 2013–14 ($/property), for utilities with 20,000–50,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Mackay Water	911	1,101	1,231	1,297	1,475	14%
East Gippsland Water	763	988	837	881	931	6%
North East Water	777	786	861	754	796	6%
WC (Mandurah)	621	646	628	612	646	5%
GWMWater	902	899	892	893	937	5%
Tamworth	869	840	960	972	1,007	4%
Port Macquarie Hastings	748	731	741	850	880	3%
Tweed	894	876	862	913	928	2%
Coffs Harbour	870	883	897	998	1,006	1%
Lower Murray Water	632	779	742	612	602	–2%
Wagga Wagga (S)	278	313	386	424	417	–2%
Shoalhaven	777	790	768	766	752	–2%
Wannon Water	978	1,018	1,094	983	961	–2%
MidCoast Water	811	872	1,015	947	902	–5%
Clarence Valley	746	811	861	928	875	–6%
Albury	726	746	775	786	735	–6%
Fitzroy River Water	662	595	678	649	564	–13%
Riverina Water (W)	349	359	335	397	342	–14%
Wide Bay Water		1,019	1,362	1,177	872	–26%

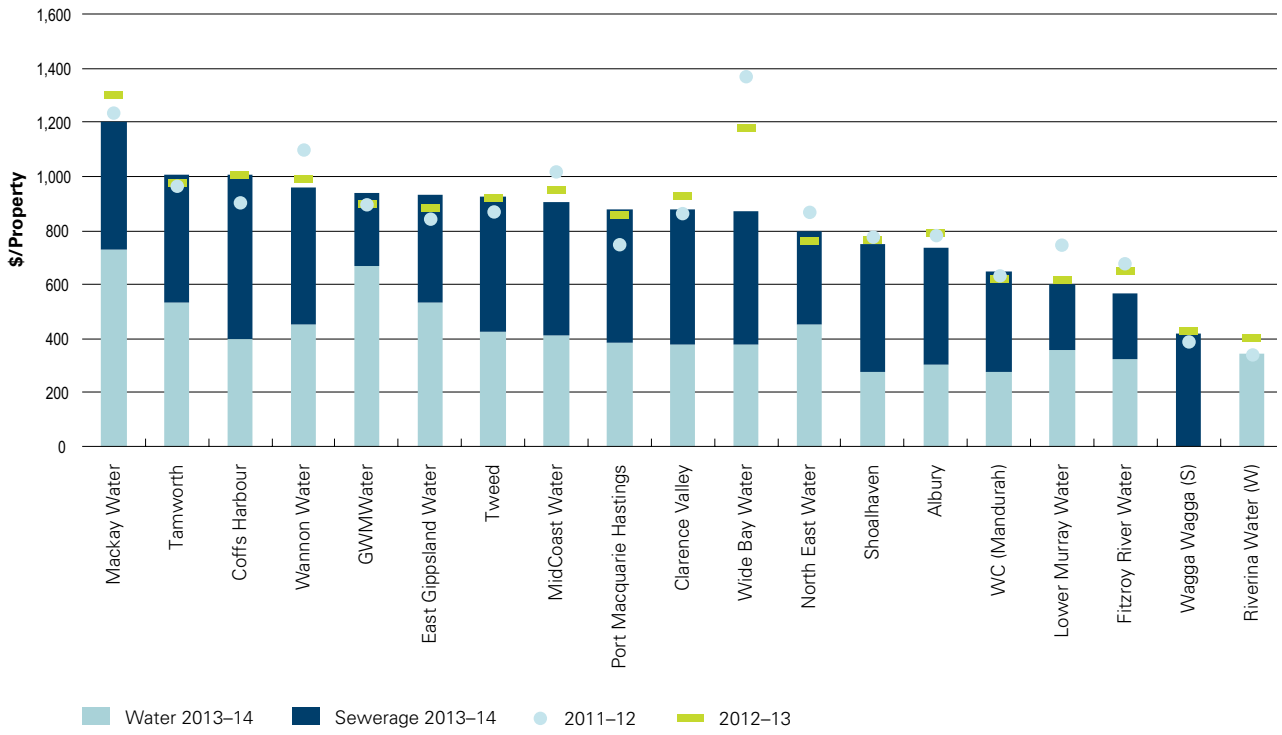

Figure 5.9 F13, 2010–11 to 2013–14 ($/property), for utilities with 20,000–50,000 connected properties

10,000–20,000 group

With a 7% decrease in the median, this group reported a 3% average reduction in combined operating costs (analysis excludes single service utilities and Gympie, which reported for the first time in 2013–14).

While once again reporting the highest combined operating costs on a per property basis across all groups, Power and Water (Alice Springs) achieved a $367 reduction in real terms, translating to a significant 18% decrease (Table 5.15; Figure 5.10). Higher operating costs for Power and Water (Alice Springs) are driven by the geographical isolation of the communities it serves, the climatic extremes in which it operates, and the high demand placed on its services by its customers.

Table 5.15 F13, 2009–10 to 2013–14 ($/property), for utilities with 10,000–20,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
WC (Busselton) (S)				634	796	26%
Wingecarribee	748	696	771	793	906	14%
WC (Kal–Boulder) (W)	1,445	1,201	1,255	1,318	1,436	9%
Queanbeyan	1,145	1,207	1,244	1,243	1,331	7%
Orange	644	814	676	710	757	7%
Essential Energy	1,186	1,500	1,761	1,508	1,600	6%
Eurobodalla	865	919	1,014	939	988	5%
Dubbo	883	883	784	838	853	2%
Byron	1,155	1,121	1,169	1,247	1,254	1%
WC (Bunbury) (S)	418	475	457	418	420	0%
Bathurst	859	902	874	958	948	–1%
Lismore	946	1,023	1,084	1,094	1,082	–1%
Bega Valley	1,177	1,244	1,312	1,261	1,240	–2%
Kempsey	892	1,027	973	1,060	1,024	–3%
Goldenfields Water (R)	465	567	559	665	642	–4%
Ballina	1,153	1,158	1,225	1,335	1,285	–4%
South Gippsland Water	1,155	1,045	1,155	1,069	1,025	–4%
Goulburn Mulwaree	848	762	818	828	786	–5%
WC (Geraldton)	394	886	815	926	686	–26%
WC (Albany)	970	907	938	852	665	–22%
Kal–Boulder (S)	225	246	250	236	217	–8%
Aqwest–Bunbury (W)	350	392	383	510	438	–14%
Busselton (W)	415	387	437	523	440	–16%
P&W (Alice Springs)	1,384	1,398	1,615	2,066	1,699	–18%
WC (Australind-Eaton)			867	1,159	771	–33%
Westernport Water	643	627	654	678	471	–31%
Gympie					877	

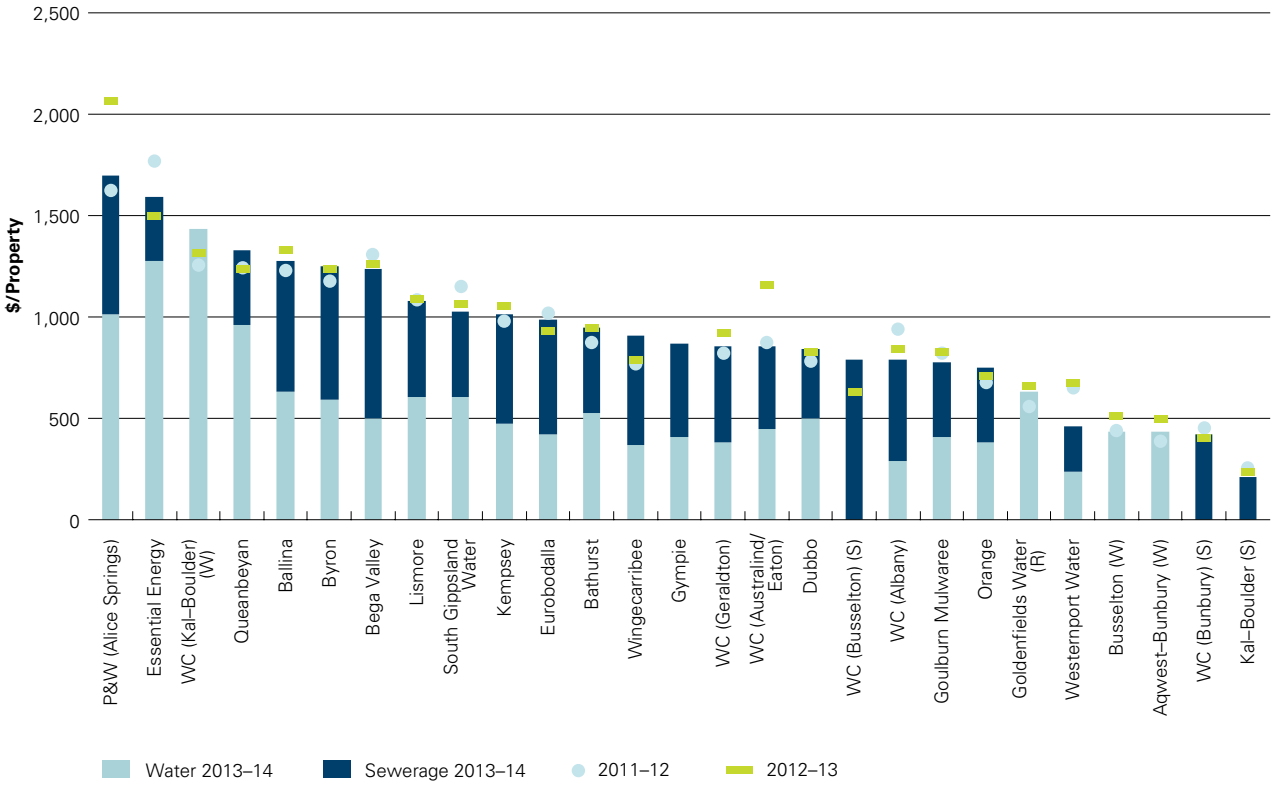

Figure 5.10 F13, 2010–11 to 2013–14 ($/property), for utilities with 10,000–20,000 properties

5.4 F24—Net profit after tax ($000) and F30—NPAT ratio

5.4.1 Introduction

A utility's net profit after tax (NPAT) is simply the NPAT disclosed in its annual financial statements. Net profit is driven by the factors that contribute to a utility's revenue and expenditure, including pricing structures, water restrictions, Government policy, asset condition, climate, and utility size. As with income, NPAT indicators can be highly sensitive to movements in capital grants and contributions, which are treated as income and can change significantly from year to year. NPAT also reflects depreciation but not dividend payments. Because of these factors, it can vary significantly between years and utilities.

The NPAT ratio has been included here to indicate how large a utility's profit is compared with its income, to make it easier to compare utilities. The NPAT ratio is defined as NPAT (Indicator F24) divided by total income for the utility (F3). It can be considered as the utility's net profit margin after tax.

Nationally, the total NPAT for the 60 utilities reporting data for 2012–13 and 2013–14 was up 18%, equating to just under $336 million (Table 5.16; Table 5.17). The most significant changes to NPAT was in the 10,000–20,000 group, which reported a 730% increase.

Table 5.16 Overview of results: F24 ($000)[1,2]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Total		% change in the total from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	677,763	8,123	9	4	1,668,917	1,903,566	14%
	WC (Perth)	Barwon Water					
50,000– 100,000 connected properties	69,637	–5,219	6	4	113,301	122,657	8%
	P&W (Darwin)	Wyong					
20,000– 50,000 connected properties	40,271	–10,454	10	7	72,500	120,986	67%
	Mackay Water	GWMWater					
10,000–20,000 connected properties	9,307	–4,596	15	5	5,930	49,219	730%
	Orange	Kempsey					
All size groups (national)	677,763	–10,454	40	20	1,860,647	2,196,428	18%
	WC (Perth)	GWMWater					

Table notes

[1] NPAT totals are calculated using data from all utilities, (dual and single service providers) that have reported NPAT (F24) in both 2012–13 and 2013–14 and therefore excludes TasWater, Toowoomba, Wide Bay and Gympie.

[2] SA Water have always reported indicator F24 at the whole of utility scale.

Table 5.17 Overview of results: F30 (%)[1,2]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Total		% change in the total from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	27	4	8	5	10	13	35%
	WC (Perth)	Barwon Water					
50,000–100,000 connected properties	39	–7	7	3	3	2	–20%
	P&W (Darwin)	Wyong					
20,000–50,000 connected properties	44	–25	10	7	9	8	–1%
	Fitzroy River Water	GWMWater					
10,000–20,000 connected properties	34	–27	15	5	> –1	10	7,943%
	Orange	Kempsey					
All size groups (national)	44	–27	40	20	7	9	29%
	Fitzroy River Water	Kempsey					

Table notes

[1] NPAT ratios are calculated using data from all utilities (dual and single service providers) that reported NPAT (F24) and Total Revenue (F3) in both 2012–13 and 2013–14 and therefore exclude TasWater, Toowoomba Wide Bay Water and Gympie.

[2] SA Water have always reported Indicator F30 at the whole of utility scale.

5.4.2 Results and analysis

100,000+ group

Total NPAT for utilities in this group was up by just over 14%. This equated to an increase of almost $235 million. Within the group, Hunter Water reported the largest percentage increase in NPAT, with growth of 93% to $50.3 million (Table 5.18). This result, yielding a NPAT ratio of 17%, was attributed to lower-than-expected depreciation as a result of valuation write downs in the previous year, and lower finance expenses due to favourable interest rates (New South Wales Auditor–General 2014: 65).

South East Water and ACTEW also reported significant increases in their NPAT, recording growth of 66% and 56% respectively (Table 5.18). South East Water's increase was driven by rising retail water sales, developer income, and reduced expenditure on items such as finance charges (South East Water 2014: 8).

ACTEW's 56% increase in NPAT was a result of decreased capital expenditure and operating costs. It should be noted that WC (Perth) reported NPAT on the basis of its entire operation in 2013–14.

Table 5.18 F24 and F30, 2011–12 to 2012–13, for utilities with 100,000+ connected properties

	F24 Net profit after tax ($000)			F30 NPAT ratio (%)		
Utility	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
WC (Perth)	554,122	520,274	677,763	26%	23%	27%
Logan		40,901	57,597		21%	27%
Sydney Water	385,796	426,389	464,493	14%	17%	18%
Hunter Water	34,844	26,045	50,327	13%	9%	17%
Unitywater	66,901	69,781	86,012	13%	13%	16%
SA Water	233,441	270,844	199,912	17%	18%	15%
ACTEW	29,181	24,835	38,742	10%	8%	13%
Queensland Urban Utilities	138,518	105,879	134,755	15%	11%	13%
TasWater			27,236			10%
South East Water	95,031	56,207	93,123	12%	8%	10%
Yarra Valley Water	63,863	48,736	45,600	8%	6%	5%
Gold Coast Water		20,820	22,041		5%	5%
City West Water	53,173	38,141	25,078	10%	8%	4%
Barwon Water	37,196	20,066	8,123	16%	10%	4%

50,000–100,000 group

Townsville, Western Water, and Goulburn Valley Water were the only utilities in this group to report reductions in NPAT (Table 5.19). Power and Water (Darwin) reported the largest increase of 113% ($39.8 million), which was attributed to the reversal of asset impairment adjustments as well as an increase in water and sewerage revenue resulting from a combination of increased sales and tariff increases (P&W 2014a: 55).

Other notable increases in NPAT were reported by Coliban Water and Gosford. These service providers recorded an $11.1 million and $5.8 million increase in NPAT respectively. Coliban Water's increase was driven by an increase in water consumption and temporary water sales as well as reductions in operational expenses, in particular maintenance (Coliban Water 2014: 44).

Townsville reported the largest decrease in NPAT, recording a 69% reduction from 2012–13, which equates to $49.9 million. This result was driven by a significant 39% increase in operational costs for this utility. On a percentage basis, Western Water reported a 62% decrease in NPAT; however, in dollar terms, this translated to a $1.8 million decrease for Western Water, which was driven by a 51% increase in combined capital expenditure for its water and water sewerage businesses.

Table 5.19 F24 ($000) and F30 (%), 2011–12 to 2013–14, for utilities with 50,000–100,000 connected properties

	F24 Net profit after tax ($000)			F30 NPAT ratio (%)		
Utility	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
P&W (Darwin)	18,237	29,879	69,637	16%	23%	39%
Cairns	25,194	29,440	29,397	20%	22%	24%
Townsville	81,413	72,134	22,238	46%	40%	12%
Central Highlands Water	–4,478	3,967	7,221	–5%	4%	8%
Toowoomba			4,500			5%
Gippsland Water	–4,384	3,230	3,293	–3%	2%	3%
Goulburn Valley Water	–5,002	1,843	1,717	–7%	2%	2%
Western Water	3,874	2,939	1,105	5%	3%	1%
Gosford	–10,503	–7,782	–2,032	–14%	–9%	–2%
Coliban Water	–14,801	–14,056	–4,700	–16%	–14%	–4%
Wyong	–15,926	–8,294	–5,219	–22%	–11%	–7%

20,000–50,000 group

Of the 17 utilities in this group, ten reported increases in NPAT and seven reported decreases (Table 5.20). The largest increases were $15.9 million for Tweed (920%) and $11.1 million for Port Macquarie Hastings (445%). Tweed's increase was driven by a large increase in developer contributions and a decrease in capital expenditure, while Port Macquarie Hastings in reporting this figure attributed its result primarily to a 36% decrease in capital expenditure.

Other notable increases in NPAT were reported by Clarence Valley (144%) and Albury (104%). These results were both driven by decreases in capital expenditure and operational costs.

The largest percentage decrease in NPAT within the group was reported by Wannon Water, which recorded a 79% reduction ($5.4 million). This was driven by a decrease in revenue and an increase in total expenditure in 2013–14 (Wannon Water 2014: 10).

In dollar terms, the largest decrease was reported by Mackay Water, for which NPAT decreased just over $158 million from 2012–13. Mackay Water's decrease was attributed to a 14% increase in operational costs.

Table 5.20 F24 ($000) and F30 (%), 2011–12 to 2013–14, for utilities with 20,000–50,000 connected properties

	F24 Net profit after tax ($000)			F30 NPAT ratio (%)		
Utility	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
Fitzroy River Water	19,208	18,636	29,141	26%	24%	44%
Mackay Water	27,219	56,096	40,271	27%	49%	31%
Albury	–1,667	5,228	10,684	–7%	16%	29%
Tamworth	7,152	6,084	11,637	18%	16%	27%
Riverina Water (W)	375	3,862	6,931	2%	15%	26%
Tweed	–478	–1,732	14,196	–1%	–4%	21%
Shoalhaven	11,435	13,116	12,650	19%	20%	20%
Port Macquarie Hastings	3,913	–2,489	8,590	9%	–6%	14%
East Gippsland Water	2,723	2,860	2,818	8%	9%	8%
Wide Bay Water	–553		6,011	–1%		8%
North East Water	–1,759	5,668	3,824	–3%	9%	6%
Clarence Valley	–2,822	–3,874	1,706	–10%	–13%	6%
Wannon Water	3,932	6,800	1,448	5%	9%	2%
Coffs Harbour	1,514	–2,214	–3,197	3%	–5%	–7%
MidCoast Water	27,855	–6,814	–5,351	27%	–10%	–8%
Wagga Wagga (S)	–161	–847	–1,343	–1%	–5%	–8%
GWMWater	–6,388	–24,700	–10,454	–17%	–59%	–25%

10,000–20,000 group

This group recorded the most significant year on variation and change in NPAT (Table 5.21) across the four utility groups. Total NPAT for the group increased significantly (730%), equal to a $4.3 million increase since the 2012–13 year.

The single largest increase in percentage terms across all groups was reported by Wingecarribee, which recorded a 2,198% jump in NPAT as a result of an 81% decrease in capital expenditure. Busselton (W) also posted a significant year-on-year NPAT increase, recording a 432% rise ($2.3 million) as a result of increased revenue from a number of large developments, increased water consumption in response to a drier year, staff vacancies, and asset revaluation and depreciation.

Essential Energy reported the largest percentage decrease in NPAT within the group, recording an 86% ($2.57 million) reduction, while Kempsey recorded a 38% drop ($1.26 million). Both utilities reported that these decreases were a result of increases in capital expenditure and reductions in revenue.

Table 5.21 F24 ($000) and F30 (%), 2011–12 to 2013–14, for utilities with 10,000–20,000 connected properties

	F24 Net profit after tax ($000)			F30 NPAT ratio (%)		
Utility	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
Orange	5,112	9,330	9,307	22%	35%	34%
Goldenfields Water (R)	0	2,297	4,069	0%	19%	30%
Goulburn Mulwaree	3,264	5,576	5,972	17%	27%	28%
Busselton (W)	1,209	530	2,821	14%	6%	26%
Dubbo	2,596	6,264	7,340	12%	21%	24%
Gympie			4,543			22%
Kal–Boulder (S)	1,486	1,204	1,599	22%	16%	19%
Bathurst	818	1,996	4,718	4%	9%	18%
Wingecarribee	–3,041	201	4,626	–13%	1%	16%
Queanbeyan	–4,228	–4,092	4,718	–21%	–18%	15%
P&W (Alice Springs)	2,381	–3,803	4,490	9%	–10%	11%
Byron	–534	–3,263	2,036	–3%	–15%	9%
Westernport Water	3,182	1,268	924	14%	6%	5%
Eurobodalla	1,608	–2,341	1,674	5%	–8%	5%
Aqwest–Bunbury (W)	–139	–2,059	361	–1%	–22%	3%
Essential Energy		2,989	420		13%	2%
Ballina	–1,882	–2,760	–54	–8%	–12%	0%
Lismore	–3,039	–535	–151	–15%	–3%	–1%
South Gippsland Water	–1,177	–301	–352	–4%	–1%	–1%
Bega Valley	2,032	–3,240	–702	8%	–13%	–3%
Kempsey	–4,274	–3,333	–4,596	–26%	–19%	–27%

5.5 F20—Dividend ($000) and F21—Dividend payout ratio (%)

5.5.1 Introduction

This indicator reports the dividend payable by a utility for the reporting year (not the dividend paid during the year, which relates to the previous year), and the dividend payout ratio (that is, dividend payable divided by NPAT). It gives an indication of the level of funds returned to the Government (as shareholder) or retained by the utility for reinvestment in the business.

The dividend payable by a utility reflects Government dividend policy, pricing policies, the profitability of the utility, and its future cash requirements. It is possible to have a dividend payout ratio of more than 100%, since dividends can be paid from prior years' retained earnings (or even borrowings). Dividend policies are generally set by Government and are usually outside of the utilities' control.

In general, only the larger retail and bulk utilities are required to make dividend payments, and only five utilities with fewer than 100,000 connected properties paid a dividend in 2013–14.Total dividends increased for 2013–14 by $57.5 million (5%) from 2012–13 (Table 5.22).

Table 5.22 Overview of results: F20 ($000)[1-2]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Total		% change in the total from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	491,264	0	6	7	1,163,335†	1,218,801†	5%
	WC (Perth)	Barwon Water					
50,000–100,000 connected properties	23,794	0	1	0	22,087	23,794	8%
	Cairns	Multiple utilities					
20,000– 50,000 connected properties	10,125	0	1	1	12,961	13,738	6%
	Fitzroy River Water	Multiple utilities					
10,000–20,000 connected properties	2,200	0	0	1	543	133	–76%
	Gympie	Multiple utilities					
All size groups (national)	491,264	0	7	9	1,198,925†	1,256,465†	5%
	WC (Perth)	Multiple utilities					

Table notes

[1] Dividend ($000) calculated for all utilities that reported data for F20 in both 2012–13 and 2013–14.

[2] SA Water have always reported Indicator F20 at the whole of utility scale.

† As a result the amalgamation of the previous regional corporations to form TasWater, the 2012–13 total water and sewerage capital expenditure ($000) uses combined data for Southern Water, Ben Lomond Water, and Cradle Mountain Water, while the 2013–14 figure uses whole of TasWater data.

Table 5.23 Overview of results: F21 (%)[1]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Total		% change in the total from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	100	0	5	7	57†	53†	-6%
	ACTEW	Barwon Water					
50,000–100,000 connected properties	81	0	1	0	0	0	0%
	Cairns	Multiple utilities					
20,000–50,000 connected properties	35	0	1	1	0	0	0%
	Fitzroy River Water	Multiple utilities					
10,000–20,000 connected properties	48	0	0	1	0	0	0%
	Gympie	Multiple utilities					
All size groups (national)	100	0	7	9	0†	0†	0%
	ACTEW	Multiple utilities					

Table notes

[1] Dividend pay ratios are calculated for all utilities that reported data for F20 in both 2012–13 and 2013–14.

† As a result the amalgamation of the previous regional corporations to form TasWater, the 2012–13 dividend payout ratio (%) utilises the average of data for Southern Water, Ben Lomond Water and Cradle Mountain Water, while the 2013–14 figure utilises whole of TasWater data.

5.5.2 Results and analysis

100,000+ group

Of the 13 utilities in this group that have reported data for both the 2012–13 and 2013–14 years, five utilities recorded an increase in dividend payments while seven reported decreases.

Hunter Water recorded the largest percentage increase in dividend payments (127%), followed by TasWater (78%), and Queensland Urban Utilities (77%). Gold Coast Water had the largest percentage of decrease (97%), followed by South East Water (46%) and SA Water (19%).

Table 5.24 F20 ($000) and F21 (%), 2011–12 to 2013–14, for with 100,000+ connected properties

	F20 Dividend ($000)			F21 Dividend payout ratio (%)		
Utility	**2011–12**	**2012–13**	**2013–14**	**2011–12**	**2012–13**	**2013–14**
WC (Perth)	411,523	390,109	491,264	74%	75%	72%
Sydney Water	254,342	298,472	252,000	66%	70%	54%
SA Water	229,166	242,141	196,717	98%	89%	98%
Queensland Urban Utilities	78,996	40,105	70,954	57%	38%	53%
Unitywater	49,905	48,830	48,274	75%	70%	56%
ACTEW	29,181	24,835	38,742	100%	100%	100%
Hunter Water	21,882	16,021	36,300	63%	62%	72%
Yarra Valley Water	58,961	22,799	19,200	92%	47%	42%
Logan		14,687	18,902		36%	33%
TasWater[1]		10,493	18,647		42%	68%
South East Water	52,550	29,372	16,000	55%	52%	17%
City West Water	18,918	11,811	11,400	36%	31%	45%
Gold Coast Water		13,659	400		66%	2%
Barwon Water	0	0	0	0%	0%	0%

Table notes

[1] As a result the amalgamation of the previous regional corporations to form TasWater, the 2012–13 dividend payout ratio (%) utilises the average of data for Southern Water, Ben Lomond Water, and Cradle Mountain Water, while the 2013–14 figure utilises whole of TasWater data.

50,000–100,000 group

Cairns was the only utility in this group to make a dividend payment. The utility's payment of $23.79 million was up 7.7% from 2012–13 (Table 5.25).

Table 5.25 F20 ($000) and F21 (%), 2011–12 to 2013–14, for with 50,000–100,000 connected properties

	F20 Dividend ($000)			F21 Dividend payout ratio (%)		
Utility	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
Cairns	20,450	22,087	23,794	81	75	81
Townsville		0	0		0	0
Gosford	0	0	0	0	0	0
Coliban Water	0	0	0	0	0	0
Gippsland Water	0	0	0	0	0	0
Central Highlands Water	0	0	0	0	0	0
Wyong	0	0	0	0	0	0
Western Water	0	0	0	0	0	0
Goulburn Valley Water	0	0	0	0	0	0
P&W (Darwin)	0	0	0	0	0	0

20,000–50,000 group

In 2013–14, only three utilities in this group reported dividends (Table 5.26). Shoalhaven and Fitzroy River Water's payments were consistent with previous years, while Port Macquarie Hastings returned a dividend after not doing so in 2012–13.

Table 5.26 F20 ($000) and F21 (%), 2011–12 to 2013–14, for utilities with 20,000–50,000 connected properties

	F20 Dividend ($000)			F21 Dividend payout ratio (%)		
Utility	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
Fitzroy River Water	12,824	10,292	10,125	67	55	35
Shoalhaven	2,723	2,669	2,673	24	20	21
Port Macquarie Hastings	1,683	0	940	43	0	11
North East Water	0	0	0	0	0	0
Mackay Water	0	0	0	0	0	0
Wannon Water	0	0	0	0	0	0
MidCoast Water	0	0	0	0	0	0
Wide Bay Water	0		0	0		0
Lower Murray Water	0	0	0	0	0	0
Tweed	0	0	0	0	0	0
GWMWater	0	0	0	0	0	0
Riverina Water (W)	0	0	0	0	0	0
Wagga Wagga (S)	0	0	0	0	0	0
Coffs Harbour	0	0	0	0	0	0
Albury	0	0	0	0	0	0
East Gippsland Water	0	0	0	0	0	0
Clarence Valley	0	0	0	0	0	0
Tamworth	0	0	0	0	0	0

10,000–20,000 group

In 2013–14, only two utilities in this group reported dividends, one of which (Gympie) reported data for this indicator for the first time in 2013–14 (Table 5.27). Eurobodalla reported a 75% decrease from 2012–13.

Table 5.27 F20 ($000) and F21 (%), 2011–12 to 2013–14, for utilities with 10,000–20,000 connected properties

	F20 Dividend ($000)			F21 Dividend payout ratio (%)		
Utility	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
Eurobodalla	788	543	133	49	23	8
Gympie			2,200			48
South Gippsland Water	0	0	0	0	0	0
Wingecarribee	0	0	0	0	0	0
Dubbo	0	0	0	0	0	0
Orange	0	0	0	0	0	0
Aqwest–Bunbury (W)		0	0		0	0
Queanbeyan	0	0	0	0	0	0
Westernport Water	0	0	0	0	0	0
Bathurst	0	0	0	0	0	0
Kal–Boulder (S)	0	0	0	0	0	0
Bega Valley	0	0	0	0	0	0
Lismore	0	0	0	0	0	0
Ballina	0	0	0	0	0	0
Kempsey	0	0	0	0	0	0
Busselton (W)	0	0	0	0	0	0
P&W (Alice Springs)	0	0	0	0	0	0
Byron	0	0	0	0	0	0
Essential Energy			0			0
Goulburn Mulwaree	0	0	0	0	0	0
Goldenfields Water (R)	0	0	0	0	0	0

5.6 F8—Revenue from community service obligations (%)

5.6.1 Introduction

Revenue from community service obligations (CSOs) represents payments to a utility by the State or Territory Government following a Government direction to undertake activities that the utility would not perform on a solely commercial basis. In the water sector, CSOs may be provided:

- to allow reductions on bills to certain disadvantaged customer groups (for example, pensioners);
- to allow utilities to charge common tariffs across all their geographical regions despite cost differences;
- to ensure the delivery of Government policy (for example, by administering rebates); and/or
- to allow utilities to provide services to high-cost areas where full cost recovery would otherwise result in unaffordable bills.

In 2012–13, 19 utilities reported increases and 37 reported decreases in revenue received from CSOs. This resulted in a decrease in the national median of 8%. The 20,000–50,000 size group was responsible for the largest reduction in the median value, which decreased by 28% from 2012–13 (Table 5.28).

Table 5.28 F8—Overview of results: F8 (%)1-2

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	10	0	3	9	5.1†	4.1†	–21%
	SA Water[2]	Multiple utilities					
50,000–100,000 connected properties	6	0	5	4	2.0	3.1	55%
	Goulburn Valley Water	Central Highlands Water					
20,000–50,000 connected properties	20	0	5	10	1.6	1.2	–28%
	WC (Mandurah)	Mackay Water					
10,000–20,000 connected properties	59	0	6	15	1.3	1.2	–11%
	WC (Kal–Boulder) (W)	Multiple utilities					
All size groups (national)	59	0	19	38	1.7†	1.6†	–8%
	WC (Kal–Boulder) (W)	Multiple utilities					

Table notes

[1] Dividend ($000) calculated for all utilities that reported data for F8 in both 2012–13 and 2013–14.

[2] SA Water have always reported Indicator F8 at the whole of utility scale.

† As a result of the amalgamation of the previous regional corporations to form TasWater, the 2012–13 total water and sewerage capital expenditure ($000) uses combined data for Southern Water, Ben Lomond Water, and Cradle Mountain Water, while the 2013–14 figure uses whole of TasWater data.

5.6.2 Results and analysis

100,000+ group

In this group, three reported increases in the percentage of revenue raised from CSOs, while nine reported decreases. SA Water reported the largest increase, with its percentage of revenue rising from 7.4% in 2012–13 to 9.7% in 2013–14 (Table 5.29).

Following a significant increase in revenue from CSO in 2012–13 , Queensland Urban Utilities reported receiving just 2% of its revenue from CSOs in the 2013–14 year—a figure in keeping with historic values.

Unitywater also reported a significant decrease in revenue raised from CSOs, which fell from 9.4% in 2011–12 to 1% in 2013–14.

Historically, SA Water and Water Corporation (Perth) have had the highest proportions of revenue from CSOs, although both proportions have reduced over time. In the case of SA Water, CSOs compensate for the under-recovery of the costs of providing country water and sewerage services due to statewide pricing, as well as concessions to customers such as charities, churches, and schools. Water Corporation (Perth) receives CSOs to compensate for the provision of non-profitable services and concessions to customers (Water Corporation 2014: 15).

Table 5.29 F8, 2009–10 to 2013–14 (%), for utilities with 100,000+ connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14
SA Water	18.6	15.6	12.1	7.4	9.7
WC (Perth)	10.0	9.0	8.3	7.9	7.9
Sydney Water	6.0	7.0	6.0	6.3	6.0
Barwon Water	5.5	5.2	4.0	4.6	5.0
Yarra Valley Water	6.4	6.0	5.6	6.1	4.8
Hunter Water	4.8	4.9	4.8	4.7	4.6
South East Water	5.9	5.8	5.3	5.7	4.6
City West Water	4.2	4.1	4.0	4.3	3.6
ACTEW	3.8	3.7	3.7	3.9	3.3
TasWater				4.0[†]	2.8[†]
Queensland Urban Utilities		1.9	2.4	6.3	2.0
Unitywater		5.5	5.6	9.4	1.0
Gold Coast Water	0.0			0.0	0.0
Logan	0.0			0.0	0.0

Table notes

[†] As a result of the amalgamation of the previous regional corporations to form uses, the 2012–13 total water and sewerage capital expenditure ($000) utilises combined data for Southern Water, Ben Lomond Water, and Cradle Mountain Water, while the 2013–14 figure uses whole of TasWater data.

50,000–100,000 group

In this group, 11 utilities reported increases and five reported decreases in the revenue raised from CSOs in 2013–14.

Townsville reported the largest increase, from less than 1% to 1.7%. Coliban Water reported the largest decrease with a dip from 5.1% to 4% (Table 5.30).

Table 5.30 F8, 2009–10 to 2013–14 (%), for utilities with 50,000–100,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14
Goulburn Valley Water	5.5	5.9	6.0	5.7	5.6
Western Water	3.5	3.7	3.9	4.0	4.6
Coliban Water	5.8	7.4	5.4	5.1	4.0
Gippsland Water	3.4	3.9	4.0	3.9	4.0
P&W (Darwin)	4.0	9.0	3.0	2.0	3.3
Cairns	2.9	2.8	2.8	2.8	3.1
Townsville			0.0	0.0	1.7
Wyong	0.9	1.9	2.0	1.8	1.7
Gosford	0.8	0.8	0.8	1.4	1.4
Toowoomba				0.8	0.8
Central Highlands Water		0.0	0.0	0.0	0.0

20,000–50,000 group

In this group, ten utilities reported decreases in revenue raised from CSOs in 2013–14. The most significant decrease from was reported by Wide Bay Water; its revenue fell from 1.7% in 2012–13 to less than 1% in 2013–14 (Table 5.31).

Wannon Water reported the largest increase with a 13% rise from 3.9% to 4.4%.

Table 5.31 F8, 2009–10 to 2013–14 (%), for utilities with 20,000–50,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14
WC (Mandurah)	30.4	30	32.2	19.3	19.9
GWMWater	8.1	9	8.6	7.4	7.1
North East Water	6	6.3	6.7	5.7	6.1
Lower Murray Water	4.8	5.4	6.3	6	5.9
East Gippsland Water	5.1	5	0	0	5.2
Wannon Water	5.1	4.5	3.6	3.9	4.4
Shoalhaven	1.9	1.8	1.8	1.6	1.6
MidCoast Water	1.6	1.6	0.9	1.5	1.4
Clarence Valley	1.8	2	1.7	1.6	1.4
Port Macquarie Hastings	1.3	2.1	1.7	1.7	1.2
Tweed	1.6	2	1.6	1.5	1.1
Coffs Harbour	0.8	1.1	1.1	1.1	1.1
Wagga Wagga (S)	1.4	1.2	0.9	0.9	1
Albury	1.3	1.3	1.2	1	0.9
Tamworth	1	1.1	1	1.1	0.9
Riverina Water (W)	1	1.4	1.2	0.8	0.8
Fitzroy River Water	0.4	1.6	1.5	1.7	0.7
Wide Bay Water		0.3	1.8	1.7	0.4
Mackay Water	0.5	0.4	0.1	0	0.1

10,000–20,000 group

In this group, six utilities reported an increase and 15 reported a decrease in CSO funding as a percentage of revenue. The results for the five remaining utilities remained unchanged from the previous year (Table 5.32).

Table 5.32 F8, 2009–10 to 2013–14 (%), for utilities with 10,000–20,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14
WC (Kal–Boulder) (W)	64	61	52.8	47.9	58.7
WC (Albany)	33.1	34.4	27.2	20.8	36.5
WC (Australind-Eaton)			27.7	29.2	25.1
WC (Bunbury) (S)	22.8	28.8	7.1	23.1	22.9
WC (Busselton) (S)				23	17.6
WC (Geraldton)	3.2	17.4	15.7	14.1	14.5
P&W (Alice Springs)	9	8	13	12	7.5
South Gippsland Water	3.4	5	5	5.2	5.3
Gympie					4.4
Westernport Water	3.2	3.2	2.6	3.6	4.3
Essential Energy	1.5	1.8	1.3	1.1	1.7
Kempsey	1.7	1.6	1.6	1.5	1.5
Eurobodalla	1.4	1.3	1.3	1.4	1.2
Wingecarribee	1.4	1.5	1.4	1.3	1.2
Lismore	1.5	1.7	1.3	1.4	1.2
Ballina	1.6	1.2	1.4	1.4	1.1
Bega Valley	1.1	1.2	1	1.1	1
Orange	1.4	1.3	1.1	1	0.9
Goulburn Mulwaree	1.1	1.1	1	0.9	0.9
Bathurst	1.1	1.2	1.1	0.9	0.8
Goldenfields Water (R)	1.5	1.3	1	0.9	0.7
Dubbo	0.9	0.8	0.9	0.6	0.6
Byron	0.8	0.8	0.8	0.7	0.6
Queanbeyan	1.1	1	0.9	0.7	0.5
Busselton (W)	0.1	0.1	0.1	0.1	0.1
Aqwest–Bunbury (W)	0	0		0	0
Kal–Boulder (S)	0	0	0	0	0

6 Customer

6.1 C15—Average duration of an unplanned interruption—water (minutes)

6.1.1 Introduction

This indicator reports the average time (in minutes) that a customer is without a water supply due to an unforeseen interruption that requires attention by the utility. It also includes instances in which scheduled (planned) interruptions exceed the time limit originally notified by the utility. It is a partial indicator of customer service and the condition of the water network, and of how effectively the network is being operated managed.

The average duration is influenced by the scale of the event that causes the interruption, the location of the interruption (its proximity to the utility's repair crews and, for example, the depth or location of a pipe that has burst), the utility's response policy for outlying areas, and the number of maintenance and repair staff at the utility's disposal. A single event affecting a small number of properties for a long duration can have a material effect on this indicator, particularly for smaller utilities, and hence there are often relatively large variations from year to year.

In 2013–14, 19 utilities reported increases, whereas 30 utilities reported decreases. The median value for all utilities decreased from 124 to 113 (Table 6.1).

Table 6.1 Overview of results: C15 (minutes)

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change of the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	161 SA Water	91 South East Water	4	8	130†	123†	–7%
50,000–100,000 connected properties	311 Gosford	3 Townsville	2	7	128	100	–22%
20,000–50,000 connected properties	220 Shoalhaven	4 Fitzroy River Water	8	5	104	102	–2%
10,000–20,000 connected properties	240 Gympie	3 Busselton (W)	5	10	132	115	–14%
All size groups (national)	311 Gosford	3 Busselton (W)	19	30	126†	116†	–8%

Table notes

† As a result of changes to reporting boundaries for SA Water, the 2012–13 average duration of an unplanned interruption uses a connected properties weighted average of Adelaide, Mount Gambier, and Whyalla, while the 2013–14 figure uses whole of SA Water data.

6.1.2 Results and analysis

100,000+ group

In this group, three reported increases while eight reported decreases from 2012–13 to 2013–14. The median for the group was 123 minutes, a decrease of 7% from 2012–13. SA Water had the highest result for 2013–14 (161 minutes), while South East Water had the lowest of 91 minutes (Figure 6.1).

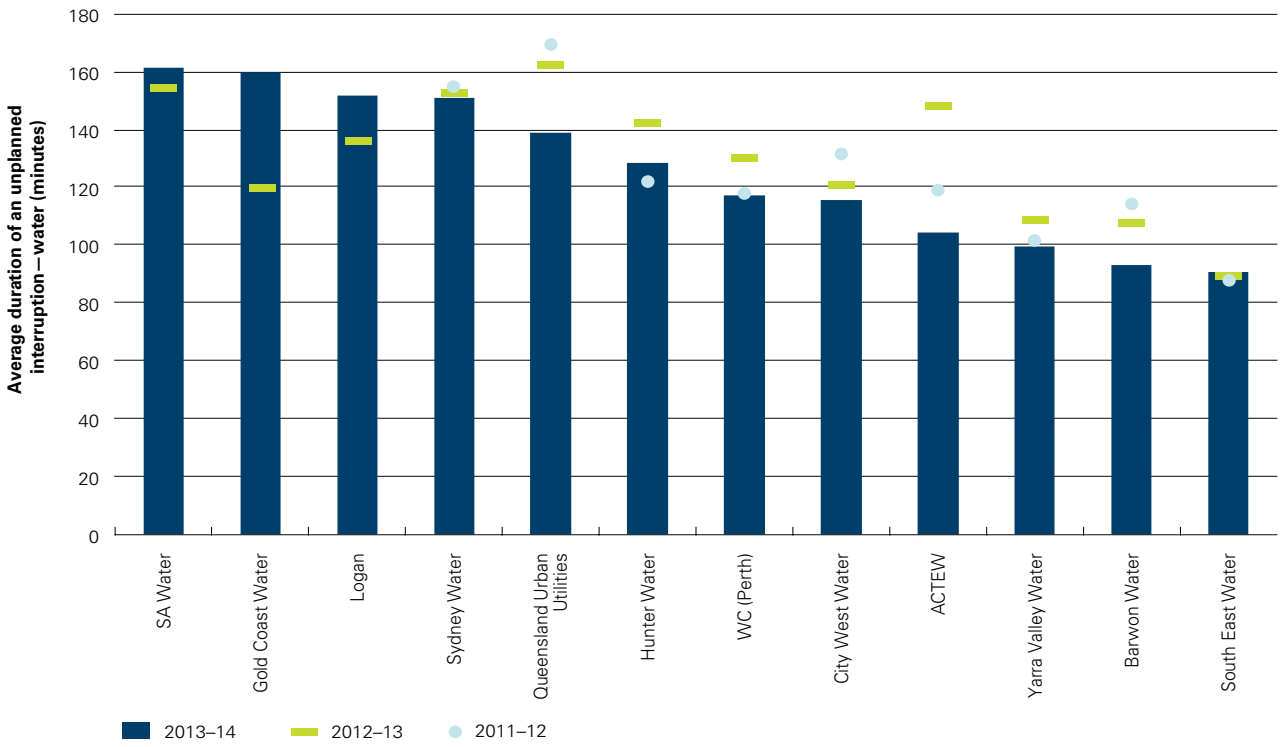

Figure 6.1 C15, 2011–12 to 2013–14 (minutes), for utilities with 100,000+ connected properties

50,000–100,000 group

In 2013–14, the median unplanned interruption for this group was 100 minutes, a 22% decrease from that of 2012–13 (128 minutes).

As with 2012–13, results were highly varied. Overall, seven utilities recorded a decrease while two recorded an increase for the 2013–14 year. Gosford recorded the largest unplanned interruption (311 minutes), while Townsville recorded the lowest (3 minutes) (Figure 6.2).

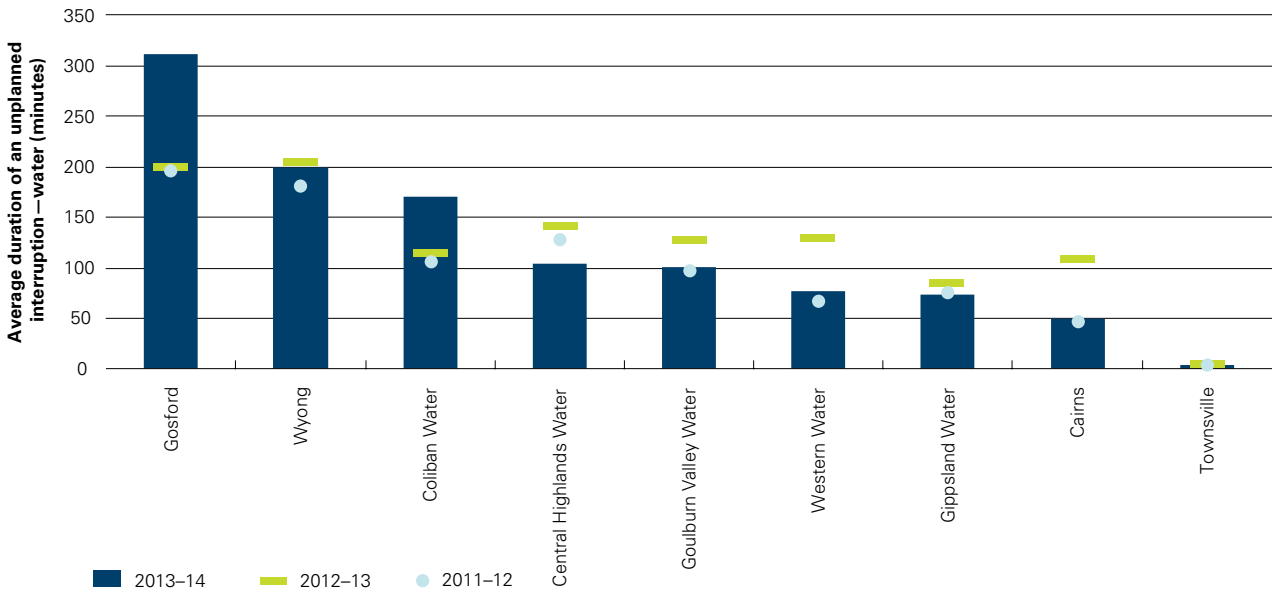

Figure 6.2 C15, 2011–12 to 2013–14 (minutes), for utilities with 50,000–100,000 connected properties

20,000–50,000 group

In 2013–14, the median unplanned interruption (102 minutes) for this group varied little from 2012–13 (Table 6.1). Of the group's 15 utilities, eight recorded an increase while five utilities recorded a decrease. The longest unplanned interruption was recorded by Shoalhaven (220 minutes) and the shortest by Fitzroy River Water (4 minutes).

Variations in the duration of unplanned interruptions between the 2011–12, 2012–13, and 2013–14 years is evident for Riverina Water, Port Macquarie Hastings, Mackay Water, North East Water and Fitzroy River Water (Figure 6.3).

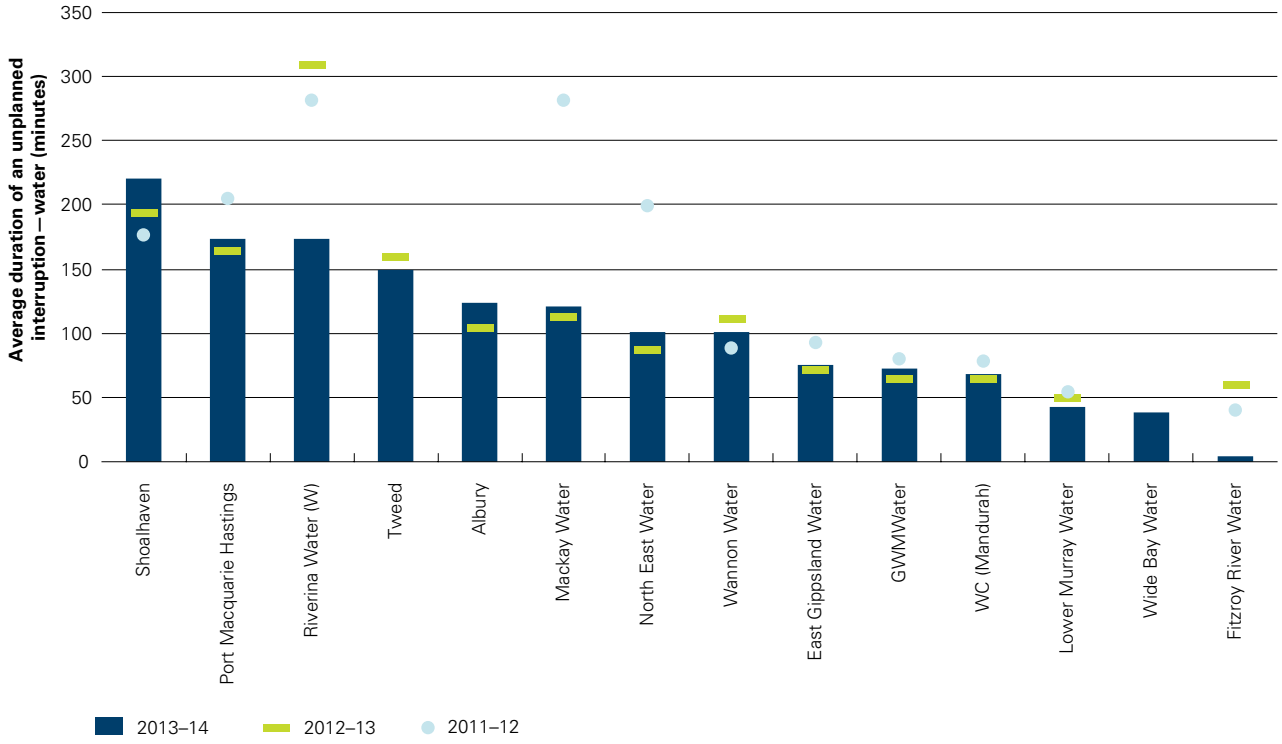

Figure 6.3 C15, 2011–12 to 2013–14 (minutes), for utilities with 20,000–50,000 connected properties

10,000–20,000 group

This group also presents significant variations in the duration of unplanned interruptions over different years (Figure 6.4); however, the 2013–14 median for all utilities decreased slightly by 9% from that of 2012–13.

In 2013–14, ten utilities reported a decreases and five reported increases (Table 6.1). The lowest duration was recorded by Busselton (3 minutes), and the highest by Gympie (240 minutes).

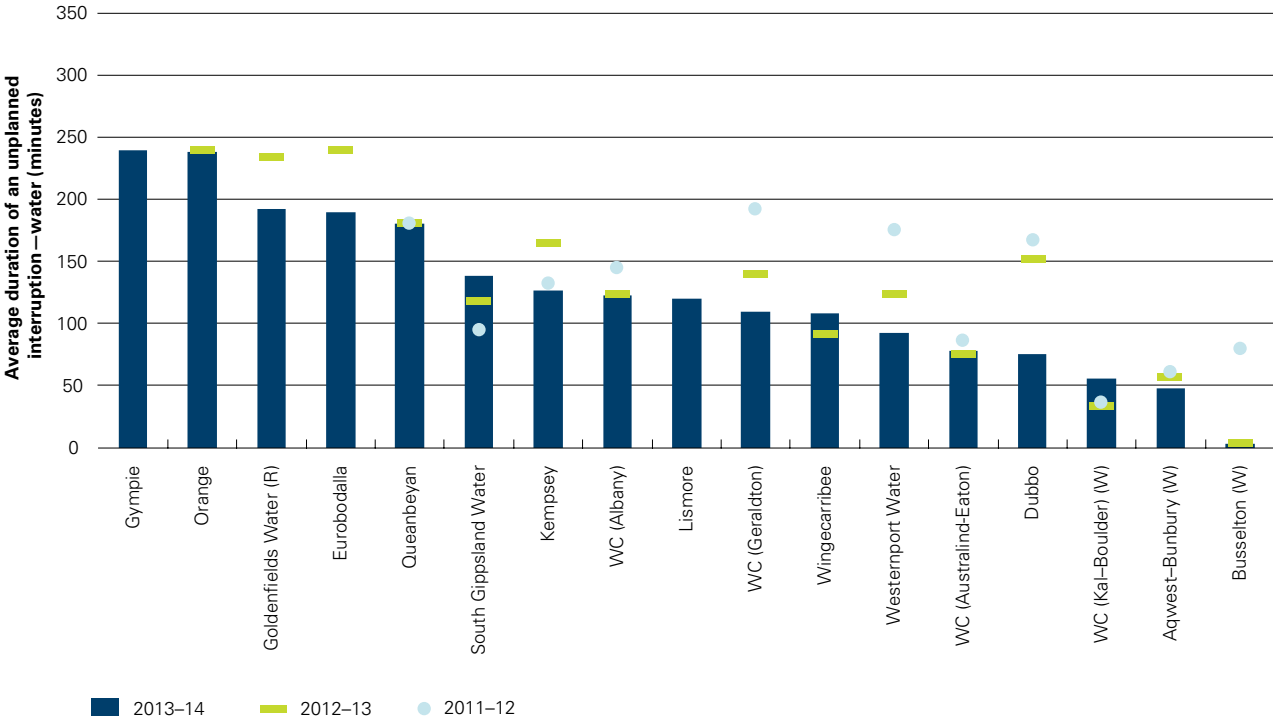

Figure 6.4 C15, 2011–12 to 2013–14 (minutes), for utilities with 10,000–20,000 connected properties

6.2 C13—Total water and sewerage complaints (per 1,000 properties)

6.2.1 Introduction

This indicator reports the total number of complaints received by a water utility per 1,000 properties. A complaint can be a written or verbal expression of dissatisfaction about an action or proposed action or a failure to act by the water utility, its employees, or contractors. Complaints from different customers arising from the same cause are recorded as separate complaints. The number of complaints is an indicator of the level of customer service and customer satisfaction and is a common performance indicator in many industries.

6.2.2 Results and analysis

In 2013–14, the median number of complaints per 1,000 properties (6) decreased by 1 from that of 2012–13 (7). Across the four utility groups, 28 reported decreases and 20 reported increases (Table 6.2).

Table 6.2 Overview of results: C13 (per 1,000 properties)

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	18.1	1.0	4	6	4.5†	3.6†	–19%
	Gold Coast Water	WC (Perth)					
50,000–100,000 connected properties	49.9	4.7	3	6	9.9	8.3	–17%
	P&W (Darwin)	Western Water					
20,000–50,000 connected properties	131.8	0	5	9	6.5	6.0	–8%
	Mackay Water	Coffs Harbour					
10,000–20,000 connected properties	103.0	0.7	8	9	8.2	9.5	-13%
	Wingecarribee	WC (Australind-Eaton)					
All size groups (national)	131.8	0	20	28	7.0†	5.8†	–17%
	Mackay Water	Coffs Harbour					

Table notes

† As a result of changes to reporting boundaries for SA Water, the 2012–13 total water and sewerage complaints uses a connected properties weighted average of Adelaide, Mount Gambier and Whyalla, while the 2013–14 figure uses whole of SA Water data.

100,000+ group

In this group, four utilities reported increases in the number of complaints and six reported decreases in 2013–14 compared with 2012–13. Gold Coast record the highest number of complaints per 1,000 properties (18).

Significant variation between the years in the number of complaints is evident for some utilities, particularly Yarra Valley Water (down 43%) and Barwon water (down 50%) between 2012–13 and 2013–14. Water Corporation (Perth) reported the lowest number of complaints (1), as shown in Figure 6.5.

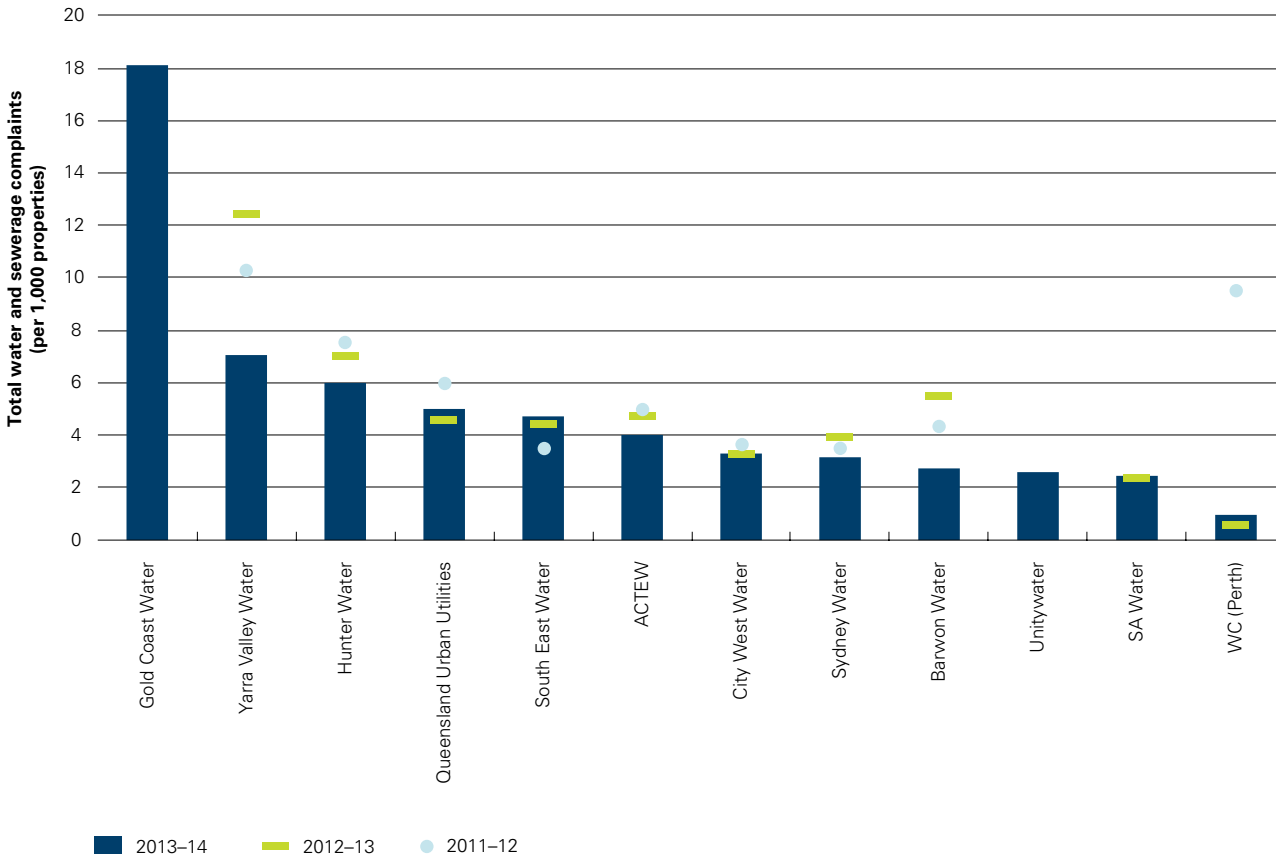

Figure 6.5 C13, 2011–12 to 2013–14 (per 1,000 properties), for utilities with 100,000+ connected properties

50,000–100,000 group

This group recorded an overall decrease of 17% in the median number of complaints per 1,000 properties for 2013–14 (8) compared with 2012–13 (10). Power and Water (Darwin) recorded the highest number of complaints (50), and Western Water the lowest (5).

Figure 6.6 overleaf shows that variability in complaints is minimal, with the exception of the Power and Water (Darwin) and Wyong.

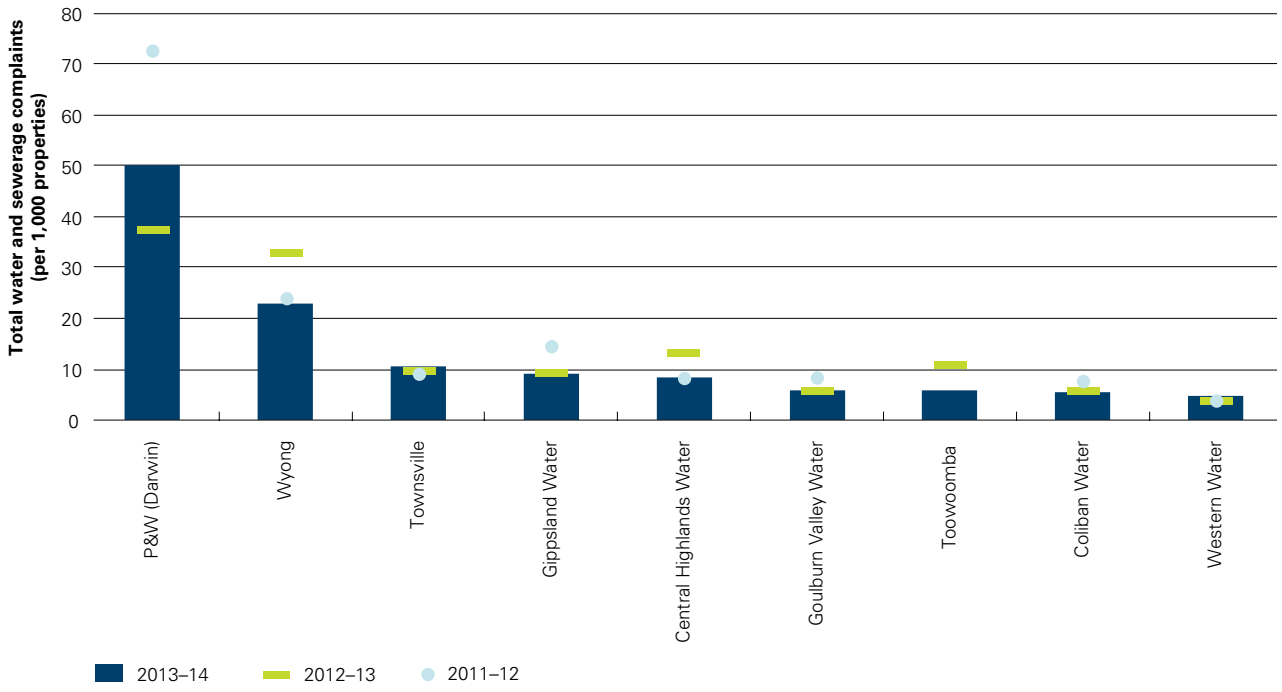

Figure 6.6 C13, 2011–12 to 2013–14 (per 1,000 properties), for utilities with 50,000–100,000 connected properties

20,000–50,000 group

Within this group, Mackay Water recorded the highest number of complaints (132) per 1,000 properties (Table 6.2). Clarence Valley Council recorded the largest increase, recording 101 complaints per 1,000 properties in 2013–14 compared with 53 in 2012–13 (Figure 6.7).

The 2013–14 year continued the trend of previous years, with five utilities reporting increases in the number of complaints and nine reporting decreases (Table 6.2).

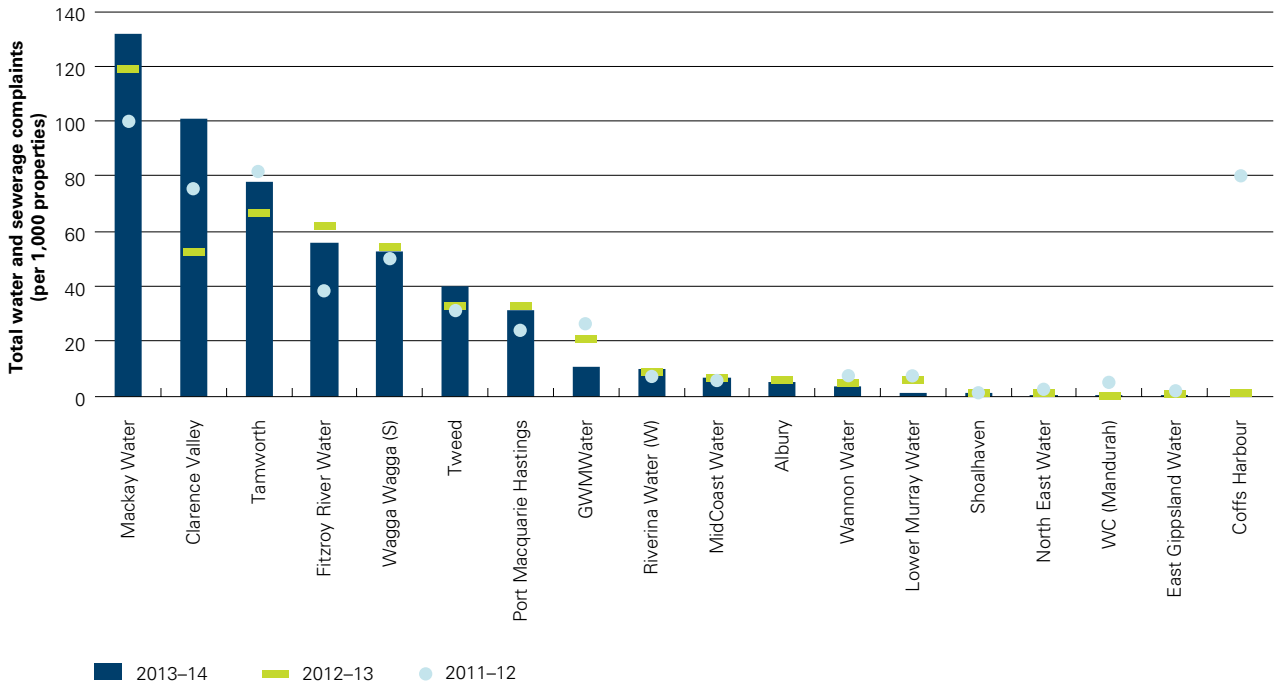

Figure 6.7 C13, 2011–12 to 2013–14 (per 1,000 properties), for utilities with 20,000–50,000 connected properties

10,000–20,000 group

In 2013–14, 50% of utilities within this group reported less than 5 complaints per 1,000 properties for the 2013–14 period.

As with 2012–13, the three utilities reporting the highest number of complaints per 1,000 properties were Wingecarribee (103), Orange (92), and Bathurst (82). The number of complaints received by Goldenfields and Power and Water (Alice Springs) both decreased by 84%, while Lismore recorded an increase from 4 (per 1,000 properties) in 2013–13 to 19 in 2013–14 (Figure 6.8).

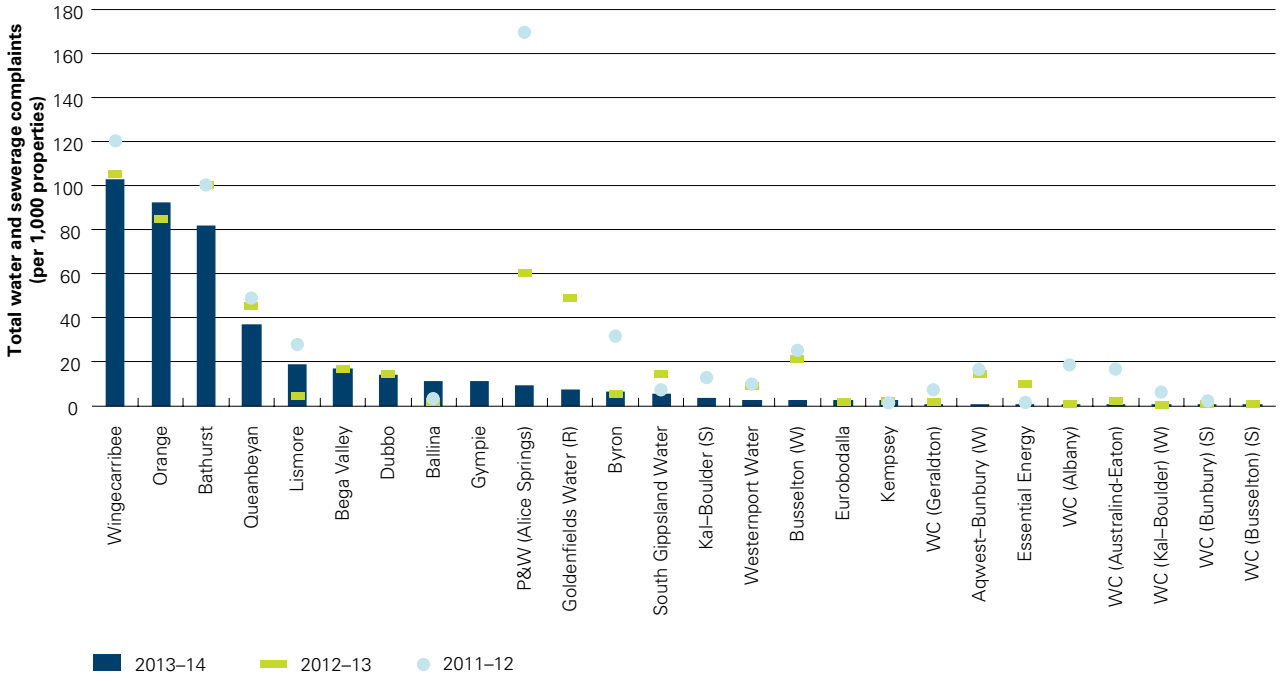

Figure 6.8 C13, 2011–12 to 2013–14 (per 1,000 properties), for utilities with 10,000–20,000 connected properties

6.3 C14—Percentage of calls answered by an operator within 30 seconds

6.3.1 Introduction

Where utilities use interactive voice response systems, this indicator measures the number of calls answered within 30 seconds after the 'operator' option is selected. It gives an indication of the efficiency of the utility's customer service centre, and is affected by the ratio of customer service staff to customers, particularly when severe events such as storms or floods result in a large increase in customer calls.

In 2013–14, 19 utilities recorded an increase in the percentage of calls answered by an operator within 30 seconds while 15 utilities recorded a decrease; overall, however, there was no change in the median between 2012–13 and 2013–14 (Table 6.3).

Table 6.3 Overview of results: C14 (%)

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	92 Barwon Water	34 Gold Coast Water	4	7	79†	79†	<1%
50,000–100,000 connected properties	99 Goulburn Valley Water	33 Wyong	7	1	84	84	<1%
20,000–50,000 connected properties	100 Wagga Wagga (S)	44 Mackay Water	4	5	96	94	–2%
10,000–20,000 connected properties	100 Kal–Boulder (S)	48 Kempsey	4	2	80	80	–1%
All size group (national)	100 Multiple utilities	33 Wyong	19	15	84†	84†	<1%

Table notes

† As a result of changes to reporting boundaries for SA Water, the 2012–13 Percentage of calls answered by an operator within 30 seconds uses Adelaide data while the 2013–14 figure uses whole of SA Water data.

6.3.2 Results and analysis

100,000+ group

This group recorded a minimal change in the percentage of calls answered by an operator within 30 seconds for the 2012–13 and 2013–14 reporting years. The median increased by less than 1%, with the highest percentage reported by Barwon Water (92) and the lowest by Gold Coast Water (34) (Figure 6.9).

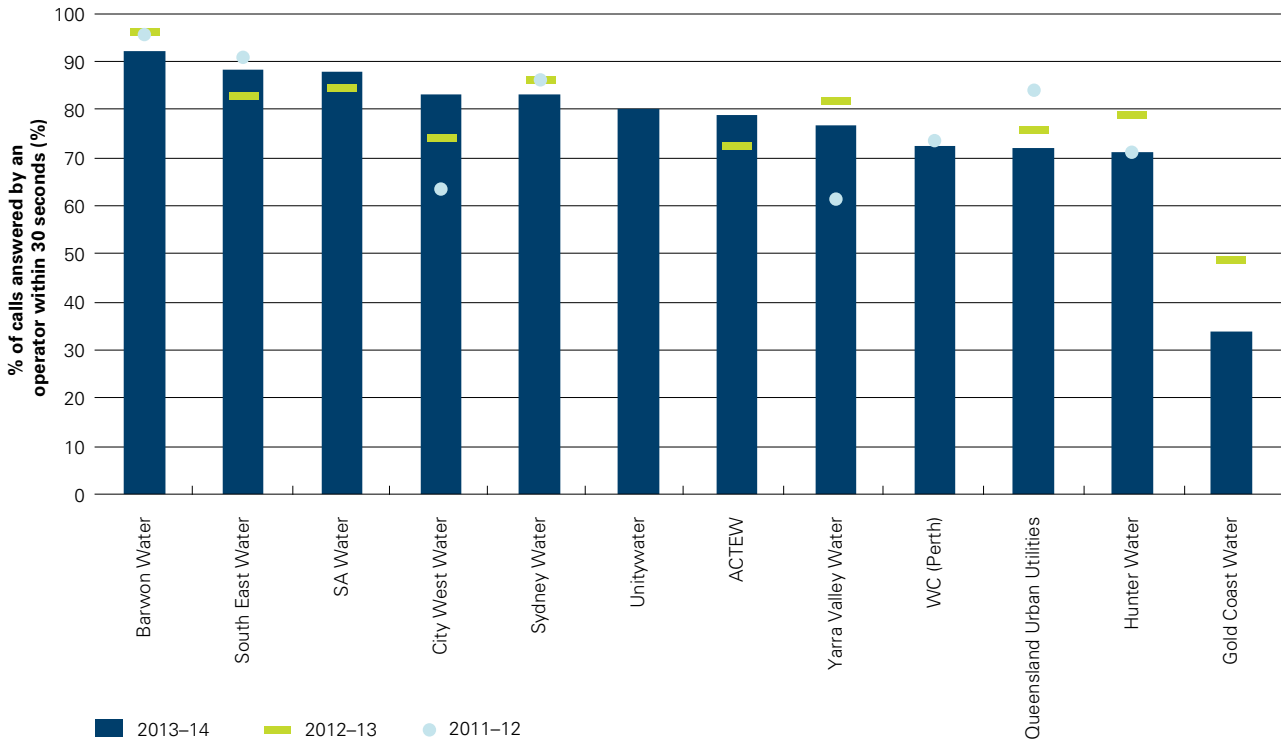

Figure 6.9 C14, 2011–12 to 2013–14, for utilities with 100,000+ connected properties

50,000–100,000 group

This group also recorded minimal variation in the percentage of calls answered by an operator within 30 seconds (Figure 6.10). Overall, there was no change in the median percentage between 2012–13 and 2013–14. The highest percentage was recorded by Goulburn Valley Water (99) and the lowest by Wyong (33).

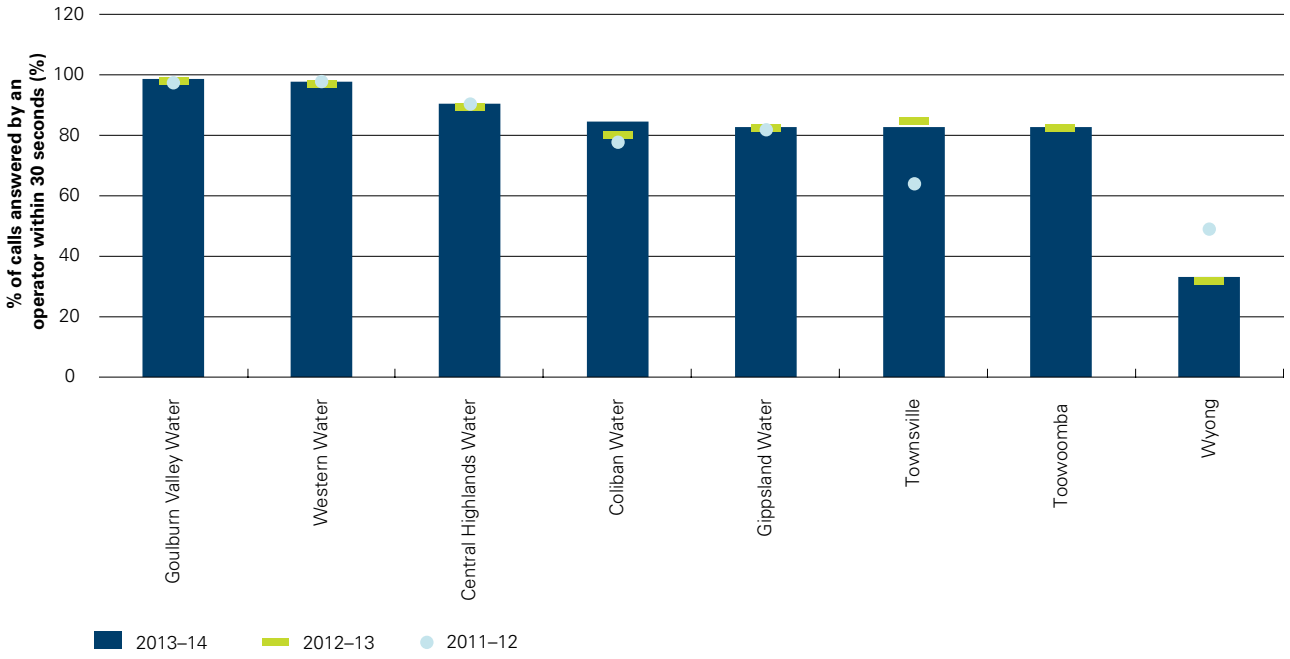

Figure 6.10 C14, 2011–12 to 2013–14, for utilities with 50,000–100,000 connected properties

20,000–50,000 group

In 2013–14, eight utilities within this group reported results between 85% and 100% for the percentage of calls answered by an operator within 30 seconds (Figure 6.11). The highest percentages were reported by Wagga Wagga and East Gippsland Water (100%). Although Mackay Water recorded the lowest result (44%), this also represented an increase of 30% from its 2012–13 result.

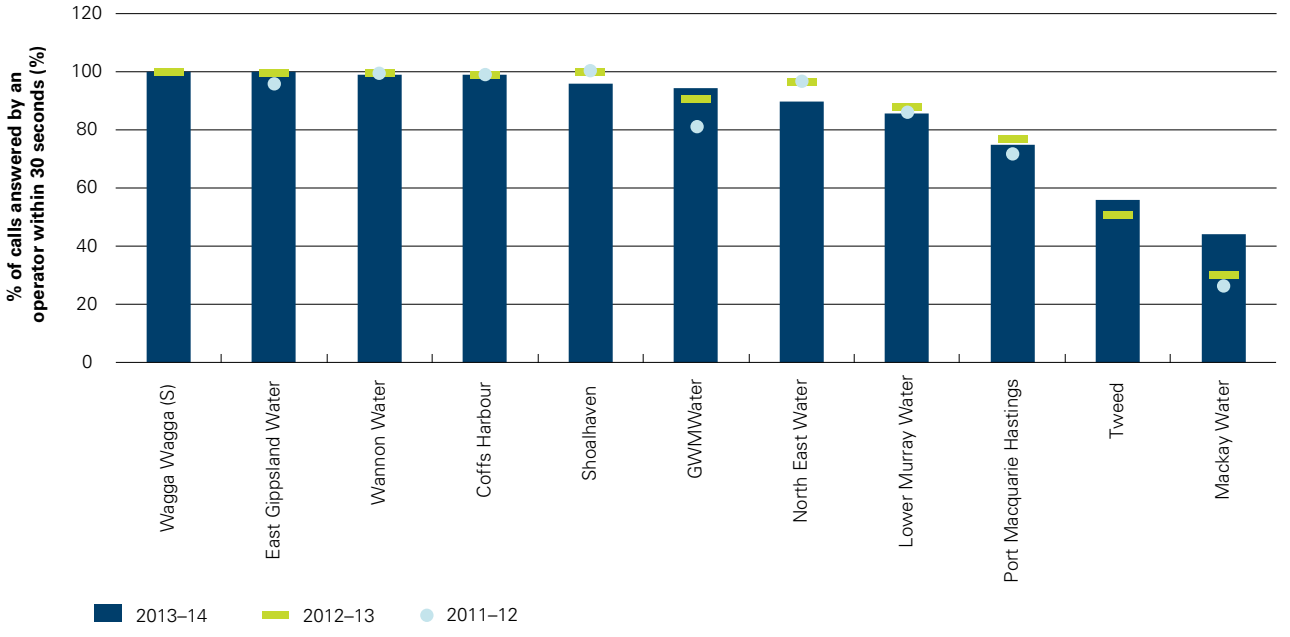

Figure 6.11 C14, 2011–12 to 2013–14, for utilities with 20,000–50,000 connected properties

10,000–20,000 group

In the 2013–14 period, the majority of utilities in this group answered at least 78% of calls within 30 seconds. There was minimal variation between the 2012–13 and 2013–14 years (Figure 6.12). Wingecarribee recorded the largest increase (20%) between the two reporting years. Overall, the median percentage was unchanged.

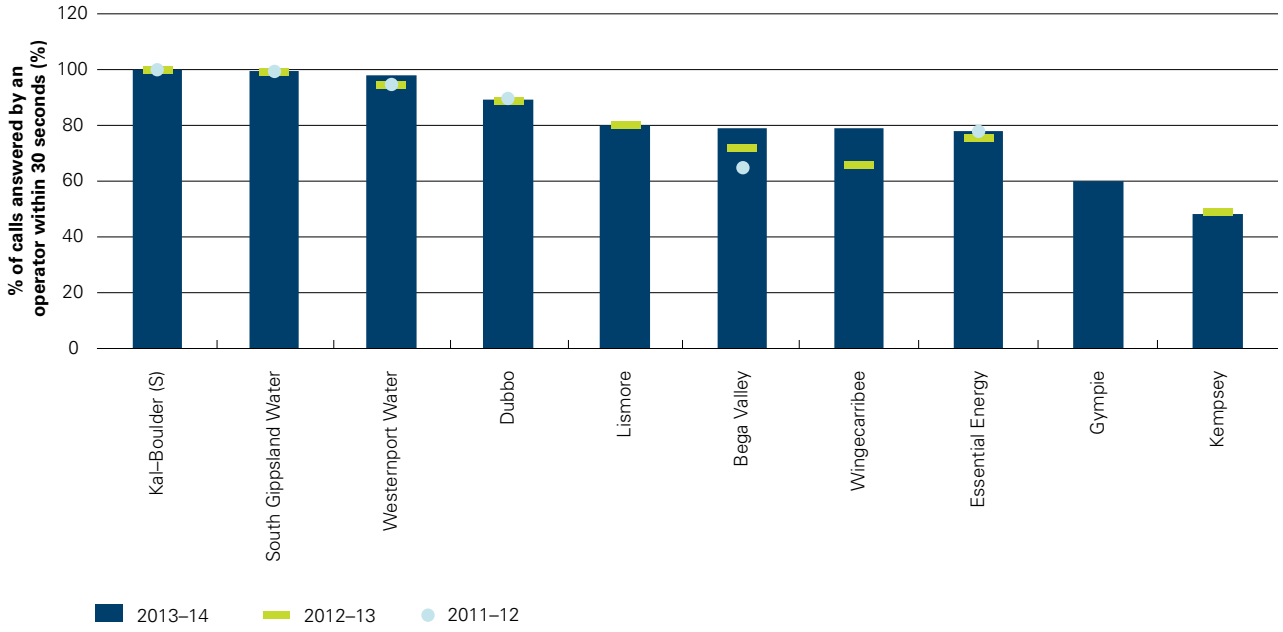

Figure 6.12 C14, 2011–12 to 2013–14, for utilities with 10,000–50,000 connected properties

7.1 A8—Water main breaks (per 100km of water main)

7.1.1 Introduction

This indicator reports the total number of breaks, bursts, and leaks in all distribution system mains (including both potable and nonpotable water mains), but excludes breaks associated with headworks and transfer mains. It provides a partial indication of the customer service provided and the condition of the network.

The number of main breaks is influenced by various factors, including soil type, rainfall, and pipe material, as well as the age and condition of the network.

Both median and mean results reported in 2013–14 support the observation that there is a relationship between utility size and mains breaks, with smaller utilities reporting fewer breaks per 100 km.

In 2013–14, 32 utilities reported an increase in the number of water main breaks per 100 km of water main compared with 2012–14, and 31 reported a decrease (Table 7.1). The national median for this indicator (Figure 7.1) has shown a steady decline since 2007–08 when, during the peak of the drought, breaks increased significantly.

Table 7.1 Overview of results: A8 (per 100 km of water main)[1]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	51	6	4	8	28†	30†	6%
	Yarra Valley Water	Unitywater					
50,000–100,000 connected properties	29	13	5	6	19	22	18%
	Coliban Water	Western Water					
20,000–50,000 connected properties	60	3	10	8	10	10	4%
	GWMWater	Coffs Harbour					
10,000–20,000 connected properties	48	2	12	10	11	10	-9%
	South Gippsland Water	Queanbeyan					
All size groups (national)	60	2	31	32	13†	12†	–6%
	GWMWater	Queanbeyan					

Table notes

[1] Median water main breaks (per 100 km of water main) is calculated using data from all utilities (dual and single service providers) who reported data for A8 in both 2012–13 and 2013–14.

† As a result of changes to reporting boundaries for SA Water, the 2012–13 main breaks uses the main length weighted average of data for metropolitan Adelaide, Whyalla, and Mount Gambier, while the 2013–14 figure uses whole of SA Water data.

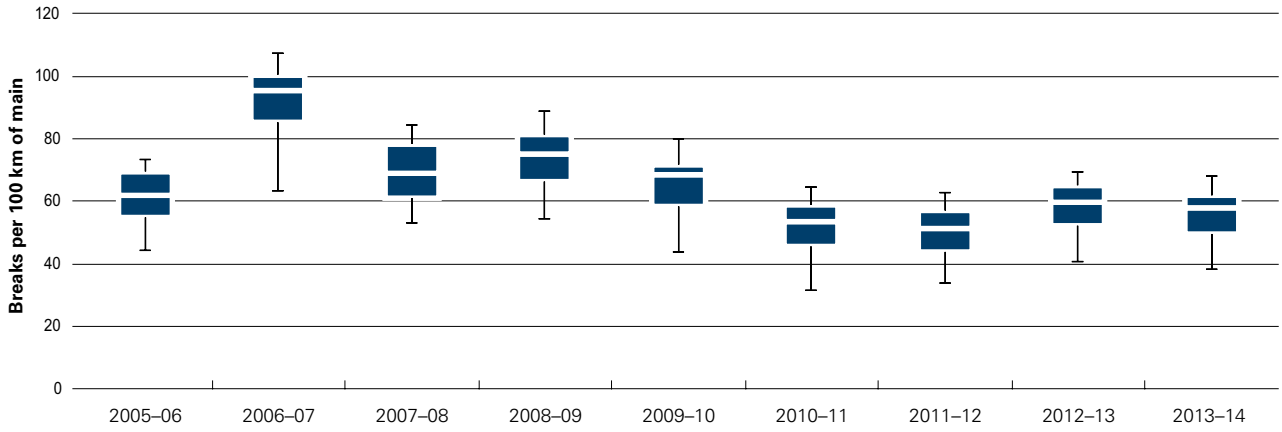

Figure 7.1 Summary of results: A8 (per 100 km of water main), 2005–06 to 2013–14 (per 100 km of water main)

7.1.2 Results and analysis

100,000+ group

Figure 7.2 presents breaks per 100 km of water main for this group over the last three reporting years. In 2013–14, four utilities reported increases and eight reported decreases compared with 2012–13.

Yarra Valley Water reported the highest number of breaks in 2013–14 (51 per 100 km of water main), down 3% from the previous year. The largest decreases were reported by ACTEW (42%) and Barwon Water (30%).

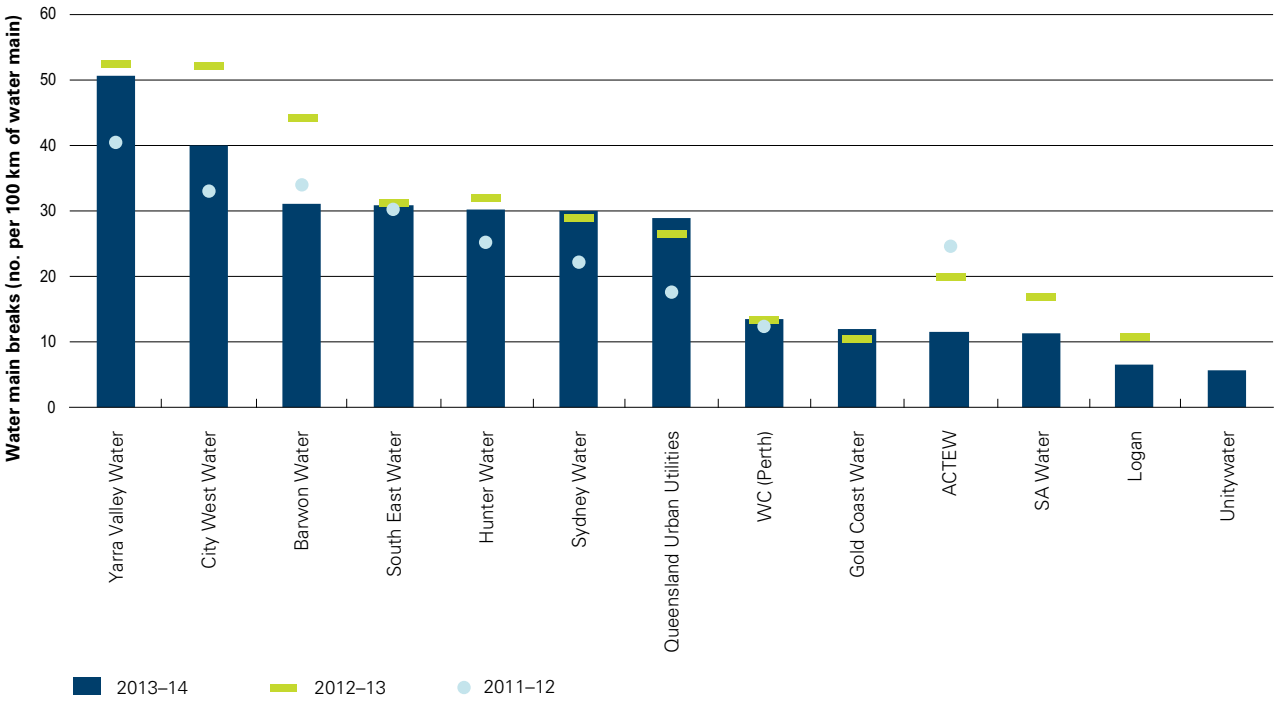

Figure 7.2 A8, 2011–12 to 2013–14 (per 100 km of water main), for utilities with 100,000+ connected properties

50,000–100,000 group

Within this group, five reported increases in the number of breaks per 100 km of water main in 2013–14 and six reported decreases (Figure 7.3). Overall, the median for the group increased from 19 breaks in 2012–13 to 22 in 2013–14 (18%).

Wyong reported the greatest increase (68%) from 2012–13 to 2013–14, continuing the trend from previous reporting years. Coliban Water reported the highest number of water main breaks (29) for this group and while this was a 7% increase on 2012–13 the number of breaks remains below its high of 2008–09.

The most significant decrease (29%) was reported by Western Water followed by Gippsland Water (25%) and Toowoomba (25%). Toowoomba's decrease was attributed to improvements in the scheduling of maintenance.

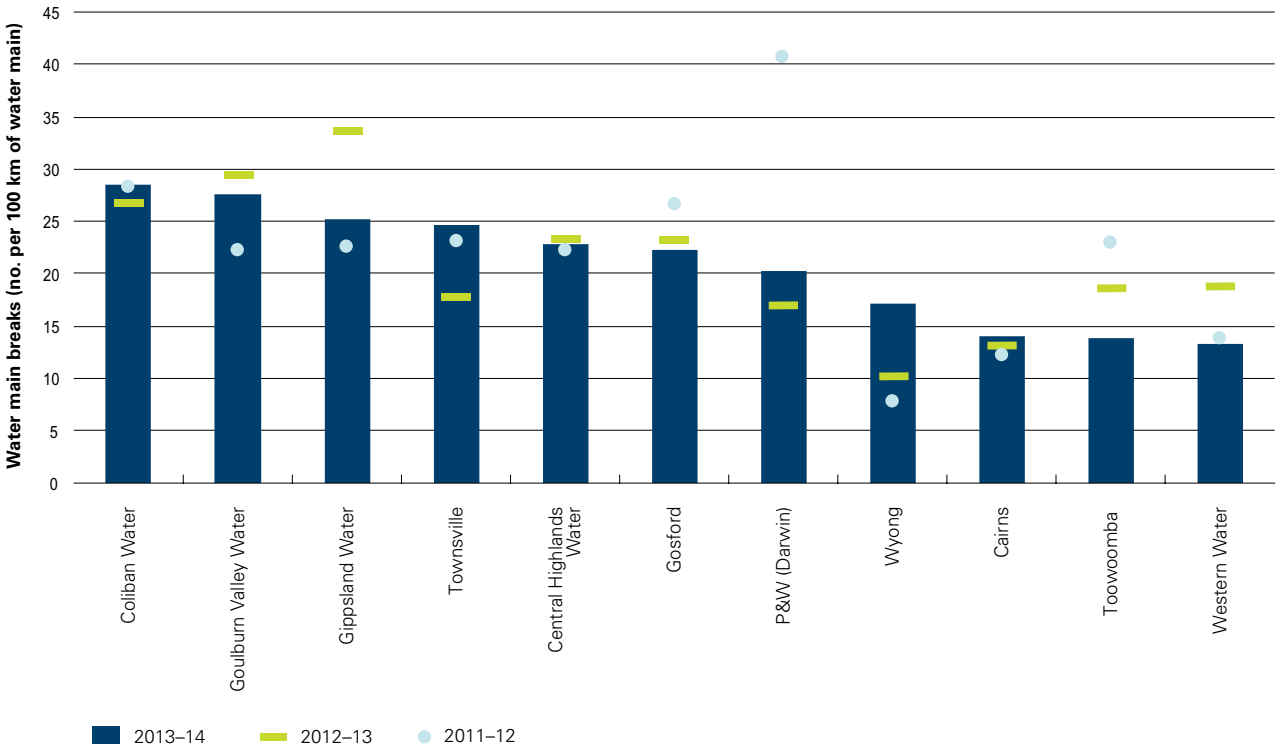

Figure 7.3 2011–12 to 2013–14 (per 100 km of water main), for utilities with 50,000–100,000 connected properties

20,000–50,000 group

There was wide variability in the number of breaks for the utilities in this group, with reported data spanning a range between 3 and 60 breaks per 100 km of water main (Figure 7.4). Of the 18 utilities, 10 reported increases in main breaks. The largest increase was reported by Port Macquarie Hastings, from 3 breaks in 2012–13 to 15 breaks in 2013–14. Tweed Shire Council also reported a large increase (82%) from 4 breaks in 2012–13 to eight breaks in 2013–14.

Other utilities which reported increases included Wide Bay Water (37%) and Albury (34%), as well as Riverina Water (W) and Fitzroy River Water, which both recorded a 33% increase. The data trends for Riverina Water and Fitzroy River Water show an increase in total number of main breaks over the last four years for both utilities.

The most significant decreases were reported by Coffs Harbour (67%) followed by WC (Mandurah) (54%) and North East Water (38%).

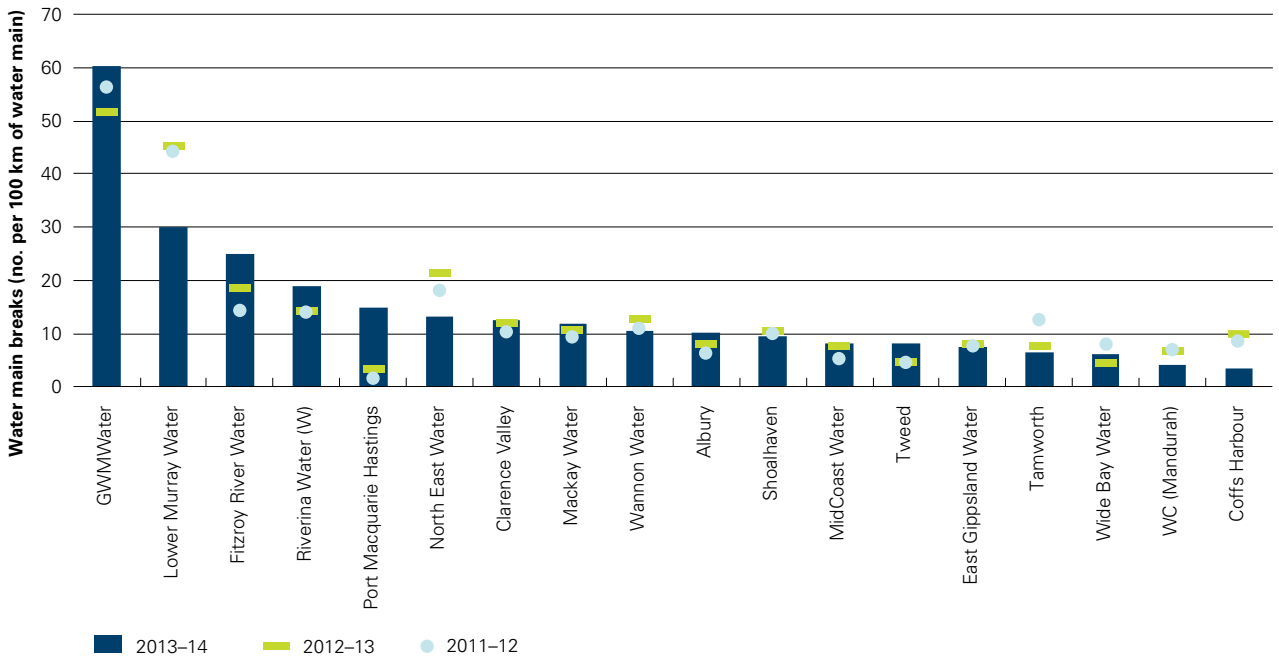

Figure 7.4 A8, 2011–12 to 2013–14 (per 100 km of water main), for utilities with 20,000– 50,000 connected properties

10,000–20,000 group

This group reported a wide variation in the number of breaks per 100 km of water main for 2013–14 (Figure 7.5). Of the 23 utilities that reported in both 2012–13 and 2013–14, 12 reported increases in water main breaks. The median for this size group was 11 in 2013–14, representing a 9% decrease from 2012–13.

The largest increase was reported by Wingecarribee (115%), followed by Bathurst (67%), and Power and Water (Alice Springs) (52%). South Gippsland Water reported the highest number of water mains breaks (48) which was a 30% increase from 2012—13.

The largest decrease was reported by Queanbeyan (66%), followed by Goldenfields Water (R) (50%), Ballina (48%) and Westernport Water (41%) (Figure 7.5).

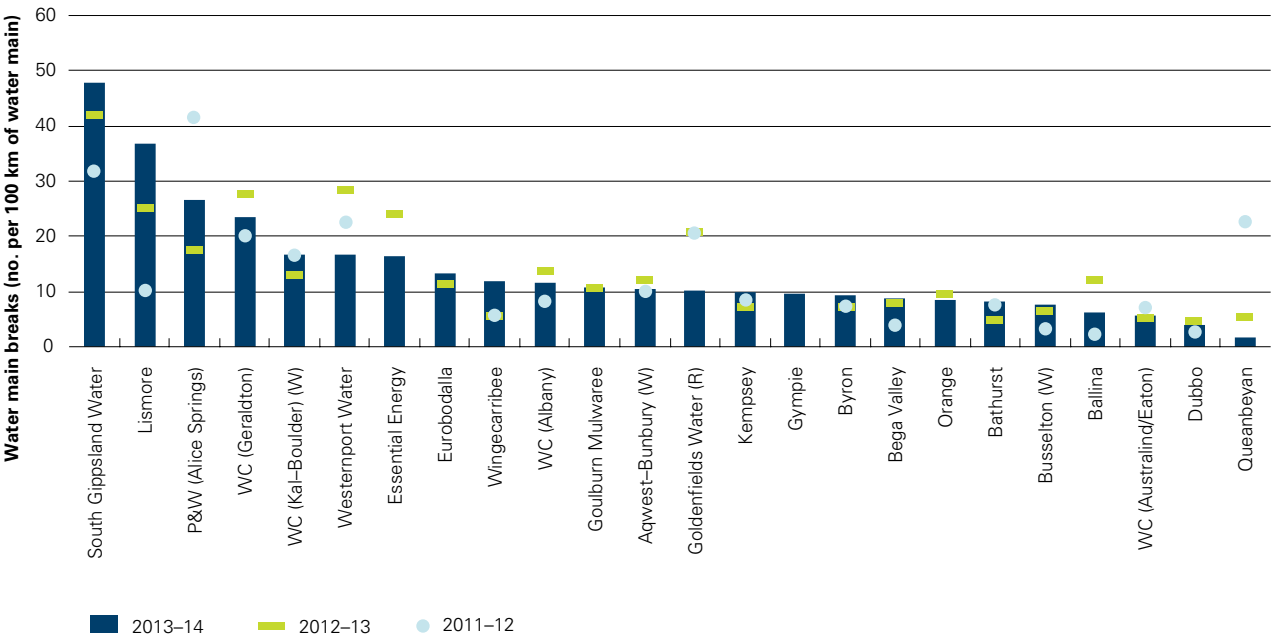

Figure 7.5 A8, 2011–12 to 2013–14 (per 100 km of water main), for utilities with 10,000–20,000 connected properties

7.2 A14—Sewerage mains breaks and chokes (no. per 100 km of sewer main) and A15—Property connection sewer breaks and chokes (no. per 1,000 properties)

7.2.1 Introduction

Indicator A14 reports the number of breaks and chokes per 100 km of sewerage main, and Indicator A15 reports the number of property-connection sewerage breaks and chokes per 1,000 properties. The indicators are presented together to provide a complete picture of sewer system performance, which is important because water utilities have sewer networks with various configurations. For example, some have a very long property connection (from the customer's sanitary drain to the middle of a road), while others have a very short or no property connection (i.e., the sanitary drain may connect straight to the sewer main, which runs down an easement at the back of the property).

Some utilities do not own or maintain the property connections and therefore do not report them (in accordance with the definition of the indicator). Other utilities are responsible for only a portion of property sewer connections, and so only report results on those for which they are responsible.[4]

The performance of a sewerage system is influenced by such factors as soil type, pipe material, and sewerage configuration, as well as age, tree root intrusion, the management of trade waste, the volume of sewage inflows, and rainfall. The results are a partial indicator of the condition of the network and level of customer service.

In 2013–14, 35 utilities reported increases in sewerage main breaks and chokes while 24 reported decreases (Table 7.2). The national median in 2013–14 remained consistent with that of 2012–13, rising just 2% to 19.4.

Across the four utility groups, 26 reported increase in property-connection sewer breaks and chokes, while 17 reported decreases. The national median for property-connection sewerage breaks and chokes rose 35% from 3.1 per 1,000 properties in 2012–13 to 4.2 per 1,000 properties in 2013–14 (Table 7.3).

[4] For such utilities, each property owner is responsible for the property's sewer connections.

Table 7.2 Overview of results: A14 (per 100 km of sewerage main)[1]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	61 Sydney Water	12 Logan	10	1	25.2†	27.6†	10%
50,000–100,000 connected properties	63 Coliban Water	5 Townsville	8	3	16.1	18.8	17%
20,000–50,000 connected properties	80 Wagga Wagga (S)	1 Tweed	9	7	16.1	12.1	–25%
10,000–20,000 connected properties	115 Essential Energy	1 P&W (Alice Springs)	8	13	24.0	20.0	–17%
All size groups (national)	115 Essential Energy	1 Tweed	35	24	19.1†	19.4†	2%

Table notes

[1] The median sewer main breaks (per 100 km of water main) is calculated using data from all uses (dual and single service providers) that reported data for A14 in both 2012–13 and 2013–14.

† As a result of changes to reporting boundaries for SA Water the 2012–13, sewer main breaks uses the length of sewer main weighted average of data for metropolitan Adelaide, Whyalla, and Mount Gambier, while the 2013–14 figure uses whole of SA Water data.

Table 7.3 Overview of results: A15 (per 1,000 properties)[1]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	30 SA Water	0 Barwon Water	6	3	5.0†	4.6†	–8%
50,000–100,000 connected properties	18 Coliban Water	0 Gippsland Water	8	1	3.1	4.11	35%
20,000–50,000 connected properties	21 Wagga Wagga (S)	0 Multiple utilities	6	6	2.7	2.3	–17%
10,000–20,000 connected properties	37 Essential Energy	0 Multiple utilities	6	7	4.5	4.8	7%
All size groups (national)	37 Essential Energy	0 Multiple utilities	26	17	3.1†	4.2†	35%

Table notes

[1] The median property-connection sewer breaks and chokes (per 1,000 properties) is calculated using data from all uses (dual and single service providers) that reported data for A15 in 2012–13 and 2013–14.

† As a result of changes to reporting boundaries for SA Water, the 2012–13 property-connection sewer breaks and chokes (per 1,000 properties) uses the connected-properties weighted average of data for metropolitan Adelaide, Whyalla, and Mount Gambier while the 2013–14 figure uses whole of SA Water data.

7.2.2 Results and analysis

100,000+ group

Where data was available, all utilities in this group reported increases in sewerage main breaks and chokes (A14), with the exception of SA Water. The greatest change was reported by ACTEW (36%), followed by Sydney Water (33%), and Hunter Water (27%) (Figure 7.6).

Sydney Water reported that its increase may be due to climatic variation in the past 18 months, with unusually warm temperatures that resulted in drier ground conditions, leading to tree roots seeking moisture in sewerage pipes and increasing chokes and breaks in the system.

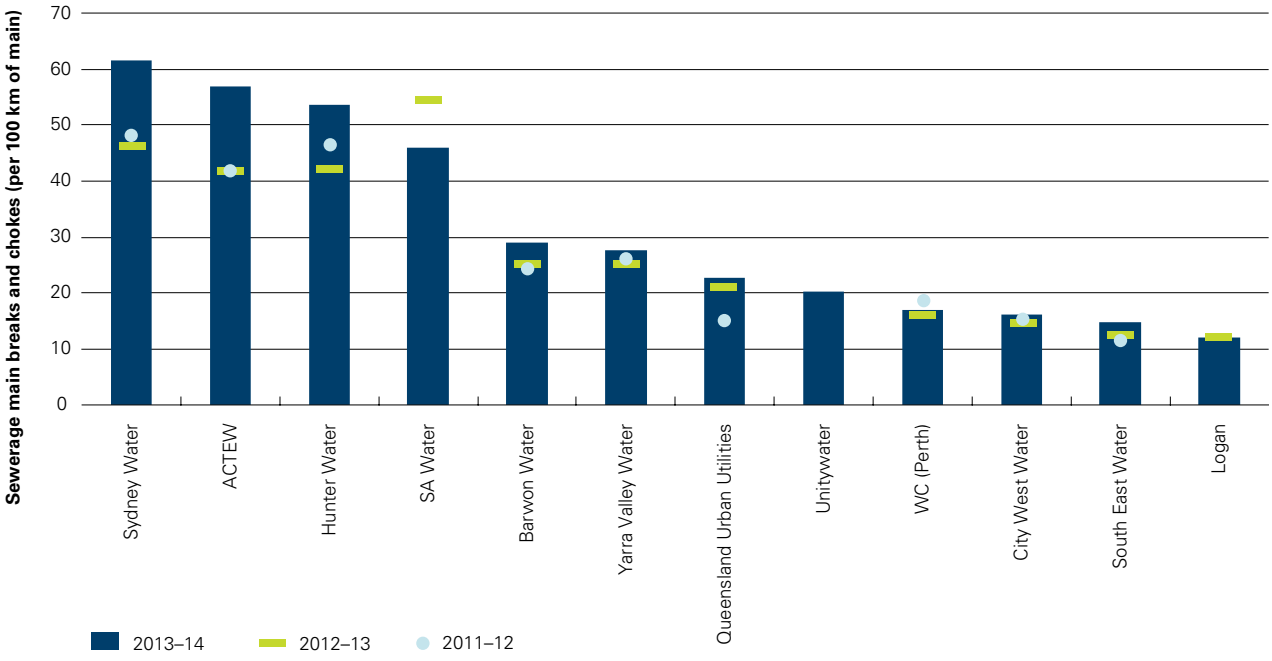

Figure 7.6 A14, 2011–12 to 2013–14 (per 100 km of sewer main), for utilities with 100,000+ connected properties

For property-connection breaks (A15), South East Water reported the greatest decrease (32%) followed by SA Water (20%), and Logan (18%) (Figure 7.7). Sydney Water reported the greatest increase (31%); however, this is an artefact of its low base of 0.16 breaks per 1,000 properties in 2012–13, rising to 0.21 breaks per 1,000 properties in 2013–14, which is the lowest of all the utilities in the group.

SA Water reported the largest number breaks (30) per 1,000 properties for 2013–14, followed by Hunter Water and ACTEW (both reporting 10 breaks per 1,000 properties). SA Water's decrease can in part be attributed to changes in its reporting for 2013–14, with the utility providing a single value for each indicator for its entire operation in 2013–14.

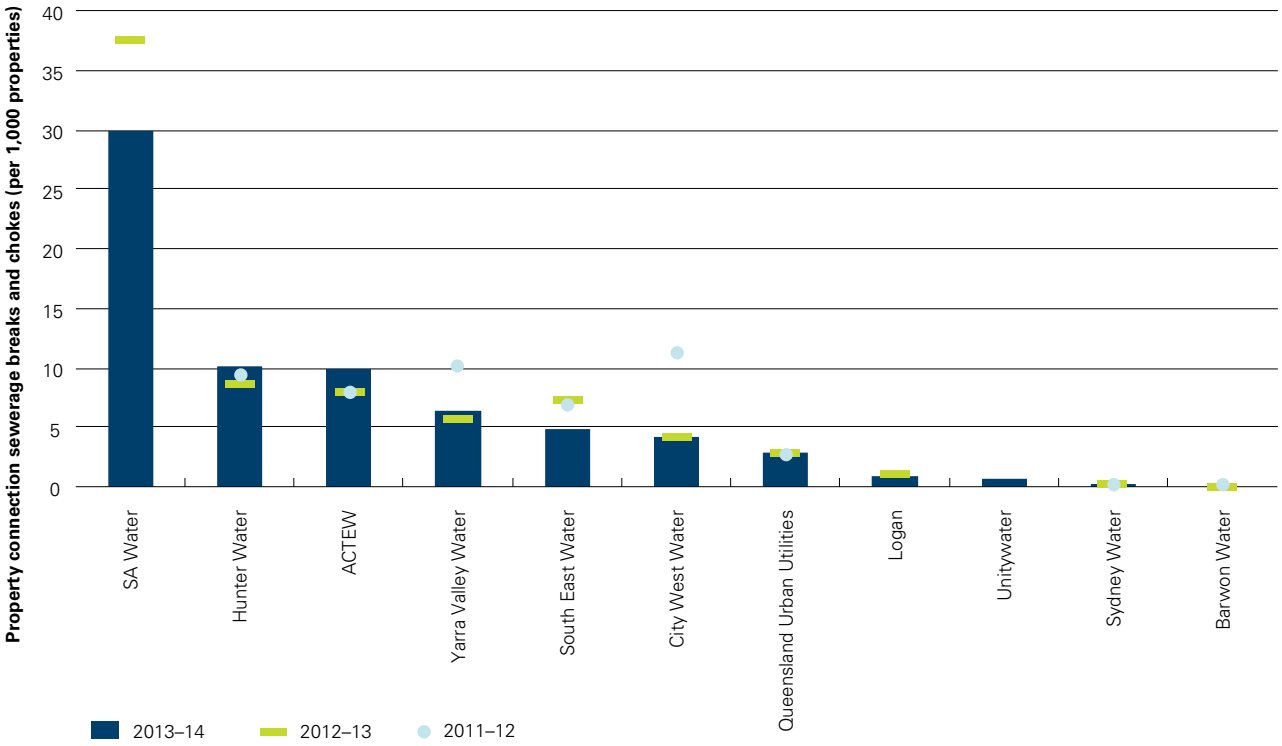

Figure 7.7 A15, 2011–12 to 2013–14 (per 1000 properties), for utilities with 100,000+ connected properties

50,000–100,000 group

In this group, three utilities reported decreases in breaks per 100 km of sewerage mains, while eight reported increases (Figure 7.8). Power and Water (Darwin) reported the greatest decrease of 46% (from 15.7 to 8.5), while Townsville reported the greatest increase of 101% (from 2.7 to 5.4), followed by Toowoomba at 91% from (16.1 to 30.7).

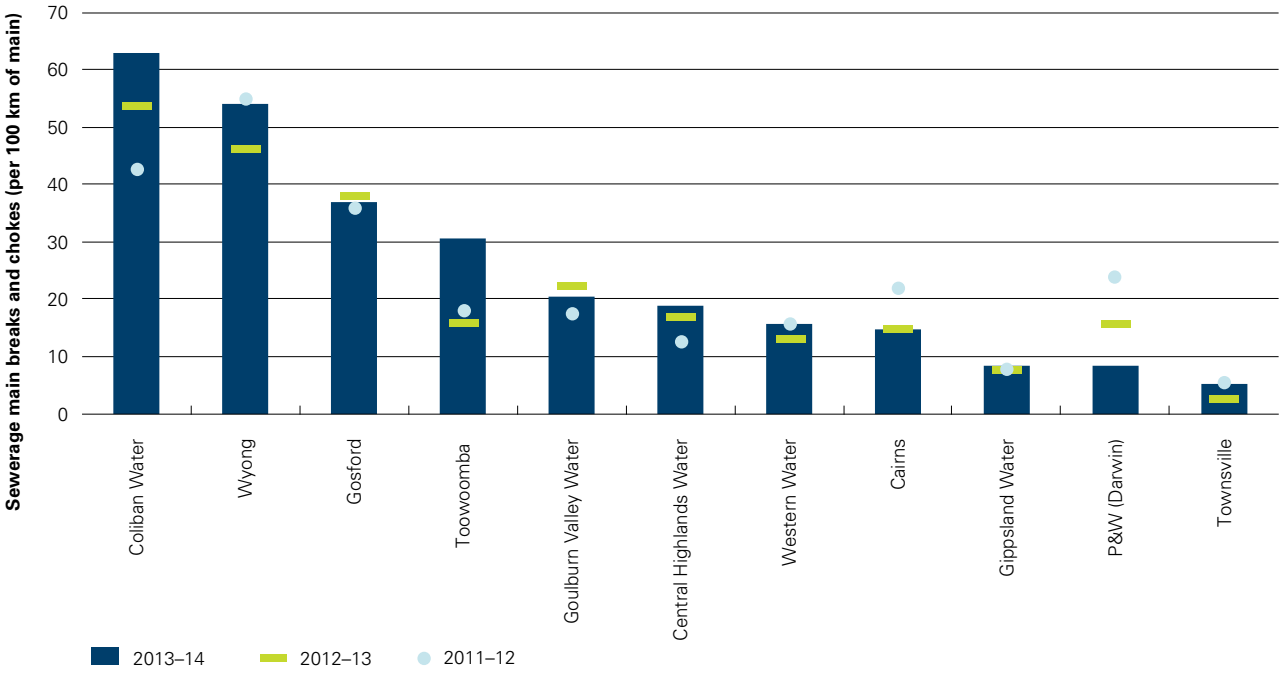

Figure 7.8 A14, 2011–12 to 2013–14 (per 100 km of sewerage main), for utilities with 50,000–100,000 connected properties

In 2013–14, all utilities within this group reported an increase in property-connection sewerage breaks and chokes, except Goulburn Valley Water which recorded a 37% decrease. Breaks and chokes were down overall from 8.25 to 5.2 (Figure 7.9). Cairns reported the largest percentage increase with a rise of 142% (1.32 to 3.19). Coliban Water reported the highest number of property-connection sewerage breaks at 18 per 100 km of sewerage main, representing a year-on increase of 24%.

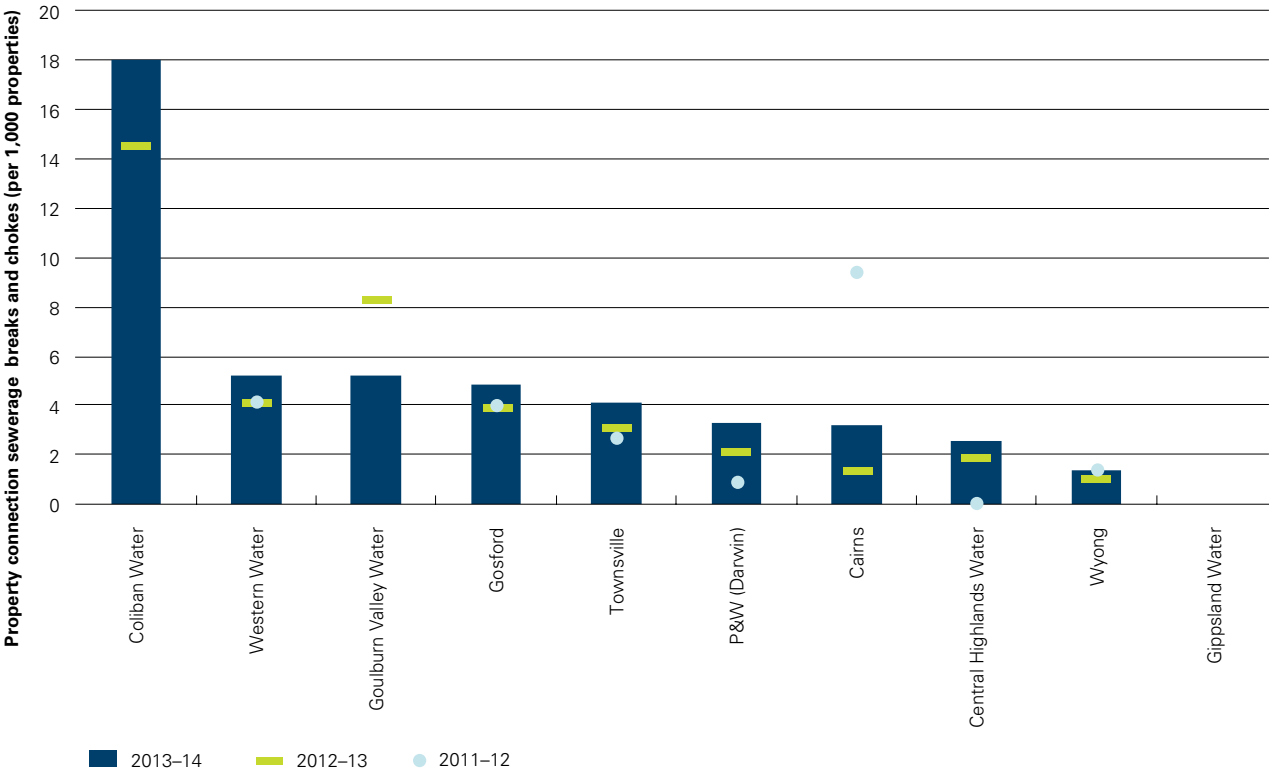

Figure 7.9 A15, 2011–12 to 2013–14 (per 1,000 properties), for utilities with 50,000–100,000 connected properties

20,000–50,000 group

In 2013–14, nine utilities in this group reported increases in the number of sewerage main breaks and chokes (A14), while seven reported decreases and MidCoast Water remained constant (Figure 7.10). Mackay Water reported the largest percentage increase (351%), from 4 to 19. Fitzroy River Water reported the largest percentage decrease (83%), from 70 to 12.

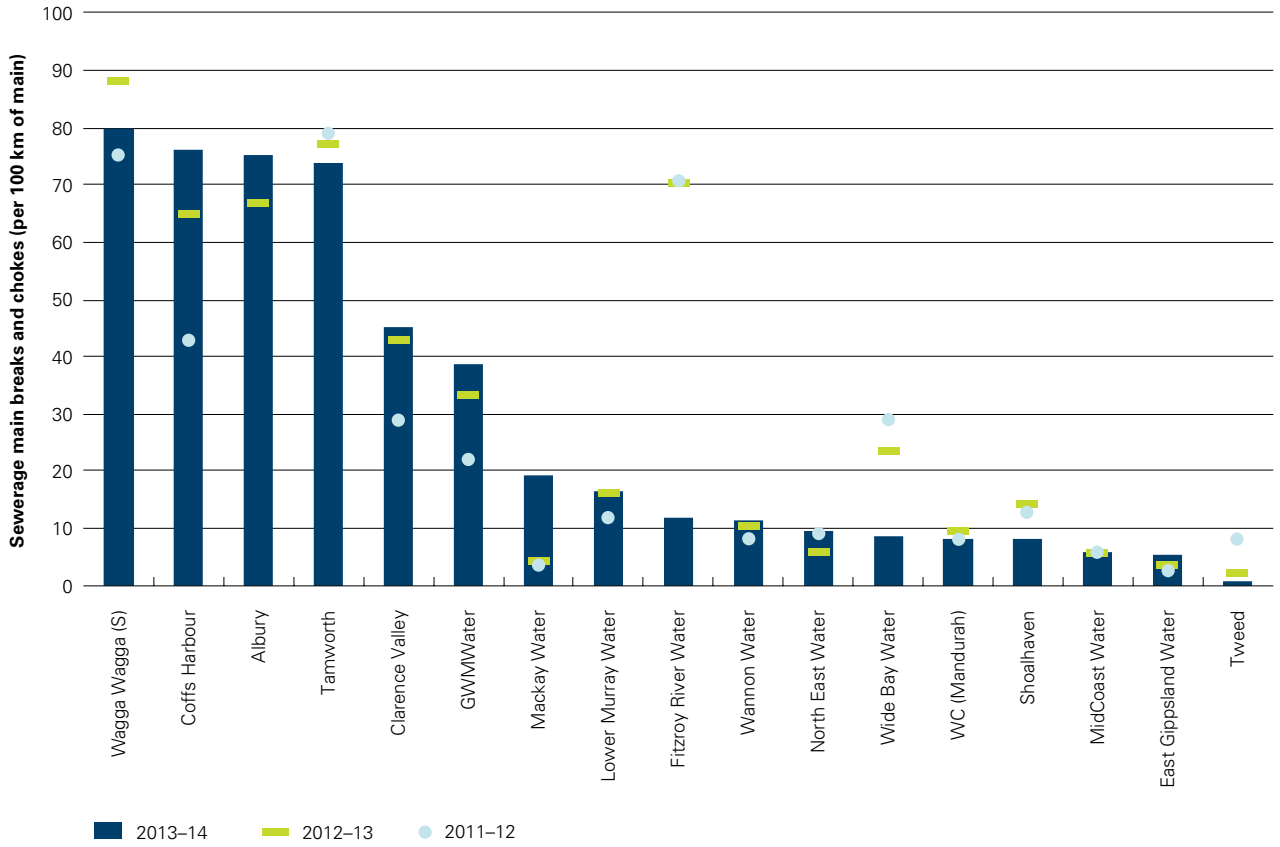

Figure 7.10 A14, 2011–12 to 2013–14 (per 100 km of sewerage main), for utilities with 20,000–50,000 connected properties

Within this utility group, six reported increases in property-connection breaks and chokes in 2013–14, while six reported decreases (Figure 7.11). GWM Water recorded the largest decrease, from 4.8 per 1,000 properties to zero.

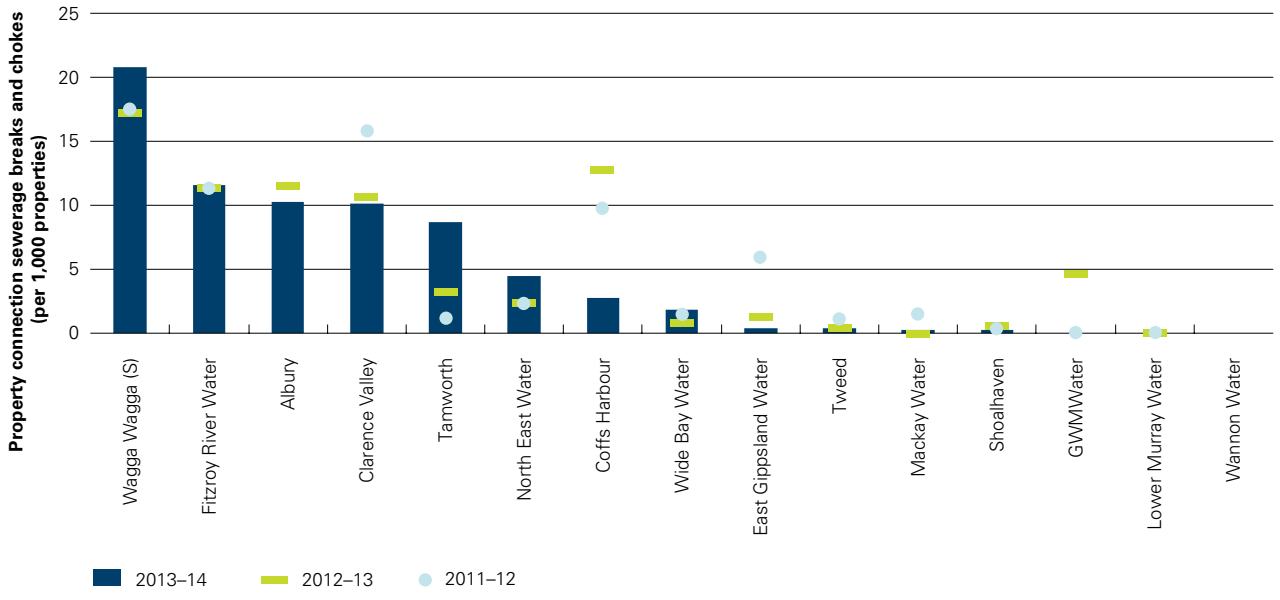

Figure 7.11 A15, 2011–12 to 2013–14 (per 1,000 properties), for utilities with 20,000–50,000 connected properties

10,000–20,000 group

Within this group, eight of the 21 utilities reported increases in the number of sewerage main breaks and chokes (A14) while 12 reported decreases (Figure 7.12).

Ballina reported the greatest increase from 8 to 20 per 100 km of sewerage main (150%), followed by Bega Valley with an increase from 9 to 22 (144%); however, 2012–13 figures for Ballina and Bega were low compared with the preceding reporting years (2011–12 and 2012–13), and were also much lower than other utilities in this group for 2013–14. P&W (Alice Springs) reported the biggest percentage decrease within the group, from 9.6 to 1.4 (85%).

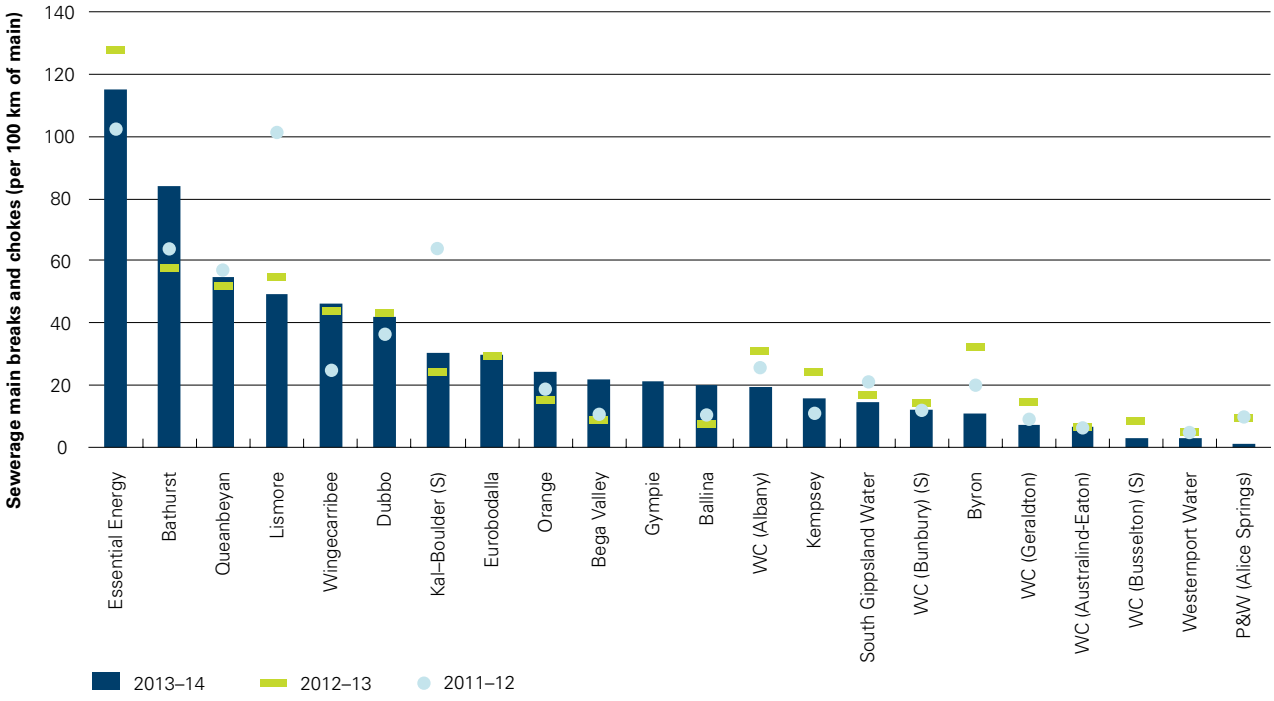

Figure 7.12 A14, 2011–12 to 2013–14 (per 100 km of sewer main), for utilities with 10,000–20,000 connected properties

Within this group, six of the 13 utilities reported property-connection breaks and chokes in 2013–14 compared with 2012–13, and seven reported decreases. Orange reported the highest percentage increase (650%), with a change from 0.6 to 4.5. Power and Water (Alice Springs) reported the highest percentage decrease (88%), with a change from 1.56 to 0.18 (Figure 7.13).

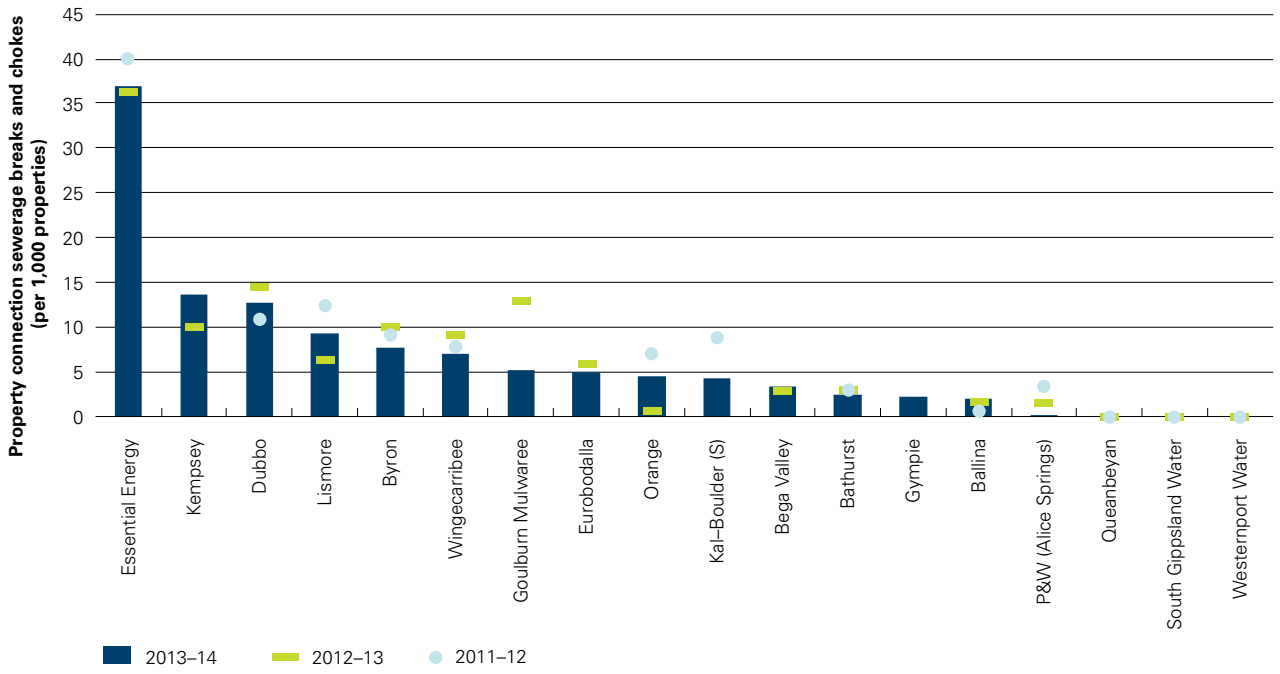

Figure 7.13 A15, 2011–12 to 2013–14 (per 1,000 properties), for utilities with 10,000–20,000 connected properties

7.3 A10—Real losses (L/service connection/day)

7.3.1 Introduction

'Real' losses are leakages and overflows from potable water mains, service reservoirs, and service connections before the customer meter. This indicator does not include metering errors and unauthorised consumption (which are referred to as 'apparent' losses). It also excludes unbilled authorised consumption, which may include water used for firefighting. Performance on this indicator can be influenced by the condition of mains and other infrastructure and also by water pressure.

Real losses are estimated using a range of assumptions, including assumed errors in metered water deliveries, estimates of unmetered components, and metering of night flows. Therefore, the real losses reported are not likely to be as accurate as for some of the other indicators (for example, water main breaks), and that should be considered when comparing utilities.

In 2013–14, 31 utilities reported increases in real losses and 25 utilities reported decreases; the median value for all utilities increased by 2% (Table 7.4). Between 2007–08 and 2010–11, the national median generally decreased; however, in the past three years it has increased, which is consistent with increasing usage (Figure 7.14).

Table 7.4 Overview of results: A10 (L/service connection/day)[1]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	110	33	4	8	78†	70†	–10%
	Gold Coast Water	Logan					
50,000–100,000 connected properties	268	33	5	5	77	68	–11%
	P&W (Darwin)	Western Water					
20,000–50,000 connected properties	228	37	9	5	68	66	–3%
	Fitzroy River Water	Port Macquarie Hastings					
10,000–20,000 connected properties	291	25	14	7	89	94	5%
	P&W (Alice Springs)	Westernport Water					
All size groups (national)	291	25	32	25	79†	81†	2%
	P&W (Alice Springs)	Westernport Water					

Table notes

[1] Median real losses (L/service connection/day) is calculated using data from all uses (dual and single service providers) which reported data for A15 in both 2012–13 and 2013–14.

† As a result of changes to reporting boundaries for SA Water, the 2012–13 real losses (L/service connection/day) uses the connected properties weighted average of data for metropolitan Adelaide, Whyalla, and Mount Gambier, while the 2013–14 figure uses whole of SA Water data.

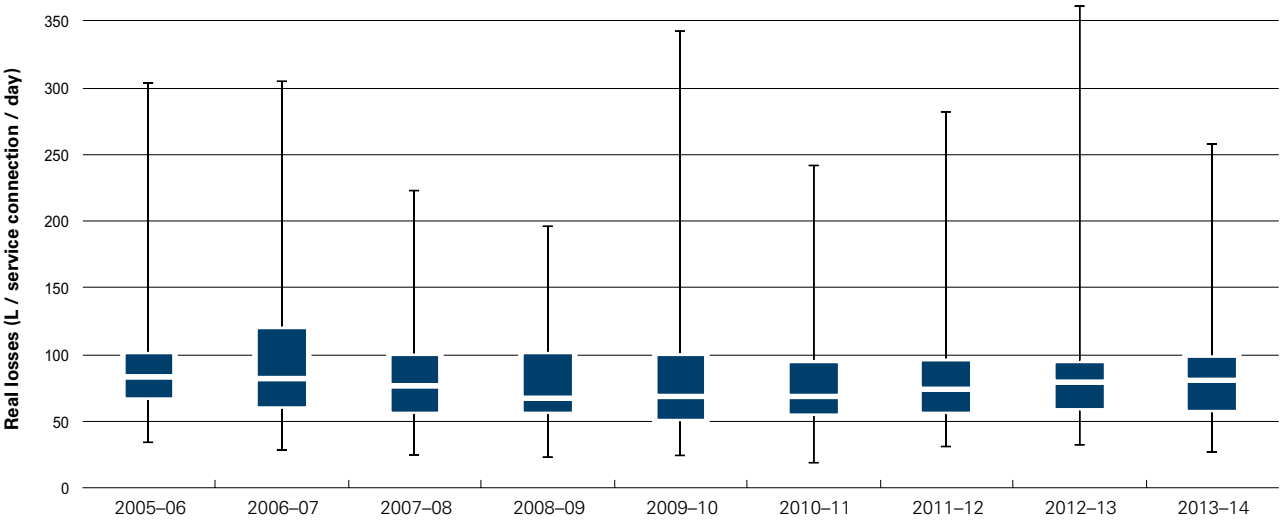

Figure 7.14 Summary of results: A10 (L/service connection/day)

7.3.2 Results and analysis

100,000+ group

As shown in Figure 7.15, this group's real losses in 2013–14 varied between 33 and 110 litres per service connection per day (L/service per connection/day). The median was 70, which was a 10% decrease on 2012–13. Of the 12 utilities that reported in both 2012–13 and 2013–14, four reported increases in real losses while eight reported a decrease in losses.

Gold Coast Water reported the greatest increase (36%), although its real losses rate is consistent with its 5-year average. Barwon Water reported the greatest decrease in real losses over the past year (39%), followed by ACTEW (27%), and Logan (26%). The decrease in real losses for these water utilities correlates with a decrease in water main break rates for 2013–14. The real losses for Barwon Water and ACTEW were at their lowest levels for the last five reporting years.

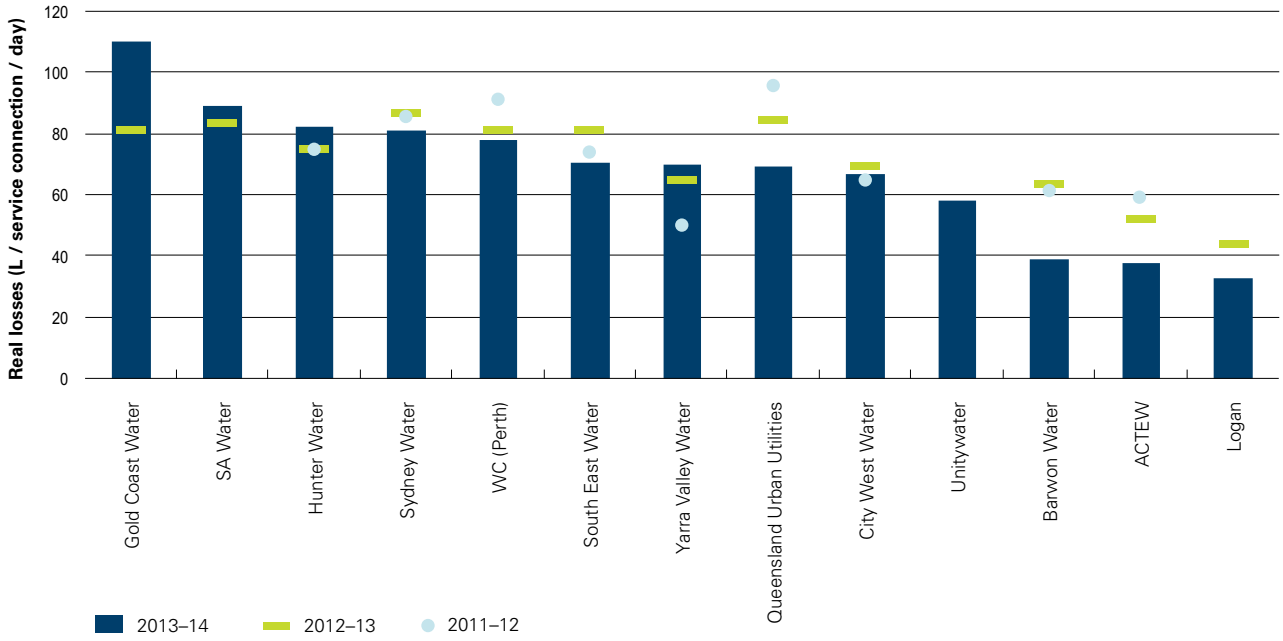

Figure 7.15 A10, 2011–12 to 2013–14 (L/service connection/day), for utilities with 100,000+ connected properties

50,000–100,000 group

In 2013–14, five utilities in this group reported increases in real losses, while five reported decreases (Figure 7.16). The 2013–14 median for this group was 68 L/service per connection/day, down 11% from 2012–13.

Power and Water (Darwin) experienced the highest per-connected-property volume of real losses (268 L/service per connection/day) in 2013–14; however this was a 36% decrease from 2012–13 (416 L/service connection/day). This decrease has been attributed to the implementation of a comprehensive demand management programme, Living Water Smart. Aiming to reduce water use in the Darwin region, the programme includes works to minimise water losses from water supply infrastructure (Power and Water 2014a: 38).

Gosford reported the greatest increase in real losses, from 32 to 116 L/service per connection/day (263%), The largest decrease was reported by Western Water (38%), followed by Power and Water (Darwin) and Coliban Water, with both reporting 36%. The rate of decrease in real losses for Western Water appears to be consistent with its decrease in water main breaks for 2013–14 (26%); this is that utility's lowest rate in real losses reported in the last five reporting years.

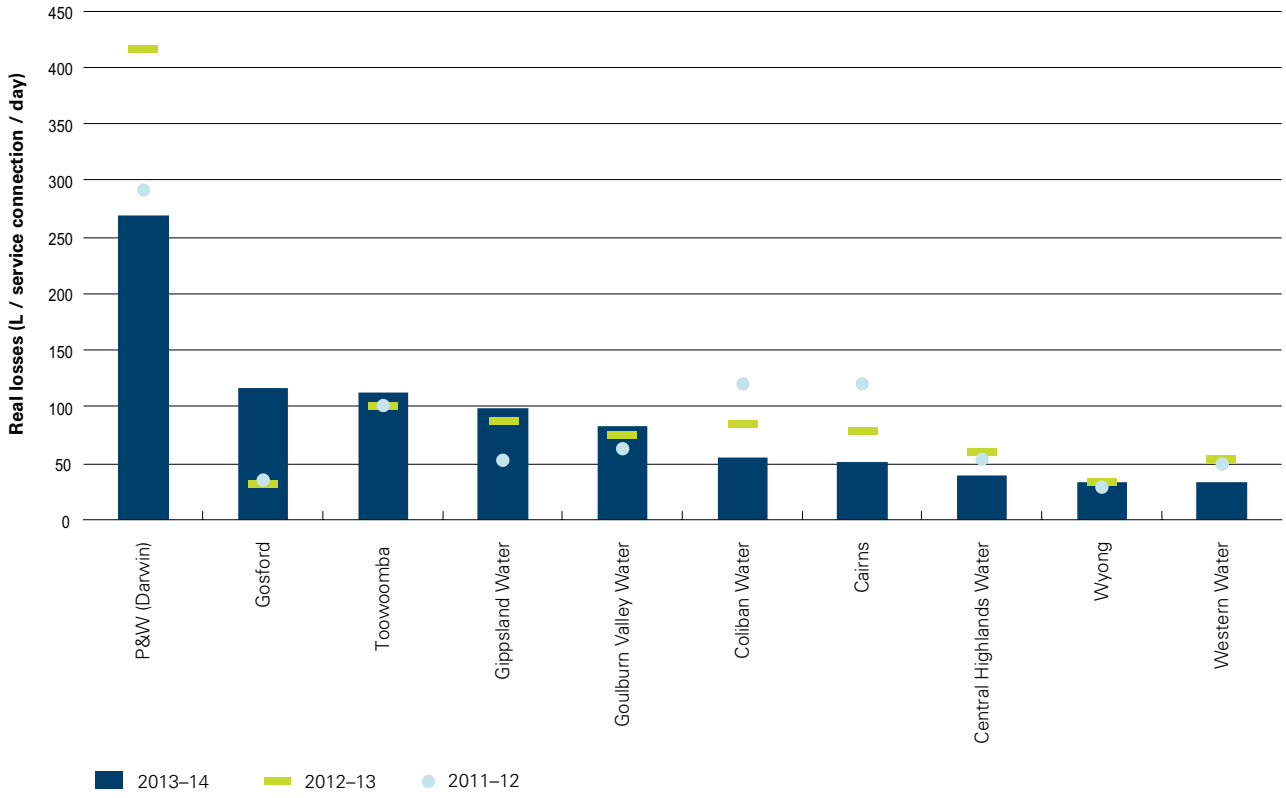

Figure 7.16 A10, 2011–12 to 2013–14 (L/service connection/day), for utilities with 50,000–100,000 connected properties

20,000–50,000 group

This group reported a large variation in the 2013–14 results, ranging between 37 and 228 L/service/ connection/day (Figure 7.17). Increases in real losses were reported by nine utilities, while five reported decreases compared with 2012–13. Riverina Water (W), North East Water, MidCoast Water, and Port Macquarie Hastings remained constant.

The largest increase (66%) was reported by Water Corporation (Mandurah), followed by Shoalhaven (33%). Fitzroy River Water reported the highest amount of real losses in the group (228 L/service connection/day) with a 23% increase compared to 2012–13. This rate of increase is consistent with Fitzroy River Water's increase in its water main break rate for 2014 (33%). Fitzroy River Water has also noted that its Rockhampton and Gracemere water supply schemes have observed higher losses than targeted.

East Gippsland Water recorded the greatest decrease in real losses in this group (37%), followed by Mackay Water (29%). The rate of decrease in real losses for both of these utilities correlates with the decrease in their water main break rates for 2013–14.

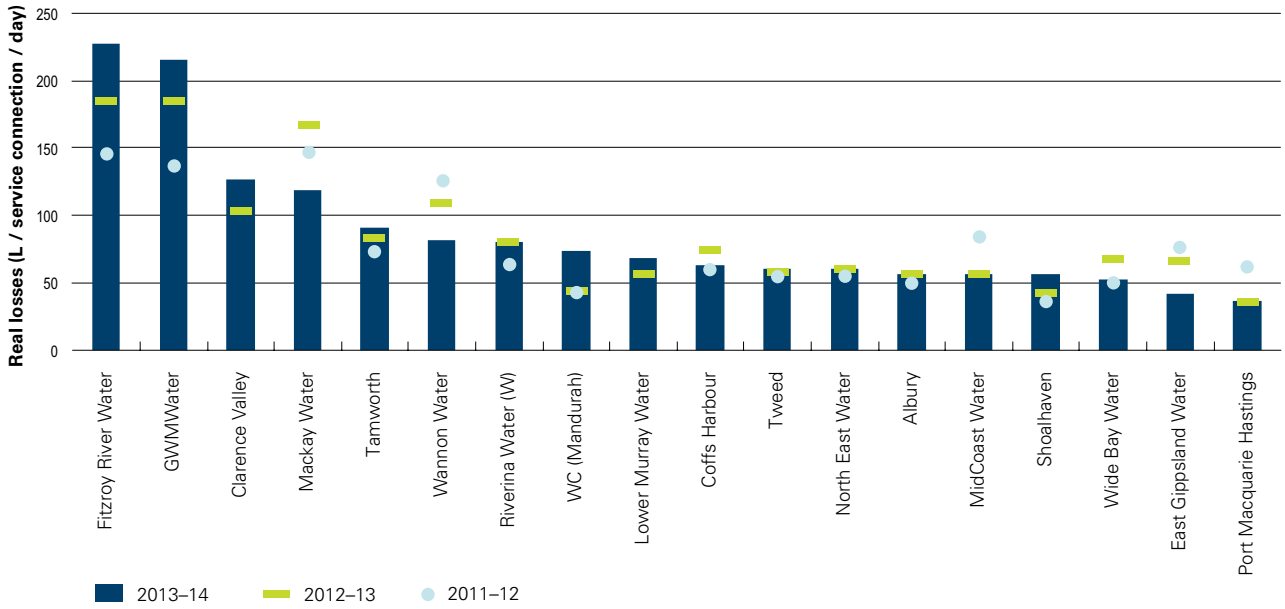

Figure 7.17 A10, 2011–12 to 2013–14 (L/service connection/day), for utilities with 20,000–50,000 connected properties

10,000–20,000 group

Of the utilities in this group that reported in both 2012–13 and 2013–14, 14 recorded increases in real losses since 2012–13 and seven recorded decreases. Eurobodalla remained constant (Figure 7.18).

Power and Water (Alice Springs) reported the highest real losses in 2013–14 for all utilities nationally (291 litres per service connection per day), although it reported the second biggest decrease of 32% from last year. Power and Water is continuing to implement a water efficiency programme that started last year (P&W 2014a: 42).

The largest increases observed were for Kempsey (92%), Westernport Water (64%), South Gippsland Water (45%), Water Corporation (Kal–Boulder) (W), and Water Corporation (Geraldton) (both 41%). South Gippsland Water has shown a constant increase in its real losses rate in the last five reporting years (2009–10 to 2013–14). In 2013–14, Kempsey and WC (Geraldton) reported their highest rates of real losses for the past five reporting years (2009–10 to 2013–14).

Bega Valley recorded the largest decrease (33%), followed by P&W (Alice Springs) (32%), although Bega Valley's 2013–14 real losses rate of 96 L/service per connection/day was 73% above its average for the past three reporting periods (2010–11 to 2012–13) of 55 L/service per connection/day. The real losses rate of Power and Water (Alice Springs) is consistent with its 5-year average.

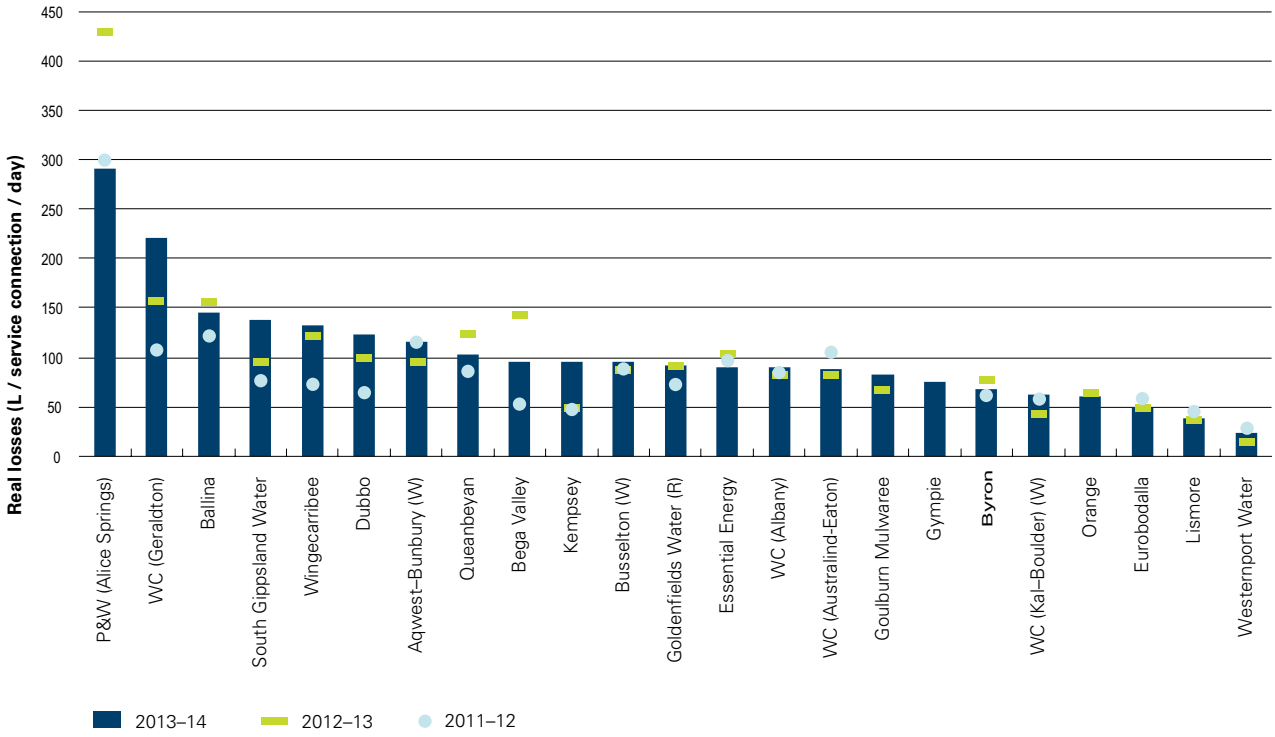

Figure 7.18 A10, 2011–12 to 2013–14 (L/service connection/day), for utilities with 10,000–20,000 connected properties.

8 Environment

8.1 E12—Total net greenhouse gas emissions (net t CO_2 equivalent per 1,000 properties)

8.1.1 Introduction

This indicator reports the contribution of the utility's operations to greenhouse gas (GHG) emissions. Utilities' calculations are required to refer to the National Greenhouse Accounts Factors published by the Australian Government Department of the Environment and updated annually. GHG emissions are reported in net terms; that is, any quantity of carbon sequestered through activities such as the purchase of carbon offsets is deducted.

The National Greenhouse Accounts outline three distinct types of emissions factors that may need to be calculated to estimate the full greenhouse impact of an organisation's activities:

- direct emission factors (Scope 1), which calculate the quantity of carbon dioxide equivalent (CO_2 equivalent) emitted per unit of activity, at the point of emission release;
- indirect emission factors (Scope 2), which calculate the greenhouse impact of purchasing and consuming electricity (that is, the impact of burning fuels such as coal or gas at the power station); and
- various emission factors (Scope 3), which include the impact of various activities, such as the disposal of waste, employee business travel, and the transportation of products.

In 2008–09, the method for calculating GHG emissions for reporting to the Urban NPR changed, with Scope 3 emissions being excluded from the reported value. At the same time, the Urban NPR reporting framework adopted the National Greenhouse and Energy Reporting System (NGERS) approach to calculating fugitive emissions in preference to one previously specified by the Australian Greenhouse Office. The differences between these two approaches were the conversion factors used to estimate GHG emissions and the recognised offsets, such as green energy, used to reduced net emissions in prior years.

Comparing different utilities' net GHG emissions is a difficult exercise. It should be undertaken with caution because of the number of variables affecting emissions. Those variables include the source of water; gravity versus pumped networks; geographical conditions (which influence the need for pumping); the number of large-volume customers and the extent of industry within the customer base; the prevailing greenhouse policy in the jurisdiction; and the method of calculation.

Of the utilities, only Melbourne Water exceeded the Australian Government's threshold of 25,000 tonnes of CO_2 equivalent to 92,701 tonnes and was required to make payments under the Government's carbon pricing scheme until June 2014. In 2013–14, 26 utilities reported increases in GHG emissions and 24 reported decreases. There was a 1% increase in the national median of GHG emissions from 2012–13 to 2013–14 (Table 8.1).

Table 8.1 Overview of results: E12, 2012–13 to 2013–14 (net t CO_2 equivalent per 1,000 properties)[1]

Size group	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	731	26	5	3	266†	260†	-3%
	WC (Perth)	City West Water					
50,000–100,000 connected properties	873	205	2	8	422	370	-12%
	Goulburn Valley Water	P&W (Darwin)					
20,000 –50,000 connected properties	1,134	114	7	7	417	441	6%
	Fitzroy River Water	Clarence Valley					
10,000–20,000 connected properties	1,604	167	12	7	402	416	3%
	WC (Kal–Boulder) (W)	Byron					
All size groups (national)	1 ,604	26	26	25	391†	394†	1%

Table notes

[1] Median total net greenhouse gas emissions is calculated using data from all utilities supplying both water and sewerage services which reported data for E12 for both 2012–13 and 2013–14.

† As a result of changes to reporting boundaries for SA Water, the 2012–13 total net greenhouse gas emissions uses data for metropolitan Adelaide while the 2013–14 figure uses whole of SA Water data.

8.1.2 Results and analysis

100,000+ group

In 2013–14, total net greenhouse gas emissions varied significantly in this group, from 26 to 731 t CO_2 equivalent per 1,000 properties. The median level for the group was 260, down 3% from 2012–13 (Table 8.2).

The highest emissions (731 t CO_2 equivalent per 1,000 properties) were reported by Water Corporation (Perth), 44% higher than the next highest utility, Hunter Water. The three Melbourne utilities (City West Water, Yarra Valley Water, and South East Water) reported the lowest emissions; however, this is primarily because most of Melbourne's bulk water and sewage treatment and pumping is conducted by Melbourne Water (see section 10.8 for greenhouse gas emissions data for bulk utilities, including Melbourne Water).

The greatest increase was also reported by Water Corporation (Perth) with 10%. This was driven primarily by increase in consumption at the Southern Seawater Desalination Plant in Binningup (Western Australia). This was followed by Yarra Valley Water, which reported an increase of 9%. Excluding SA Water (because of a change to its reporting basis in the *2014 Urban NPR*) the largest decrease (11%) was reported by South East Water and was the result of lower demand for recycled water during summer, which reduced operating times for treatment plants (South East Water 2014).

Table 8.2 E12, 2009–10 to 2013–14 (net t CO_2 equivalent per 1,000 properties), for utilities with 100,000+ connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
WC (Perth)	532	573	647	663	731	10%
Yarra Valley Water	40	42	40	41	44	9%
Hunter Water	448	455	438	381	412	8%
Barwon Water	390	416	403	266	274	3%
City West Water	7	–3	–4	25	26	0%
Sydney Water	164	143	72	85	85	0%
ACTEW	422	362	313	288	260	–10%
South East Water	45	48	50	59	53	–11%
SA Water				422[†]	287[†]	–32%
Unitywater					225	

Table notes

[†] As a result of changes to reporting boundaries for SA Water the 2012–13, total net greenhouse gas emissions uses data for metropolitan Adelaide, while the 2013–14 figure uses whole of SA Water data.

50,000–100,000 group

In 2013–14, the median level of greenhouse gas emissions for this group reduced by 12% to 370 t CO_2 equivalent per 1,000 properties (Table 8.3). The highest result was reported by Goulburn Valley Water (873), followed by Gippsland Water (580); these were also the highest emitting utilities within this group in 2012–13.

Minimal changes in greenhouse gas emissions were reported in 2013–14 compared with 2012–13. The greatest increase (9%) was reported by Central Highlands Water. The greatest decrease (14%) was reported by Gosford City Council, which has consistently reported decreases since 2010–11. This may continue into the future as a result of pumping station and sewage treatment upgrades, including the installation of two methane-powered heaters that are used to heat digesters. The use of methane as a fuel reduces both direct greenhouse gas emissions and reliance on other energy sources (Gosford 2013: 42)

Table 8.3 E12, 2009–10 to 2013–14 (net t CO_2 equivalent per 1,000 properties), for utilities with 50,000–100,000 connected properties

Utility	2009–10	2010–11	201–12	2012–13	2013–14	% change from 2012–13
Central Highlands Water	848	305	236	228	250	9%
Goulburn Valley Water	562	448	777	848	873	3%
Western Water	404	411	320	282	267	–5%
Coliban Water	767	490	487	475	446	–6%
P&W (Darwin)	217	189	208	219	205	–7%
Wyong				486	441	–9%
Toowoomba				439	394	–10%
Cairns	361	354	330	308	273	–11%
Gippsland Water	1,174	1082	959	661	580	–12%
Gosford	482	536	502	405	347	–14%

20,000–50,000 group

There was great variability in results for this group, from 114 t CO_2 equivalent per 1,000 properties for Clarence Valley Council to 1,134 for Fitzroy River Water (Table 8.4). The 2013–14 median for the group was 441, an increase of 6% from 2012–13. Goulburn Wimmera Mallee Water (GWMWater) reported the greatest increase (70%), which was in part explained by a reported 29% increase in greenhouse gas emissions associated with sewage treatment (GWMWater 2014: 38). Coffs Harbour City Council reported the greatest decrease (30%).

Table 8.4 E12, 2009–10 to 2013–14 (net t CO_2 equivalent per 1,000 properties), for utilities with 20,000–50,000 connected properties

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
GWMWater	615	502	487	384	652	70%
Lower Murray Water	675	725	1092	346	533	54%
MidCoast Water	341	306	315	340	483	42%
Tamworth	457	368	374	378	419	11%
Fitzroy River Water	1,155	938	1,149	1,032	1,134	10%
North East Water	805	773	820	837	860	3%
Tweed	427	429	454	434	441	2%
Riverina Water (W)	407	307	624	365	372	2%
Clarence Valley	113	98	137	114	114	0%
WC (Mandurah)	282	280	287	306	290	–5%
Wannon Water	767	703	819	739	693	–6%
East Gippsland Water	419	404	383	380	359	–6%
Port Macquarie Hastings	103	202	222	417	386	–7%
Shoalhaven	377	408	489	423	377	–11%
Albury	540	494	528	541	451	–17%
Coffs Harbour	453	450	460	515	362	–30%

10,000–20,000 group

In 2013–14, emissions varied considerably in this group. Water Corporation (Kal–Boulder) (W) reported the highest amount (1,604 t CO_2 equivalent per 1,000 properties), and were substantially higher than the next highest (686), reported by Power and Water (Alice Springs). Byron Shire Council recorded 167 t CO_2 equivalent per 1,000 properties, the lowest among this group (Table 8.5).

Essential Energy reported the highest increase in this group (44%). South Gippsland Water reported the greatest decrease (20%), which can be attributed to improvements to the lagoon aeration system. This was achieved through the installation of a Series 3 wind-powered mixer for improving the quality of treated wastewater while reducing greenhouse gas emissions (South Gippsland Water 2014: 15)

Table 8.5 E12, 2009–10 to 2013–14 (net t CO_2 equivalent per 1,000 properties), for utilities with 10,000–20,000 connected properties

Utility	2009–10	2010-11	2011–12	2012–13	2013–14	% change from 2012–13
Essential Energy	998	550	572	647	930	44%
Lismore	198	69	69	210	248	18%
Wingecarribee	338	382	377	398	467	17%
WC (Bunbury) (S)	472	406	386	330	384	16%
Ballina	280	351	347	366	425	16%
WC (Busselton) (S)				297	320	8%
Aqwest–Bunbury (W)	181	176	158	159	170	7%
WC (Australind-Eaton)			337	443	469	6%
Bega Valley		72	193	331	343	4%
Eurobodalla	331	341	351	352	363	3%
WC (Geraldton)	322	471	448	419	433	3%
Busselton (W)	201	202	194	193	198	3%
Westernport Water	292	288	476	402	411	2%
Byron	471	283	363	164	167	2%
Orange	435	449	390	414	416	0%
Goulburn Mulwaree				615	618	0%
WC (Albany)	596	590	621	554	541	-2%
Dubbo	486	482	429	527	499	-5%
Kal–Boulder (S)	133	475	169	295	281	-5%
Bathurst		616	512	384	362	-6%
Kempsey	401	340	368	376	349	-7%
WC (Kal–Boulder) (W)	1,928	1,820	1,814	1,773	1,604	-10%
Queanbeyan	281	110	143	190	170	-11%
P&W (Alice Springs)	767	600	704	778	686	-12%
Goldenfields Water (R)				461	407	-12%
South Gippsland Water	723	673	429	445	354	-20%

9.1 H3—Percentage of population for which microbiological compliance was achieved (%)

9.1.1 Introduction

This indicator reports the percentage of the population serviced by the utility for which microbiological compliance was achieved. Compliance is assessed against the *2004 Australian drinking water guidelines* or licence conditions imposed on the utility by the regulator. Typically, utilities record very high (often 100%) compliance, but occasionally there are unforeseen events that result in lower compliance. The cause of non-compliance is not always traceable.

In the 2013–14 reporting year, the median percentage of population for which microbiological compliance was achieved was 100% for each utility group.

Table 9.1 Overview of results: H3 (%)[1]

	Range		Number of utilities with increase/decrease from 2012–13		Median		% change in the median from 2012–13
Size group	High	Low	Increase	Decrease	2012–13	2013–14	
100,000+ connected properties	100 multiple utilities	99 TasWater	0	0	100[†]	100[†]	0%
50,000–100,000 connected properties	100 multiple utilities	99 Coliban Water	0	2	100	100	0%
20,000–50,000 connected properties	100 multiple utilities	100 multiple utilities	2	0	100	100	0%
10,000–20,000 connected properties	100 multiple utilities	100 multiple utilities	0	0	100	100	0%
All size groups (national)	100 multiple utilities	99 TasWater	2	2	100[†]	100[†]	0%

Table notes

[1] Median percentage of population for which microbiological compliance was achieved is calculated using data from all reporting parties supplying both water services that reported data for H3 for both 2012–13 and 2013–14.

[†] As a result of changes to reporting boundaries for SA Water, the 2012–13 percentage of population for which microbiological compliance was achieved uses data for metropolitan Adelaide, while the 2013–14 figure uses whole of SA Water data.

9.1.2 Results and analysis

Most utilities in all groups reported that 100% of the population achieved microbiological compliance (Tables 9.2–9.5).

In 2013–14, three Tasmanian regional utilities (Ben Lomond Water, Southern Water, and Cradle Mountain Water) amalgamated and, from 1 July 2013, reported as one entity the Tasmanian Water and Sewerage Corporation (TasWater). The microbiological compliance achieved by the three previous regional utilities in Tasmania varied during the period 1 July 2009 – 30 June 2013; however, as cited in the *2013 Urban NPR*, substantial capital works programmes commenced and completed by the previous regional utilities or commenced by the previous regional utilities and completed by TasWater during 2013–14 have addressed many of the water quality issues. This contributed to TasWater reporting that, overall, 99% of the population received microbiologically compliant water in 2013–14 (Table 9.1). TasWater continues to work on addressing the remaining water quality issues.

Clarence Valley reported 100% microbiological compliance for 2013–14, increasing from a low result of 73% in 2012–13 that was attributed to major floods and defects in bird-proofing of the Maclean Reservoir (Table 9.4).

100,000+ group

Table 9.2 H3, 2009–10 to 2013–14 (%), for utilities with 100,000+ connections

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Sydney Water	100	100	100	100	100	0%
WC (Perth)	100	100	100	100	100	0%
SA Water				100†	100†	0%
Yarra Valley Water	100	100	100	100	100	0%
South East Water	100	100	100	100	100	0%
Queensland Urban Utilities		100	100	100	100	0%
City West Water	100	100	100	100	100	0%
Unitywater		100	100	100	100	0%
Hunter Water	100	100	100	100	100	0%
Gold Coast Water	100			100	100	0%
ACTEW[1]	100	100	100	100	100	0%
Barwon Water	100	100	100	100	100	0%
Logan	100			100	100	0%
TasWater					99	

Table notes

† As a result of changes to reporting boundaries for SA Water, the 2012–13 percentage of population for which microbiological compliance was achieved uses data for metropolitan Adelaide, while the 2013–14 figure uses whole of SA Water data.

50,000–100,000 group

Table 9.3 H3, 2009–10 to 2013–14 (%), for utilities with 50,000–100,000 connections

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Townsville	100		100	100	100	0.0%
Cairns	99	99	100	100	100	0.0%
Gosford	100	100	100	100	100	0.0%
Gippsland Water	100	100	100	100	100	0.0%
Central Highlands Water	100	98	100	100	100	0.0%
Wyong	100	100	100	100	100	0.0%
Western Water	100	100	100	100	100	0.0%
Goulburn Valley Water	100	100	100	100	100	0.0%
P&W (Darwin)	100	100	100	100	100	0.0%
Toowoomba				100	100	–0.2%
Coliban Water	100	99	100	100	99	–0.4%

20,000–50,000 group

Table 9.4 H3, 2009–10 to 2013–14 (%), for utilities with 20,000–50,000 connections

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Clarence Valley	99	99	99	73	100	37.0%
Tamworth	99	99	100	99	100	1.0%
North East Water	100	100	100	100	100	0.0%
Shoalhaven	100	99	100	100	100	0.0%
WC (Mandurah)	100	100	100	100	100	0.0%
Mackay Water	100	99	100	100	100	0.0%
Wannon Water	100	100	99	100	100	0.0%
MidCoast Water	100	100	100	100	100	0.0%
Wide Bay Water		97	100	100	100	0.0%
Lower Murray Water	100	100	100	100	100	0.0%
Tweed	100	100	100	100	100	0.0%
GWMWater	100	100	100	100	100	0.0%
Fitzroy River Water	100	98		100	100	0.0%
Port Macquarie Hastings	100	100	100	100	100	0.0%
Riverina Water (W)	100	100	100	100	100	0.0%
Coffs Harbour	100	100	100	100	100	0.0%
Albury	100	100	100	100	100	0.0%
East Gippsland Water	100	100	100	100	100	0.0%

10,000–20,000 group

Table 9.5 H3, 2009–10 to 2013–14 (%), for utilities with 10,000–20,000 connections

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Eurobodalla	100	100	100	100	100	0.0%
South Gippsland Water	100	100	100	100	100	0.0%
Wingecarribee	100	100	100	100	100	0.0%
WC (Geraldton)	100	100	100	100	100	0.0%
Dubbo	100	100	100	100	100	0.0%
Orange	100	100	100	100	100	0.0%
Aqwest–Bunbury (W)	100	100	100	100	100	0.0%
Queanbeyan	100	100	100	100	100	0.0%
Westernport Water	100	100	100	100	100	0.0%
WC (Albany)	100	100	100	100	100	0.0%
Bathurst	100	100	100	100	100	0.0%
WC (Kal–Boulder) (W)	100	100	100	100	100	0.0%
Bega Valley	100	99	100	100	100	0.0%
Lismore	100	100	100	100	100	0.0%
Ballina	100	100	100	100	100	0.0%
Gympie					100	0.0%
Kempsey	100	100	100	100	100	0.0%
Busselton (W)	100	100	100	100	100	0.0%
P&W (Alice Springs)	100	100	100	100	100	0.0%
Byron	100	100	100	100	100	0.0%
WC (Australind-Eaton)			100	100	100	0.0%
Essential Energy	100	100	100	100	100	0.0%
Goulburn Mulwaree	100	100	100	100	100	0.0%
Goldenfields Water (R)	100	100	100	100	100	0.0%

10 Bulk utilities

10.1 Introduction

Bulk utilities are those utilities that do not have end-use customers of their own. Instead, their primary purpose is to provide services to other water utilities. The usual services they provide include all or some of:

- harvesting and storing water in reservoirs (referred to as 'bulk' water);
- treating and transferring water from storages to other utilities' reticulation networks; and
- treating and disposing of (or recycling) large volumes of sewage collected from other utilities' customers (referred to as 'bulk' sewage).

Seven bulk utilities reported data for the *2014 Urban NPR*:

- from New South Wales: Fish River Water, Goldenfields Water, Rous Water and Sydney Catchment Authority;
- from Queensland: Seqwater and Gladstone Area Water Board; and
- from Victoria: Melbourne Water (which is also the only provider of bulk sewerage services).

There are significant differences in the scale of the bulk utilities. For example, Melbourne Water and Sydney Catchment Authority are responsible for providing Melbourne and Sydney, respectively, with the vast bulk of those cities' water. Rous Water, on the other hand, provides bulk water to utilities owned by regional councils on the New South Wales north coast, an area with a total population of around 100,000. It is therefore difficult to draw any comparisons between these bulk utilities and, as a result, the commentary in this chapter is limited.

Because the bulk utilities provide bulk water services to other water utilities, rather than reticulated services to residents, they do not report results for most of the national performance indicators. Therefore, they have not been reported with the other utilities in the preceding chapters of this report.

This chapter focuses on nine indicators reported upon by most of the seven bulk utilities listed above:

- W7—Total sourced water
- F1—Total revenue—water
- F14—Total water supply capital expenditure
- F11.1—Operating costs
- F24—Net profit after tax (NPAT)
- F30—NPAT ratio
- F20—Dividends
- F21—Dividend payout ratio
- E12.1—Total net greenhouse gas emissions

In addition, Melbourne Water, which also provides bulk sewerage services and earns significantly more revenue than other bulk utilities, has a number of utility-specific indicators reported in section 10.2.8 below.

Financial figures in tables and charts in this report are in real 2013–14 dollars.

10.2 W7—Total sourced water

Total sourced water is the volume of water from all of the sources from which water is abstracted to supply to bulk water customers and, in some cases, to provide environmental flows. Virtually all of the water sourced by bulk utilities is from surface water.

Goldenfields Water, Rous Water, Melbourne Water, Sydney Catchment Authority, and Seqwater reported little variation in total sourced volumes from 2012–13 to 2013–14.

Fish River reported a substantial increase in demand for sourced water (32%), as did Gladstone Area Water Board (52%) (Table 10.1).

Gladstone Area Water Board reported a substantial increase in demand for sourced water (52%), as did Fish River (32%) (Table 10.1).

Table 10.1 W7, 2009–10 to 2013–14 (ML), for bulk water utilities

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Gladstone Area Water Board		42,226	53,736	51,460	78,426	52%
Fish River Water	5,124	7,946	6,273	8,107	10,713	32%
Seqwater	251,960	241,370	271,413	282,235	295,877	5%
Rous Water	12,070	11,142	11,132	11,077	11,521	4%
Goldenfields Water (B)	8,716	7,007	7,301	8,667	8,875	2%
Sydney Catchment Authority	582,623	736,874	880,597	848,637	826,889	–3%
Melbourne Water	375,619	370,490	379,891	443,489	411,739	–7%

10.3 F1—Total revenue—water ($000)

This indicator captures all of the water-related revenue earned by a utility. It conveys a sense of the scale of the utility and is presented in Table 10.2.

Total revenue for Goldenfields Water, Sydney Catchment Authority, and the Gladstone Area Water Board remained very similar to that reported for previous years.

Rous Water and Seqwater reported a 10% increase in total revenue for the 2013–14, this was in contrast to a reported decrease in 2012–13, while Fish River Water reported an increase of 12%.

Melbourne Water reported the most substantial change in total revenue with an increase of 51% from 2012–13 to 2013–14. This is attributed to a large increase in water prices to reflect the full cost of the Wonthaggi desalination plant, and is also amplified by the 2012–13 price freeze across all services (Melbourne Water 2014).

Table 10.2 F1, 2009–10 to 2013–14 ($000)

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Melbourne Water	362,244	397,330	547,225	563,693	851,606	51%
Fish River Water		6,940	7,314	8,999	10,045	12%
Rous Water	18,326	19,159	21,291	20,383	22,516	10%
Seqwater	335,581	378,617	706,096	622,777	686,818	10%
Gladstone Area Water Board		45,650	53,544	54,972	56,288	2%
Goldenfields Water (B)	7,385	3,509	3,998	4,882	4,933	1%
Sydney Catchment Authority	217,472	205,164	215,570	203,665	205,240	1%

10.4 F4—Total water supply capital expenditure

Total capital expenditure is presented in real 2013–14 dollars. It shows the total capital investment by the utility and provides an indication of the size of the utility and its capital responsibilities. Data for this indicator is presented in Table 10.3.

Substantial increases in capital expenditure from 2012–13 to 2013–14 were reported by Fish River Water (135%), Rous Water (116%), and Sydney Catchment Authority (78%). Expenditure reported by the Sydney Catchment Authority included environmental flow investigations, water supply infrastructure upgrades, and improvements throughout the catchment (SCA 2014). The Rous Water result is comparable to expenditure reported in 2009–10 and 2010–11.

Table 10.3 F14, 2009–10 to 2013–14 ($000), for bulk water utilities

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Fish River Water		2,378	5,886	422	994	135%
Rous Water	5,532	5,010	3,029	2,568	5,537	116%
Sydney Catchment Authority	60,228	29,649	20,972	18,177	32,273	78%
Melbourne Water	533,293	166,862	89,521	39,484	44,177	12%
Seqwater	211,579	128,809	555,695	90,348	69,711	–23%
Gladstone Area Water Board		8,640	49,059	58,883	16,904	–71%

10.5 F11.1—Operating cost (water) ($/ML)

This indicator reports the water-related operating costs (operation, maintenance, and administration costs) of each bulk utility (Table 10.4). Due to the large variation between the utilities in size and cost-effectiveness of supply, operating costs are normalised by measuring the cost per megalitre sourced.

Melbourne Water reported a 38% increase in operation costs from 2012–13 to 2013–14. This is a significantly lower increase than the 199% increase reported in 2012–13. Seqwater reported a 26% decrease, which is lower than operating costs reported for the last two reporting years. Sydney Catchment Authority reported a 16% increase from 2012–13, although this is lower than the 2011–12 value. The remaining utilities reported minimal variation in operating costs, with variances between –2% and 4% from 2012–13 to 2013–14.

Table10.4 F11.1 Operating cost (water), 2009–10 to 2013–14 ($/ML), for bulk water utilities

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Melbourne Water	293	289	445	1,331	1,835	38%
Sydney Catchment Authority			236	160	186	16%
Fish River Water		1,548	710	472	493	4%
Gladstone Area Water Board		398	320	470	480	2%
Goldenfields Water (B)	603			314	308	–2%
Rous Water	837	809	866	987	965	–2%
Seqwater	537	690	1,088	1,052	781	–26%

10.6 F24—Net profit after tax ($000) and F30—NPAT ratio (%)

A utility's net profit after tax (NPAT) is simply the NPAT disclosed in its annual financial statements. NPAT is driven by the factors that contribute to a utility's revenue and expenditure, including pricing structures, water restrictions, Government policy, asset condition, climate, and utility size. As with income, NPAT indicators can be highly sensitive to movements in capital grants and contributions, which are treated as income and can change significantly from year to year. NPAT also reflects depreciation but not dividend payments. Because of these factors, NPAT can vary significantly between years and utilities.

The NPAT ratio has been included here (Table 10.5) to indicate how large a utility's profit is compared with its income, to make it easier to compare utilities. The NPAT ratio is defined as NPAT (Indicator F24) divided by total income for the utility (F3). It can be considered as the utility's net profit margin earned after tax.

Table 10.5 F24 ($000) and F30 (%), 2011–12 to 2013–14

	F24—Net profit after tax ($000)			F30—NPAT ratio (%)		
Utility	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
Fish River Water		3,609	4,492		40	45
Goldenfields Water (B)	0	783	862	0	16	17
Gladstone Area Water Board	12,679	8,570	10,558	23	14	15
Sydney Catchment Authority	42,720	36,639	25,879	20	18	12
Rous Water		574	1,890		3	9
Melbourne Water	283,685	30,913	89,889	30	–3	7
Seqwater	49,333	28,248	9,510	–7	0	–1

10.7 F20—Dividend ($000) and F21—Dividend payout ratio (%)

This indicator reports the dividend payable by a utility for the reporting year (not the dividend paid during the year but relating to the previous year) and the dividend payout ratio (that is, dividend payable divided by net profit after tax). It gives an indication of the funds returned to the Government or other shareholder, or retained by the utility for reinvestment in the business.

The dividend payable reflects Government dividend policy, pricing policies, the profitability of the utility and the utility's future cash requirements. It is possible to have a dividend payout ratio of more than 100%, since dividends can be paid from prior years' retained earnings. Dividend policies are usually set by Government and are often outside the utility's control.

Sydney Catchment Authority and Gladstone Area Water Board were the only bulk utilities to have a dividend payable for 2013–14 (Table 10.6). This reflects the trend for previous reporting years.

Table 10.6 F20 ($000) and F21 (%), 2010–11 to 2012–13, for bulk water utilities

	F20—Dividend ($000)			F21—Dividend payout ratio (%)		
Utility	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
Sydney Catchment Authority	26,376	27,479	27,900	75	75	108
Gladstone Area Water Board	2,464	2,478	3,338	19	29	32
Melbourne Water	124,438	0	0	44	0	0
Fish River Water		0	0		0	0
Goldenfields Water (B)	0	0	0	0	0	0
Rous Water		0	0		0	0

10.8 E12.1—Total net greenhouse gas emissions—bulk utility (net t CO_2 equivalent per ML)

This indicator reports the contribution of the utility's operations to greenhouse gas (GHG) emissions. Utilities' calculations are required to refer to the National Greenhouse Accounts Factors published by the Australian Government Department of the Environment and updated annually. GHG emissions are reported in net terms, that is, any volumes of carbon sequestered through activities such as the purchase of carbon offsets are deducted. A discussion of the methodology used to calculate GHG emissions is in chapter 8, section 8.1, of this report.

Fish River Water and Sydney Catchment Authority reported no change in GHG emissions from 2012–13 to 2013–14 (Table 10.7). Melbourne Water and Goldenfields Water both decreased GHG emissions by 8% and 13% respectively. Rous Water increased GHG emissions by 13%.

Table 10.7 E12.1, 2009–10 to 2013–14 (net t CO_2 equivalents/ML), for bulk water utilities

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Rous Water	0.40	0.70	0.70	0.80	0.90	13%
Fish River Water		0.20		0.10	0.10	0%
Sydney Catchment Authority			0.06	0.02	0.02	0%
Melbourne Water	0.94	1.00	0.99	0.92	0.85	–8%
Goldenfields Water (B)	1.00	1.10	1.20	0.80	0.70	–13%

10.9 Melbourne Water's sewerage indicators

Melbourne Water, unlike the other bulk utilities, provides bulk sewerage services. Those services are a significant part of its business, so to report only water-related indicators would be to underestimate Melbourne Water's true size and scope of operations. This section provides summary information on Melbourne Water's sewerage indicators.

Melbourne Water reported a small increase in total sewage collected in the 2013–14 reporting year. There was a 52% decrease in total sewerage capital expenditure, which continued the trend of previous reporting years. Revenue per property for sewerage services increased by 35%, reflecting increases in sewerage pricing (Melbourne Water 2014). Sewerage operating costs increased by 90% from 2012–13 to 2013–14 (Table 10.8).

From 2009–10 to 2011–12, Melbourne Water used the Water Services Association of Australia methodology for the calculation of GHG emissions from sewage treatment activity. In 2012–13, the Clean Energy Regulator advised on a different methodology to meet its requirements. The result of this change in methodology was a decrease in Melbourne Water's reported emissions. Emissions were reduced by a further 15% in the 2013–14 reporting year.

Table 10.8 Melbourne Water's sewerage indicators, 2009–10 to 2013–14

Utility	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Operating cost—sewerage: bulk utility ($/ML)	383	271	183	221	420	90%
Revenue per property for sewerage services ($/property)	182	198	241	221	298	35%
Revenue for sewerage services: bulk utility ($/ML)	1,064	995	1,265	1,235	1,668	35%
Recycled water (percent of effluent recycled)	21	9	11	11	12	15%
Total sewage collected (ML)	271,739	325,308	320,067	305,901	314,067	3%
Greenhouse gas emissions—bulk utility sewerage (t CO_2 equivalents per ML)	1	1	1.1	1.0	0.9	–15%
Total sewerage capital expenditure ($000s)	387,571	602,130	291,599	127,299	60,476	–52%
Sewer overflows reported to the environmental regulator (per 100km of sewer main)	2	5	2	1	0	–100%
Compliance with environmental regulator: sewerage (yes/no)	Yes	Yes	No	No	Yes	

Appendix A: Comparison of major urban areas

This appendix provides comparative tables of a selection of indicators for major urban areas (each of which generally corresponds to a capital city and its environs).

Because utilities' structures vary, the figures in this appendix should be treated with some caution and be read in conjunction with the notes accompanying the tables. For example, to provide figures that represent Sydney, Melbourne and southeast Queensland, it is at times necessary to aggregate the numbers for both bulk and retail utilities servicing those areas. Notes on the methods used to derive figures are provided for each table.

It should be noted that historical values for all indicators with costs have been adjusted for CPI increase.

Where appropriate, data for southeast Queensland is aggregated data from Seqwater, Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water. It excludes data from Redland Council, although this council is within the southeast Queensland region. Not all utilities reported figures on all indicators, and this detail as well as the exclusion of Redland Council is noted in the relevant tables.

Where indicated, the Sydney Catchment Authority (SCA) is combined with Sydney Water Corporation to represent the major urban area of Sydney. While SCA services not only Sydney Water but a number of other customers, services provided to those other customers are minor in comparison to those to Sydney Water; therefore, the impact may be immaterial. It is, however, important to note that the impact will vary across indicators.

Unless otherwise stated, data for other major urban areas in this appendix is sourced from a single utility for each major urban area, and therefore no modifications have been made. Those utilities are:

- Water Corporation (Perth) for Perth;
- SA Water for Adelaide (SA Water provided specific data for the city of Adelaide, although it also, for the first time in 2013–14, provided data for all of South Australia);
- ACTEW for Canberra;
- TasWater for Hobart (previously, Southern Water reported data for the whole southern region of Tasmania, including Hobart); and
- Power and Water (Darwin) for Darwin.

Some of these utilities did not provide data in 2013–14 and other years and hence are not shown in all the tables. For example, Southern Water did not provide information for several indicators.

Table A1 W1, W2, W3, W4 — Volume of water sourced from surface water, groundwater, desalinated water, and recycling, 2013–14 (ML)

Major urban area	Surface water	Groundwater	Desalination	Recycled water	Total
Sydney	530,587	0	0	41,543	572,130
Melbourne	399,596	0	0	16,316	415,912
southeast Queensland	282,698	10,462	1,435	22,027	316,622
Perth	49,025	124,850	113,060	7,767	294,702
Adelaide	80,836	0	60,953	5,258	147,047
Canberra	48,731	0	0	4,372	53,103
Darwin	34,396	6,343	0	347	41,086

Sydney surface water includes the total volume of Sydney Water's surface water and the water it received from bulk suppliers (W5).

Melbourne's surface water is that sourced by Melbourne Water while its recycled water is the total sourced by Melbourne Water and the three retailers.

The volume of southeast Queensland surface water, groundwater, and desalination water is derived from Seqwater.

The volume of southeast Queensland recycled water is the total derived from Seqwater, Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan City Council, although Logan City Council did not report on recycled water in the 2013–14 year.

Table A2 (W12) Average annual residential water supplied, 2009–10 to 2013–14 (kL/property)

Major urban area	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
southeast Queensland	178[1]	142[2]	146[3]	156	164	4.9%
Sydney	205	197	193	198	206	4.0%
Perth	276	264	250	249	254	2.1%
Canberra	199	177	180	199	203	1.9%
Melbourne	142	138	142	152	150	–1.5%
Darwin	458	405	471	454	407	–10.4%
Adelaide	191	180	179	193	183	–5.2%

Table notes

[1] Queensland Urban Utilities and Unitywater did not report against the indicator for that specific year.

[2–3] Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Melbourne figures are the weighted average of its three retailers (that is (W12 / C4—Total connected properties) while southeast Queensland's figures are the weighted average of Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water.

Table A3 W26—Total recycled water supplied (ML) and W27—Recycled water (% of effluent recycled), 2011–12 to 2013–14

	W26—Total recycled water supplied			W27—Recycled water (% of effluent recycled)		
Major urban area	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
Adelaide	22,714	28,393	25,515	26	32	28
Canberra	4,607	4,416	4,372	13	15	15
Melbourne	38,100	37,633	36,155	11	11	11
southeast Queensland	11,432[1]	23,136	23,082	6[2]	9	11
Sydney	45,929	46,951	46,943	8	10	10
Hobart (TasWater)	0	0	5,239	0	0	9
Perth	10,370	10,272	10,029	8	8	7
Darwin	376	499	347	0	3	2

Table notes

[1] Gold Coast City Council, Logan City Council and Seqwater did not report against the indicator for that specific year.

[2] Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Melbourne figures for W26 are the total volume of Melbourne Water and the three retailers. Melbourne figures for W27 are the weighted average of Melbourne Water and the three retailers (that is, W26 / W18.5—Volume of treated sewage effluent).

Southeast Queensland figures for W26 are the aggregated figures for Seqwater, Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water. Southeast Queensland figures for W27 are the weighted average of those utilities.

Table A4 P3—Typical residential bill (water) and P6—Typical residential bill (sewerage), 2009–10 to 2013–14 ($)

Major urban area	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Melbourne	693	784	896	909	1,077	18.4%
Perth	1079	1,132	1,185	1,238	1,287	4.0%
southeast Queensland	1,210[1]	1,119[2]	1,150[2]	1,251	1,262	0.9%
Sydney	1,091	1,117	1,146	1,142	1,142	0.1%
Darwin	1,083	1,199	1,490	1,825	1,784	–2.2%
Canberra	1,066	1,034	1,127	1,206	1,099	–8.8%
Adelaide	960	1,010	1,206	1,399	1,282	–8.3%

Table notes

[1] Queensland Urban Utilities and Unitywater did not report against the indicator for that specific year.

[2] Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Melbourne figures are the weighted average of the three retailers.

Southeast Queensland figures are the weighted average of Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water.

Table A5 E12—Total net greenhouse gas emissions, 2009–10 to 2013–14 (net t CO_2 equivalents per 1,000 connected water properties)

Major urban area	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Perth	532	573	647	663	731	10%
Sydney	164	143	72	85	85	0%
Darwin	217	189	208	219	205	–7%
Melbourne		250	239	253	229	–9%
Canberra	422	362	313	288	260	–10%
Adelaide	262	293	328	422	278	–34%

Sydney figures are for Sydney Water only, excluding SCA.

Melbourne figures are the weighted average of the three retailers (E12 / C4—Total connected properties) plus Melbourne Water's emissions, are expressed on a per connection basis.

The Adelaide city figure was unavailable this year.

Table A6 F13—Combined operating cost—water and sewerage, 2009–10 to 2013–14 ($/property)

Major urban area	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Melbourne	640	661	786	749	1,004	34%
southeast Queensland	899[1]	802[2]	897[3]	937	1,065	14%
Perth	530	520	557	590	608	3%
Sydney	616	622	646	675	665	–1%
Canberra	786	756	825	796	740	–7%
Darwin	958	1,033	1,100	1,127	1,005	–11%
Adelaide	483	455	488	620	600	–3%

Table notes

[1] Queensland Urban Utilities and Unitywater did not report against the indicator for that specific year.

[2–3] Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Figures for F13 are the combined amounts for F11—Operating cost (water) and F12—Operating cost (sewerage).

Sydney figures are for Sydney Water. Sydney Water's operating costs include bulk water purchases, including from SCA.

Melbourne figures are the weighted average of the three retailers. The operating costs for the three retailers include bulk purchases from Melbourne Water.

Southeast Queensland figures are the weighted average of Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water. The operating costs for these utilities include bulk purchases from Seqwater.

Table A7 F16–Total capital expenditure for water and sewerage, 2009–10 to 2013–14 ($000)

Major urban area	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2011–12
Sydney	1,450,228	792,425	778,888	701,467	618,785	–12%
Melbourne	1,508,082	1,333,598	926,228	723,126	599,560	–17%
southeast Queensland	413,244[1]	496,451[2]	972,917[3]	642,306	508,995	–21%
Perth	912,813	688,815	540,938	495,976	258,141	–48%
Canberra	201,625	252,441	226,951	140,895	58,400	–59%
Darwin	63,839	51,122	57,102	63,673	25,172	–60%
Adelaide	1,023,355	595,851	530,075	331,038	187,945	–43%
Hobart (TasWater)	0	0	0	0	74,161	

Table notes

[1] Queensland Urban Utilities and Unitywater did not report against the indicator for that specific year.

[2–3] Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Sydney figures include Sydney Water and SCA.

Melbourne figures are the aggregate for Melbourne Water and the three retailers.

Southeast Queensland figures are the total of Seqwater, Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water.

Table A8 F24—Net profit after tax ($000) and F30—NPAT ratio (%), 2011–12 to 2013–14

Major urban area	F24—NPAT ($000)			F30—NPAT ratio (%)		
	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
Darwin	18,237	29,879	69,637	16	23	39
Perth	554,122	520,274	677,763	26	23	27
Sydney	428,516	463,028	490,372	14	17	18
Adelaide	233,441	270,844	199,912[1]	17	18	15[1]
Canberra	29,181	24,835	38,742	10	8	13
southeast Queensland	156,087[2]	265,628	290,895	7[2]	9	10
Hobart (TasWater)			27,236			10
Melbourne	495,752	112,171	253,690	16	4	6

Table notes

[1] Adelaide data for 2013–14 applies to entire SA Water operations as no data specific for Adelaide was available.

[2] Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Sydney NPAT figures are the aggregate for Sydney Water and SCA. NPAT ratio is the weighted average of Sydney Water and SCA (F24 / Total income/revenue).

Melbourne total NPAT (F24) figures are the aggregate for Melbourne Water and the three retailers. NPAT ratio (F30) is the weighted average of Melbourne Water and the three retailers (F24 / Total income/revenue).

Southeast Queensland figures for total NPAT (F24) are the aggregate for Seqwater, Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water. NPAT ratio (F30) is the weighted average of those utilities.

Perth data is for Water Corporation as a whole, as data were unavailable for Water Corporation (Perth).

Table A9 F20—Dividend ($000) and F21—Dividend payout ratio (%), 2011–12 to 2013–14

	F20—Dividend ($000)			F21—Dividend payout ratio (%)		
Major urban area	**2011–12**	**2012–13**	**2013–14**	**2011–12**	**2012–13**	**2013–14**
Canberra	29,181	24,835	38,742	100	100	100
Adelaide	229,166	242,141	196,717[1]	98	89	98[2]
Perth	411,523	390,109	491,264	74	75	72
Hobart (TasWater)			18,647			68
Sydney	280,718	325,951	279,900	66	70	57
southeast Queensland	78,996[3]	40,105	70,954	63[3]	49	46
Melbourne	254,867	63,982	46,600	51	57	18
Darwin						0

Table notes

[1, 2] Adelaide data for 2013–14 applies to entire SA Water operations as no data specific for Adelaide was available.

[3] Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Sydney F20 figures are the aggregate for Sydney Water and SCA. F21 is the weighted average of Sydney Water and SCA (F20 / F24).

Melbourne total dividend (F20) figures are the aggregate for Melbourne Water and the three retailers. The dividend payout ratio (F21) is the weighted average of Melbourne Water and the three retailers (F20 / F24).

Southeast Queensland figures for total dividend (F20) are the aggregate for Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water. Dividend payout ratio (F21) is the weighted average of those utilities.

Perth data is for Water Corporation as a whole, as data were unavailable for Water Corporation (Perth).

A1 Sydney

The total volume of water sourced (W1–W4) in Sydney increased marginally (2%) for 2013–14 to 572,130 kL, and was associated with increased surface water sourced.

The average residential water supplied in Sydney increased by 4% to 206 kL in 2013–14. Sydney experienced a minimal increase to the average residential bill of 0.1%. This was attributed to an increase in sewerage charges only. The operating cost saw a small decrease of 1% to $665/property. Sydney's total capital expenditure reduced by 12% for 2013–14, which is attributed to Sydney Water Corporation reduction in spending, as Sydney Catchment Authority spending increased.

There was a 13% increase in the reported sewer overflows per 100km of sewerage main.

NPAT increased by around $27 million in 2013–14, although that is $51 million below 2009–10 levels.

Sydney's dividend payout ratio decreased from 70% to 57%, and the total dividend paid was $46 million (or 16%) lower than in 2012–13. In fact, the NPAT, dividends, and payout ratio have all returned to 2011–12 levels.

A2 Melbourne

The total volume of water sourced (W1–W4) in Melbourne decreased by 7% for 2013–14 to 415,912 kL, and was associated with a decrease across all water sources: surface water, desalination water, and recycled water.

This is coupled with a decrease in average volume of residential water supplied to Melbourne customers by 1.5% to 150 kL from 152 kL in 2012–13 (which was the highest over the past five reporting years of 2009–10 to 2013–14).

The volume of recycled water supplied and percentage of effluent collected decreased for 2013–14 by 4% and 6% respectively.

A 9% decrease in greenhouse gas emissions (GHG) occurred in Melbourne. Melbourne Water was a major contributor, reporting a 9% reduction in emissions (a decrease of 32,272 t CO_2 per 1,000 properties), despite a 3% increase in the sewage collected and treated at its wastewater treatment plants.

Despite lower volumes delivered, Melbourne's operating costs increased by 34% in 2013–14. Melbourne had the greatest increase of all the cities, with 75% of the change attributed to increased water supply costs related to the desalination plant (Essential Services Commission Victoria [ESCV] 2013), and the remaining 25% of the change was associated with increased sewerage operating costs. This contributed to an associated increase in the typical residential bill for water (35%) and sewerage (5%).

Capital expenditure decreased by 17% from 2012–13 (the 5th consecutive significant decrease). This brought Melbourne below Sydney as the highest-spending city for the first time in the past five reporting years.

The higher operating cost was offset by lower capital cost and higher revenue, resulting in a growth in net profit for Melbourne compared to 2012–13; however, the 2012–13 year showed an unusual trough in the past five reporting years, due to the return of unrequired desalination payments to customers and Melbourne Water reporting a negative NPAT. The net profit and NPAT ratio for Melbourne is still low compared with the earlier 2009–10 to 2011–12 years.

The dividend paid in 2013–14 reduced further to $46 million from the 2012–13 figure of $64 million, and from the peak of $255 million recorded for 2011–12. The dividend payout ratio of 18% is historically the lowest in the past five reporting years, and represents a 68% decrease from 2012–13.

A3 Southeast Queensland

The total volume of water sourced (W1–W4 in southeast Queensland increased by 3% for 2013–14 to 316,622 kL and was associated with an increase in surface water use, with the overall increase being partially offset by decreased use of the other water sources, groundwater, desalination water, and recycled water.

Southeast Queensland's average annual volume of residential water supplied for 2013–14 was 164 kL, which was the second lowest consumption per property for the major urban areas after Melbourne, consistent with the data for the four previous reporting years of 2009–10 to 2012–13.

Southeast Queensland's average typical residential bill in 2013–14 was $1,262 is the fourth highest of the major urban areas after Darwin ($1,784), Perth ($1, 287) and Adelaide ($1,282).

Capital expenditure reduced 21% compared to 2012–13; however, operating costs per property increased to $1,065 in 2013–14, the highest for all the urban areas.

Southeast Queensland's capital expenditure was $509 million in 2013–14, the third highest after Sydney and Melbourne.

NPAT increased by 1% to 10% and the dividend payout increased significantly by 77%.

A4 Perth

The total volume of water sourced (W1–W4) in Perth was 294,702 kL for 2013–14, with only a 1.8% increase compared to 2012–13. Surface water, desalination water, and recycled water each showed a slight increase, while groundwater showed a decrease.

In 2013–14, Perth's average annual volume of residential water supplied remained comparatively high at 254 kL.

Perth residents are not as reliant on surface water as residents in other jurisdictions. Diversification of supply sources has seen an increase in the volumes of water sourced from desalination and easing of its reliance on groundwater.

Perth has had a continued increasing trend of GHG emissions over the five reporting years (2009–10 to 2013–14), with an additional 10% increase in the 2012–13 levels. This has been attributed to an increased reliance on water sourced from desalination. It is the highest GHG-emitting major urban area by a significant margin.

Operating costs increased by 3%, reflecting growth in both the number of properties serviced and external cost pressures, including costs associated with the operation and maintenance of increasing and diverse infrastructure (Water Corporation 2014: 15). Perth, however, still has the lowest operating costs of the major urban areas, with the next highest being Sydney.

Capital expenditure reduced dramatically by 48% to $258 million, while NPAT and dividend payout also increased significantly by 30% and 77% respectively compared to last year. Residential bills, however, increased by 4%, continuing an increasing trend over the last five reporting years.

A5 Adelaide

A 3.2% decrease in the total volume of water sourced from 2012–13 to 2013–14 and a corresponding decrease in the average annual volume of residential water supplied (down 5.2% to 183 kL per property) was reflected in a reported reduction of water sourced from surface water. Water sourced from desalination increased in 2013-14. The volume of water sourced from recycling was consistent with that reported in 2012–13. Adelaide's adoption of recycled water is further reflected in the percentage of effluent treated and reused. In 2013–14 Adelaide remained the best performing urban area recycling 28% of sewage effluent produced.

Adelaide had the third lowest volume of residential water supplied, after Brisbane (164 kL/property) and Melbourne (150 kL/property).

In 2013–14, there was a significant decrease in capital expenditure (43%), while operating costs decreased only slightly (3%). NPAT and dividend data were not available, therefore an appropriate comparison could not be made against Adelaide data for 2012–13.

A6 Canberra

The total volume of water sourced (W1–W4) in Canberra was 53,103 kL for 2013–14, with only a 1.6% increase in volume compared with 2013–14. This was attributed to an increase in surface water sourced.

Average annual volumes of residential water supplied in Canberra increased marginally by 1.9% to 203 kL per property, the highest in five reporting years (2009–10 to 2013–14).

The typical residential bill decreased by 9% from 2012–13. It was similar to bills in Melbourne and Sydney.

Canberra continues its decreasing trend in GHG emissions, reporting a decrease of 10% from 2012–13. This is a result of a multitude of carbon and energy reduction programmes at ACTEW (2014: 23).

Capital expenditure dropped significantly by 59% in 2013–14 compared with 2012–13, while operating cost reduced by 7%. NPAT increased by 56% to $39 million. Dividends increased by 56%, as a result of the ACT Government's 100% dividend payout ratio policy.

A7 Darwin

The total volume of water sourced (W1–W4) in Darwin was 41,086 kL for 2013–14, showing a 5% decrease in volume compared with 2012–13. This is mostly attributed to an increase in the volume of surface water sourced.

Darwin also experienced a 10% decrease in the average annual volumes of residential water supplied in the reporting year, but remained, by a substantial margin, the major urban area with the highest residential consumption. Its volume of 407 kL per property was almost double that of the next highest, Perth (254 kL), and almost triple that of Melbourne and southeast Queensland. The 2013–14 demand in Darwin approximately equal to the area's annual sustainable supply limit. Accordingly, Power and Water is focusing on driving more efficient water use in the community to extend the life of existing water resources, which may have contributed to the decrease in 2013–14 (P&W 2014a: 38).

Total recycled water supplied reduced by 30%. Among the major urban areas, Darwin's remains by far the smallest producer of recycled water by volume, and also as a percentage of wastewater effluent collected (at 2%).

GHG emissions decreased by 7%, and Darwin remains the second-lowest greenhouse gas emitter after Sydney.

Operating costs remained one of the highest among the major urban areas, despite decreasing by 11% from 2012–13.

A change to the methodology used to calculate capital expenditure by Power and Water (Darwin) resulted in a 60% decrease from 2012–13, with the 2013–14 capital expenditure reported as $25 million.

NPAT rose by 133%, from $30 million in 2012–13 to $70 million in 2013–14. As a result, Darwin now has the equal highest NPAT ratio among the major urban areas.

Darwin experienced a small decrease in typical residential bills to $1,784 (2%) after a large 22% increase in 2013–14, but continues to have the highest average bill of all the major urban areas.

A8 Hobart

With TasWater reporting for the first time for the Tasmanian metropolitan area including Hobart, comparisons with previous years were not possible because TasWater data relates to the entire State of Tasmania. Neither is a comparison with data previously reported by Southern Water, which covers a subset area that included Hobart. Additionally, TasWater has only reported against some indicators due to a lack of audited data at this point in time.

In general, indicators for Hobart are the same order of magnitude as Canberra, which is the closest in terms of population. In particular: total recycled water supplied; total capital expenditure for water and sewerage ($74 million); and NPAT ($27 million).

Appendix B: Jurisdictional summaries

B1 Australian Capital Territory

B1.1 Introduction

The ACT Government's Environment and Planning Directorate has several roles in water management within the ACT. It manages strategic water policy, including local implementation of national water reform, and national issues relating to water access, pricing, and trading. The directorate also regulates the ACT's water resources and monitors and reports on water quality in the Territory.

Reporting and compliance obligations for the ACT water sector are imposed by national legislation including the Australian Government *Water Act 2007*, the *Corporations Act 2001* and the *Privacy Act 1988*, and ACT legislation including the *Independent Competition and Regulatory Commission Act 1997*, the *Territory-Owned Corporations Act 1990*, the *Work Safety Act 2008*, the *Utilities Act 2000*, the *Water Resources Act 2007*, the *Environment Protection Act 1997*, the *Water and Sewerage Act 2000,* and the *Public Health Act 1997.*

The Independent Competition and Regulatory Commission determines price directions for water utilities and regulates access agreements. The *Utilities Act 2000* provides for the commission to issue licences and determine industry codes. A new price direction incorporating biennial reviews was issued in June 2013 for the next price path period up to 30 June 2019 (a 6-year period), with a price path set for 2013–14 and 2014–15, and with major biennial reviews to take place in 2014–15 and 2016–17. Prices for water and sewerage services are to be increased in line with the consumer price index.

In September 2013, ACTEW Corporation Ltd submitted an application for a review by an industry panel of the price direction for regulated water and sewerage services (1 July 2013 – 30 June 2019) set by the Independent Competition and Regulatory Commission (ICRC). An industry panel under the *Independent Competition and Regulatory Commission Act 1997* is currently examining the price direction that had been determined by the Independent Competition and Regulatory Commission.

Among other functions, the *Utilities Act 2000* provides for the Essential Services Consumer Council.

B1.2 Water utilities in the ACT

ACTEW Corporation Limited, which was established as a corporation in 1995, is owned by the ACT Government and has two subsidiary companies, ACTEW Retail Limited and ACTEW Distribution Limited, which are ACTEW's partnership companies in ActewAGL. ACTEW owns and manages the water and sewerage business assets and is a 50% owner of ActewAGL, a joint venture with AGL Energy Limited and Singapore Power.

In late 2011, the ACTEW board approved the reintegration of the water and sewerage business into ACTEW. This change came into effect from 1 July 2012, when ACTEW resumed the management, operations, and maintenance of the ACT's water and sewerage assets and business. This was previously undertaken by ActewAGL on behalf of ACTEW. The services are provided under the business name ACTEW Water. The change was carried out so as to give ACTEW the opportunity to transform the business in a way that more closely aligns with the objectives of ACTEW Corporation. The ACTEW organisation grew from 38 personnel to almost 400.

ACTEW Water also released its *Statement of corporate intent* for 2013–14 to 2016–17.

On 31 October 2014, the Board of ACTEW Water announced a change in name for the water utility from ACTEW Water to Icon Water. The new branding of the utility and also the corporate name is to come into effect in early 2015.

The ACT Auditor–General is ACTEW's auditor. Internal audit services are provided by private firms. ACTEW reports regularly to the ACT Government. In April 2014, the ACT Auditor–General concluded a performance audit that examined the governance and administrative arrangements for the ICRC review of water and sewerage prices in the ACT.

Strategic planning for the sewage treatment plants culminated in the release of the *Lower Molonglo Water Quality Control Centre Strategic Plan*.

In 2013–14, the ACT received an amount equivalent to its average annual rainfall (616 mm), marked by good rainfall in summer and autumn. Water consumption remained constant to levels of recent years.

B1.3 Operation of water utilities

ACT Health regulates water quality under the *Public Health Act 1997*, in accordance with the *Australian drinking water guidelines 2004*. Testing of the quality of water was undertaken in accordance with the *Australian drinking water guidelines*. ACTEW Water had 100% compliance with the Drinking Water Utility Licence and the Public Health (Drinking Water) Code of Practice (2007) in 2013–14. ACTEW Water also published its *Annual drinking water quality report 2012–13* in accordance with the code in October 2013.

ACTEW also provides water services to Queanbeyan City Council under the updated Queanbeyan Water Supply Agreement 2008.

The construction of the Enlarged Cotter Dam was completed in August 2013. After commissioning the Murrumbidgee–Googong Pipeline (M2G) in August 2012, work has continued to incorporate the operations and maintenance processes of the pipeline into standard ACTEW Water operating practices. This included updating the *Pipeline Management Plan* for the M2G after significant amendments to the New South Wales Pipeline Regulations and the relevant Australian Standard. Upgrading works commenced on the Googong Water Treatment Plant for a combined carbon and fluoride dosing facility.

B1.4 Performance reporting

ACTEW's commercial and business objectives, activities and priorities, as agreed by voting shareholders, are detailed in its annual Statement of Corporate Intent. The ACTEW Corporation *Annual Report 2013–14* was provided to the ACT Government in September 2014. Quarterly reports of progress on the priorities outlined in the statement and financial and operational matters, as well as reports and briefings on key and emerging issues, were provided to the voting shareholders during the year.

B2 New South Wales

B2.1 Introduction

In New South Wales (NSW), urban water supply and sewerage services are provided by three state-owned metropolitan water utilities and 105 regional local water utilities (LWUs).

Various regulatory agencies have responsibility for the establishment and operation of the water utilities. The Independent Pricing and Regulatory Tribunal (IPART) is the licence-compliance regulator for the three major metropolitan water utilities in NSW: Sydney Water, Sydney Catchment Authority (SCA), and Hunter Water. IPART also determines maximum prices that Gosford City Council, Wyong Shire Council, and Essential Energy can charge their customers for the provision of bulk water, water, and sewerage services.

The NSW Office of Water (NOW) manages the State Government's Country Towns Water Supply and Sewerage Program, oversees and monitors utility performance, and is the primary regulator for the 105 regional LWUs in New South Wales, which serve a total urban population of 1.82 million (with coverage of 98.0% for water supply and 96.1% for sewerage). The infrastructure current replacement cost is almost $28 billion, and annual revenue is $1.36 billion.

A number of other agencies, including NSW Health, the Office of Environment and Heritage, and the Dam Safety Committee, are each responsible for aspects of the regulation of the New South Wales water utilities.

The State's water utilities have obligations under a number of Australian and New South Wales laws, including the Australian Government's *Corporations Act 2001* the *Privacy Act 1988*, and the *Water Management Act 2000*, and the following NSW legislation: *Water Act 1912*, *Protection of the Environment Operations Act 1997*, *Independent Pricing and Regulatory Tribunal Act 1992*, *Environmental Planning and Assessment Act 1979*, *State Owned Corporations Act 1989*, *Dams Safety Act 1978*, *Local Government Act 1993*, the *Fisheries Management Act 1994*, *Public Health Act 2010*, *Fluoridation of Public Water Supplies Act 1957*, *Work Health and Safety Act 2011*, *Public Finance and Audit Act 1983*, the *Water Industry Competition Act 2006*, *Hunter Water Act 1991*, *Sydney Water Act 1994,* and the *Sydney Water Catchment Management Act 1998*.

B2.2 Establishment of water utilities

Sydney Water, SCA, and Hunter Water are created by and derive their responsibilities and areas of operations from their respective Acts (the *Sydney Water Act 1994*, the *Sydney Water Catchment Management Act 1998*, and the *Hunter Water Act 1991*).

The 105 regional urban LWUs derive their responsibilities from and operate mainly under the *Local Government Act 1993*. Five LWUs (Gosford, Wyong, Essential Energy, Fish River, and Cobar Water Board) operate as water supply authorities under the *Water Management Act 2000*.

B2.3 Operation of water utilities

The regulatory oversight of water utilities in New South Wales is shared between different agencies.

IPART regulates operating licences that have been issued to Sydney Water (under section 12 of the *Sydney Water Act 1994*), Hunter Water (under Part 5 of the *Hunter Water Act 1991*) and the SCA (under Part 4 of the *Sydney Water Catchment Management Act 1998*). The operating licences include obligations relating to water quality, asset management, water quantity, environmental/catchment management, compliance, and performance reporting.

IPART conducts major operating audits each year, which identify any areas of non-compliance and make recommendations to improve performance. It also undertakes end-of-term reviews of operating licences and makes recommendations to the relevant minister on the terms for renewal of the licences.

The 105 LWUs are primarily regulated by NOW under the NSW Government's comprehensive Best-Practice Management of Water Supply and Sewerage Framework (www.water.nsw.gov.au). The framework is the key driver for the reform of planning, management, pricing, and continuing performance improvement of the LWUs. Eligibility for Government financial assistance towards the capital cost of backlog infrastructure (as at 1996) and for dividend payments to councils' general revenue is conditional on the implementation of the 19 requirements of the framework.

Each LWU needs to prepare a 30-year strategic business plan, total asset management plan (TAMP) and financial plan,[5] which are reviewed by NOW.[6] Each LWU also needs to undertake extensive community consultation (NSW Office of Water 2012) and to prepare and implement a risk-based drinking water management system (NSW Health and NSW Office of Water 2013) by September 2014 in accordance with the *Australian drinking water guidelines 2011*. The water quality management systems need to be independently audited.

Each LWU also needs to prepare and implement a 30-year integrated water cycle management (IWCM) strategy[7] for water supply, sewerage, and stormwater that 'right sizes' any necessary infrastructure projects and provides the best value for money on the triple bottom line (TBL) basis of social, environmental, and economic considerations. NOW reviews each LWU's IWCM strategy (Element 1 of the NSW Best-Practice Management Framework) and provides confirmation to each utility that its final IWCM strategy is soundly based.

The NSW Government has developed guidelines on assuring future urban water security. They build on the robust NSW methodology for determining the appropriate size of a regional water supply headworks system (known as the 'NSW security of supply basis') and a pilot study for 11 urban water supplies in regional NSW.

Each NSW regional water utility will need to assess the impact of climate variability on the secure yield of its water supply system in accordance with the water security guidelines. Secure yield assessments will form an integral part of the utility's IWCM strategy.

A proposal for the construction or modification of a dam or water or sewage treatment works or for the development of a water recycling system requires approval under section 60 of the *Local Government Act 1993*. This involves an independent and objective review that allows NOW to share its insights and expertise in overseeing 539 LWU water and sewage treatment works and 119 LWU dams. The review provides assurance to the community that the proposed infrastructure is fit for purpose and provides a robust, safe, cost-effective, and soundly based solution, without wasteful 'gold-plating'. Similarly, the acceptance of a high- or medium-risk trade waste discharge to the sewerage system requires a NOW section 90(1) concurrence.

Under section 61 of the *Local Government Act 1993*, NOW carries out regular inspections of LWU treatment works and provides feedback and mentoring to the LWU operators. Each operator in charge of a water or sewage treatment works in regional NSW is required to have appropriate qualifications and experience.

NOW conducts nationally certificated operator training courses for LWU water and sewage treatment works operators; 339 LWU operators have met the requirements of the National Certification Framework for Water Treatment Works Operators. The performance of each of the 539 LWU treatment works is publicly disclosed annually in appendixes D1 and D2 of the NSW *Water supply and sewerage benchmarking report*.

NSW Health regulates water quality in New South Wales and administers functions relating to water suppliers (Sydney Water, Hunter Water, and the LWUs) under the *Public Health Act 2010*. NSW Health also enters into memorandums of understanding with the metropolitan water utilities (including SCA) to facilitate interaction between the agencies and to establish the scope of drinking water management plans and procedures for communicating the results of water quality programmes. NSW Health also conducts the NSW Drinking Water Quality Program,8 which tests and monitors the water quality of samples collected by the LWUs in accordance with the *Australian drinking water guidelines 2011*.

5 Strategic business plans, TAMPS, and financial plans need to be in accordance with the July 2014 Strategic Business Planning Check List (www.water.nsw.gov.au).

6 A LWU's peak planning document for water supply and sewerage is the later of its Integrated Water Cycle Management (IWCM) strategy and financial plan and its strategic business plan and financial plan. These are required every 8 years on a rotation of every 4 years (www.water.nsw.gov.au). The IWCM strategy and strategic business plan must disclose the utility's levels of service, total asset management plan, and projected typical residential bills and should be made available on the utility's website. All of the LWUs serving more than 3,000 properties have completed a sound 30-year strategic business plan and financial plan that demonstrates the long-term financial sustainability of their water and sewerage businesses. The plans cover 93% of LWUs and over 99% of the urban population in regional New South Wales.

7 IWCM strategies, TAMPS, and financial plans need to be in accordance with the July 2014 IWCM Check list (www.water.nsw.gov.au)

8 See Appendixes B (p. 215), D1 (p. 243) and H (p. 299) of NSW Office Water 2014.

The Office of Environment and Heritage (NSW) regulates the environmental impact of water utilities' operations through environmental protection licences issued under the *Protection of the Environment Operations Act 1997* and through memorandums of understanding with the utilities. Annual reports of compliance performance, required by the licences, are publicly available on the Environment Protection Authority website.

The Dam Safety Committee regulates the water utilities with respect to dam safety. The *Dams Safety Act 1978* enables the committee to direct the utilities to undertake works, surveillance, and emergency planning to ensure the safety of dams in New South Wales.

NOW also licences the extraction of water from natural surface water and groundwater sources for supply to Hunter Water and LWU customers.

B2.4 Water utilities in New South Wales

Sydney Water, a statutory corporation wholly owned by the NSW Government is Australia's largest water utility, with an area of operations covering 12,700 square km. It provides drinking water, recycled water, wastewater services, and some stormwater services to more than 4 million people in Sydney, the Illawarra, and the Blue Mountains. Drinking water is sourced from a network of dams managed by SCA and from the Kurnell desalination plant before it is treated and delivered to customers.

SCA is a NSW Government agency created in 1999 by the *Sydney Water Catchment Management Act 1998* to supply raw water in bulk to Sydney Water. SCA's area of operations is defined in its operating licence and includes catchments in the Blue Mountains, Shoalhaven, Warragamba, upper Nepean, and Woronora areas.

Hunter Water is a wholly State-owned corporation responsible for the provision of water and wastewater services to over half a million people in the lower Hunter region. The Hunter Water area of operations covers the local Government areas of Cessnock, Lake Macquarie, Maitland, Newcastle, Port Stephens, and Dungog and parts of Singleton.

The 105 regional LWUs in NSW range in area from 130 square km (Deniliquin) to over 50,000 square km (Central Darling), while the population served ranges from under 1,000 (Jerilderie) to 165,000 (Gosford).

All of the 29 regional NSW LWUs serving 10,000 or more connected properties have reported annually for the Urban NPR.

The comprehensive final report of the Independent Local Government Review Panel has been released and the NSW Government has provided its response to the panel's report (www.olg.nsw.gov.au). Councils are required to prepare a submission by June 2015 on how they propose to be 'Fit for the Future' and to address the recommendations in the panel's report. The council submissions will be assessed by an independent expert panel.

Performance monitoring and reporting are considered important for public accountability and have been strongly endorsed by the NSW Government, IPART, and the Productivity Commission (Productivity Commission 2011)

The metropolitan water utilities are required to report on the performance indicators in their operating licences in accordance with the reporting manual. The reporting of indicators is audited each year through the annual operating licence audit, and the audit results are presented to the responsible minister, the Minister for Lands and Water.

Sydney Water and Hunter Water also report the National Water Initiative (NWI) performance indicators required for release in the Urban NPR, as outlined in the *National Performance Framework: 2013–14 urban water performance report indicators and definitions handbook.*

With the exception of the financial indicators, IPART audits one third of the auditable NWI indicators each year. The audit is conducted concurrently with the annual operating licence audits. Financial NWI indicators are audited once every three years by the Audit Office of New South Wales.

Because SCA is a bulk water supplier it reports on only a subset of the NWI indicators (29 of approximately 150).

LWUs are required to annually report the fair value and the current replacement cost depreciation of their water supply and sewerage assets in their audited annual financial statements.

NOW annually reports the performance of all the New South Wales utilities.[9] The LWU data is audited as follows:

- All of the 30 NWI financial performance indicators are independently audited annually for each of the 105 regional LWUs.
- All of the auditable non-financial performance indicators are independently audited every three years for each of the 29 regional NSW utilities that are required to report nationally.[10]

The remainder of the information reported in the NSW Performance Monitoring System is not independently audited; however, in order to assure data reliability, the data is subject to the comprehensive data validation processes detailed in Appendix G of the 2013–14 NSW water supply and sewerage performance monitoring report (www.water.nsw.gov.au). Refer also to NSW Office of Water 2014.[11]

B3 Northern Territory

B3.1 Establishment of service providers

The Northern Territory *Water Supply and Sewerage Services Act 2009 (*the *Act 2009)* provides the regulatory framework for the water and sewerage industry in the Territory. The Department of Treasury and Finance is responsible for the *Act* in so far as the it relates to price regulation, while the Minister for Essential Services is responsible for the *Act* as it relates to supply and service provision under licence, and the Department of Health is responsible for the *Act* as it relates to water quality standards.

The objects of the *Act 2009* are:

- to promote the safe and efficient provision of water supply and sewerage services;
- to establish and enforce standards of service in water supply and sewerage services;
- to facilitate the provision of financially viable water supply and sewerage services; and
- to protect the interests of customers.

Among other things, the *Act* provides for the following:

- The supply of water and sewerage services is to be licensed, and licences issued by the Utilities Commission are for defined, gazetted, geographical areas. The Minister for Essential Services is responsible for the declaration of water supply and sewerage service licence areas (by notice in a Government gazette).

9 The NSW reference rates manual for valuation of water supply, sewerage, and stormwater assets (2014) provides current unit rates and guidance on the valuation and depreciation of such assets. Available at www.water.nsw.gov.au.

10 These utilities serve 75% of the connected properties in regional NSW. Independent audits were conducted in 2006–07, 2009–10, and 2012–13.

11 The NSW Performance Monitoring System is shown on page 3 of the *2012–13 Benchmarking report*. The system involves a 'one-stop shop', which minimises red tape and avoids duplication in reporting by providing the required LWU data to the National Water Commission annually (for the Urban NPR), the Australian Bureau of Statistics and the Australian Bureau of Meteorology, as well as for NSW State reporting, including the *State of the environment report, NSW 2021*, the annual NSW performance monitoring and benchmarking reports and a TBL performance report for each LWU.

Power and Water Corporation (the licensed utility) is subject to water quality monitoring programmes and emergency directions issued by the Chief Health Officer (Department of Health).

The Northern Territory Utilities Commission is the independent industry regulator. It has responsibility for the licensing functions conferred by the *Act*.

Statutory conditions of water and sewerage licences issued under the *Act* include:

- that the licensee monitors and reports to the Utilities Commission on compliance with the licence; and
- that the licensee procures an audit, if required by the Utilities Commission, of its compliance with the terms of the licence.

The Northern Territory *Water Act 1992* (the *Water Act 1992)* is another major piece of legislation pertaining to the regulation of the supply of water and sewerage services in the Northern Territory. The *Water Act* provides for the investigation, allocation, use, control, protection, management, and administration of water resources, and for related purposes.

The *Water Act* 1992 also allows for the issue of waste discharge licences and water extraction licences by the Controller of Water Resources (Department of Land Resource Management).

B3.2 Operation of water utilities

Power and Water Corporation is responsible for monitoring the quality of drinking water in line with its Drinking Water Operational and Verification Monitoring Program and reports the results to the Chief Health Officer. The programme is based on the *2004 Australian drinking water guidelines*.

While Power and Water Corporation has primary responsibility for providing safe drinking water through the Northern Territory *Water Supply and Sewerage Services Act 2009*, a number of Government agencies are also involved. The Department of Health applies the guidelines and monitors compliance with them in the interest of public health, and the Department of Land Resource Management and the Environmental Protection Authority (EPA) of the Northern Territory (EPA) also have a role in protecting water quality, including the regulation and management of water resources and the regulation of pollution control.

The Department of Infrastructure has a major role in protecting water quality through land-use planning in the Northern Territory. In addition, legislation such as the *Water Act* 1992 and the Northern Territory *Land Acquisition Act 1978* contain provisions for infrastructure and land use relating to water supply.

A condition of the waste discharge licences issued to Power and Water Corporation is the submission to the EPA of annual audit and compliance reports related to environmental impacts that discharged water may cause, and the assessment of water recycling schemes. The corporation also investigates and reports to the EPA on pollution incidents under the Northern Territory *Waste Management and Pollution Control Act 2012*.

Water and sewerage tariffs and charges are regulated by the Northern Territory Government via a Water and Sewerage Pricing Order issued by the Treasurer as regulatory minister. The Utilities Commission monitors compliance with the pricing order and enforces it under section 23 of the Northern Territory *Utilities Commission Act 2000*. The commission is also required to investigate any complaints made to it by customers about non-compliance with the prices outlined in the order.

B3.3 Water utilities in the Northern Territory

In the Northern Territory, Power and Water Corporation's water and sewerage business is licensed and responsible for the supply of water and sewerage services to the Northern Territory's five major centres (Darwin, Katherine, Tennant Creek, Alice Springs, and Yulara) and 13 minor centres.

No significant distinction between urban and rural areas is made under the legislation or the licensing framework under which Power and Water Corporation operates. Declared water supply and sewerage service licence areas are defined by geographical coordinates (latitude and longitude).

B3.4 Performance reporting

Urban NPR data is gathered within Power and Water Corporation by a central coordinator, who collates the report, and other areas in the organisation supply information. Some key NPR indicators are provided to Power and Water Corporation's executive management, board, and shareholders on a regular basis. Performance data that is publicly available is reviewed and/or signed off at the executive or managing director level. NPR data is signed off at the senior management level. Many of the NPR indicators are audited in accordance with NPR auditing requirements.

B4 South Australia

B4.1 Establishment of utilities

The Department of Environment, Water and Natural Resources and SA Water are the agencies responsible for managing South Australia's urban and rural water delivery.

Regional natural resources management boards are responsible for the development of water allocation plans for prescribed water resource areas as required by the South Australian *Natural Resources Management Act 2004*.

The South Australian *Water Industry Act 2012* establishes the regulatory framework for the water and sewerage industry covering economic regulation, technical regulation, water planning, and customer complaint handling. The South Australian *Water Industry Act 2012* commenced on 1 July 2012 and governs all water industry entities providing retail services to South Australian customers.

On 1 January 2013, the Essential Services Commission of South Australia (ESCSA) became the independent economic regulator of water and sewerage retail services in South Australia, with the primary objective of protecting the long-term interests of South Australian consumers with respect to the price, quality, and reliability of those services.

The ESCSA is responsible for the economic regulation of water and sewerage services in South Australia, a role that includes industry licensing, consumer protection, retail pricing, and performance monitoring.

B4.2 Water utilities in South Australia

Any person or entity providing 'water retail services' to South Australian customers is required to be licensed by the ESCSA. The ESCSA has determined separate regulatory obligations for major retailers (those providing retail services to more than 50,000 connections) and other retailers (with less than 50,000 connections). SA Water is the only major retailer in South Australia, and there are currently 64 other retailers (mainly council run operations).

B4.2 Water utilities in South Australia

SA Water is a Government enterprise and, as the State's main supplier of urban water, is required under the South Australian *Water Corporation Act 1994* to deliver, monitor and report on its primary functions of:

- supply of water by reticulated systems;
- storage, treatment and supply of bulk water; and
- removal and treatment of wastewater.

SA Water provides drinking water to approximately 745,000 customers, servicing around 95% of the State's population. SA Water also provides sewerage services to approximately 586,000 customers, servicing around 76% of the State's population.

The 64 other water and sewerage retailers provide drinking water to approximately 6,000 customers and sewerage services to around 85,000.

B4.4 Operation of water utilities

Section 35 of the *Water Industry Act 2012* empowers the ESCSA to make a determination under the South Australian *Essential Services Commission Act 2002* regulating prices, conditions relating to prices, and price-fixing factors for water retail services.

The ESCSA made its first independent revenue determination for SA Water in May 2013, setting maximum allowed revenues for drinking water and sewerage retail services for the 3-year period from 1 July 2013 – 30 June 2016.

A more light-handed approach to price regulation has been applied to other water retailers for the Initial Regulatory Period (1 July 2013 – 30 June 2016) through a combination of pricing principles and a price-monitoring framework.

Pursuant to Part 4 of the *Essential Services Commission Act* 2002, the ESCSA is empowered to make industry codes and rules regulating the conduct or operations of a regulated industry or regulated entities. The ESCSA has made a Water Retail Code for major retailers that sets out the minimum requirements to be complied with by SA Water when dealing with its customers and includes obligations relating to customer connections and the quality, safety, and reliability of the water and sewerage supply. SA Water is required to meet a number of operational service standards relating to customer service, service interruptions, and new connections.

A similar Water Retail Code has been made for other retailers, but there are currently no service standards.

B4.5 Performance reporting

The Commission produces an annual performance report on the water and sewerage industry. The report covers prices charged, customer service, financial assistance offered by retailers to customers, infrastructure reliability, and financial performance.

SA Water reports against customer service and water quality indicators in its annual report. The indicators include:

- compliance with the Australian Drinking Water Guidelines 2011 (ADWG);
- the Water Quality Management Index;
- compliance with water and sewerage services targets; and
- the Incident Response Index.

B5 Tasmania

B5.1 Introduction

In July 2009, Tasmania's urban water and sewerage industry was reformed and restructured. Three regional water and sewerage corporations took over the operation of the water and sewerage services previously provided by 28 local councils and three bulk water authorities.

Two pieces of legislation were enacted to enable reform:

- the Tasmanian *Water and Sewerage Corporations Act 2008* addressed the structural elements of the reforms; and
- the *Water and Sewerage Industry Act 2008* (the *Industry Act*) addressed the economic regulatory elements.

In May 2012, the owner Councils of the three corporations agreed to amalgamate those entities into a single corporation. Legislation was subsequently passed to enable a single corporation, the Tasmanian Water and Sewerage Corporation Pty Ltd (TasWater), to commence operations on 1 July 2013.

B5.2 Establishment of water utilities

The *Water and Sewerage Corporations Act* established three corporations, owned by local Government to provide water and sewerage services across the State:

- Ben Lomond Water;
- Cradle Mountain Water; and
- Southern Water.

The *Water and Sewerage Corporation Act 2012* subsequently provided the legislative basis for the amalgamation of these three regional corporations to form TasWater.

The *Industry Act* requires any persons or entities owning and/or operating water and/or sewerage infrastructure, or supplying water and/or sewerage services to others, to be licensed, unless exempted.

The licences place a number of regulatory obligations on licensees through reference to various regulatory instruments such as codes and guidelines, as well as requiring the preparation of management plans in relation to matters such as assets and emergency management and compliance.

B5.3 Operation of water utilities

The *Water and Sewerage Industry Act* provides for the establishment of an economic regulatory framework to apply to the provision of water and sewerage services. It also provides for a number of transitional arrangements to apply until all elements of the new regulatory framework are fully implemented.

The economic regulatory framework is focused on ensuring competitive market outcomes from the sector in relation to both price and service, ensuring the financial sustainability of the water and sewerage corporations, and providing sufficient funding to meet other regulatory obligations.

Industry regulators for the sector include the Tasmanian Economic Regulator, the Director of the Environment Protection Authority, the Director of Public Health, and the Secretary of the Department of Primary Industries, Parks, Water and Environment.

The Tasmanian Economic Regulator is responsible for administering the licensing system, establishing and maintaining the Customer Service Code, and regulating prices and terms and conditions for regulated services.

The Tasmanian EPA administers and enforces the provisions of the Tasmanian *Environmental Management and Pollution Control Act 1994* and is principally concerned with the prevention, reduction, and remediation of environmental harm.

The Tasmanian Director of Public Health is responsible for drinking water quality and safety through the application of drinking water guidelines and for the fluoridation of drinking water.

The Department of Primary Industries, Parks, Water and Environment is responsible for the administration of the Tasmanian Water Management (Safety of Dams) Regulations 2011.

Independent regulation of water and sewerage prices in Tasmania commenced on 1 July 2012, following the Tasmanian Economic Regulator's first price determination investigation of regulated water and sewerage services in the State. As part of the investigation, each regional corporation submitted a proposed price and service plan articulating a set of price and service outcomes to be delivered over the first regulatory period. The investigation culminated in the release of a price determination for each water and sewerage corporation, covering the three years from 1 July 2012 – 30 June 2015. The main outcomes of the investigation centred on the commencement of price reform and the implementation of service standards.

Price reform of the industry is designed to transition customers to a single set of tariffs across the whole State by the statutory due date of 1 July 2020 (i.e., customers are required to be paying the same price for the same service irrespective of where they live in Tasmania by this date). Price reform has also introduced two-part pricing for water (a fixed charge based on the size of the connection and a variable charge reflecting metered water consumption), and sewerage charges to be determined based on the assessed equivalent tenements of each property.

Within its price and service plans, each water and sewerage corporation proposed transitional service standards for each year of the regulatory period, based on a minimum service standard framework specified in the Customer Service Code issued by the Tasmanian Economic Regulator in 2010 (updated in 2013).

The price determinations made, and price and service plans approved, as part of the 2012 price determination investigation continue to apply to TasWater for the remainder of the first regulatory period.

B5.4 Water utilities in Tasmania

During 2013–14, the sole water and sewerage provider in Tasmania was TasWater, which commenced operations on 1 July 2013 following the amalgamation of the three regional corporations.

TasWater's objectives include ensuring that infrastructure planning occurs on a statewide basis, service is delivered consistently, governance arrangements between council owners and the new corporation are streamlined, and opportunities are created for cost savings.

B5.5 Performance reporting

The Tasmanian economic regulator is required to prepare an annual report on the state of the water and sewerage industry (the 'State of the industry report'). The report covers affordability, customer service, financial performance, network reliability and efficiency, drinking water quality, and environmental performance, and also identifies future priority projects for the industry. The indicators reported on in the report are based on the National Performance Reporting Framework with some additional State-based measures.

The economic regulator's Tasmanian Water and Sewerage Industry Performance and Information Reporting Guideline 2013 prescribes the data and contextual information that TasWater must provide to the Economic Regulator so that its performance can be measured in a number of areas.

The Economic Regulator's reporting guidelines sets out how the Economic Regulator will exercise its powers to provide for regulatory reporting, the scope of the reporting, and how the reporting is to be conducted. Under the guidelines, licensees are required to engage an independent reporter or appraiser, approved by the Economic Regulator, to conduct a review according to terms of reference issued by the Economic Regulator. In developing the terms of reference, the Economic Regulator will consult with the Director of Public Health and the Director of the EPA to determine the practicality of joint reporting.

The report to the Economic Regulator covers compliance with, and the adequacy of, management and compliance plans and/or the quality, reliability or conformity of regulatory information, including performance information. Regulatory reporting for Tasmania's water corporations began in 2012–13. The auditing of performance information commenced during 2013–14, whilst reviews of *TasWater's Environmental Management Plan and Compliance Plan* are to be undertaken during 2014-15 and the review of TasWater's *Asset Management Plan* is to be completed by 31 August 2015.

The Tasmanian Department of Health and Human Services ensures compliance with regulatory obligations under the Tasmanian *Public Health Act 1997* and the Tasmanian drinking water quality guidelines 2005. Under the guidelines, any laboratory tests of drinking water must be performed by an accredited laboratory. If results obtained from drinking water tests indicate that there is, or is likely to be, a threat to public health, then the laboratory that performed those tests must notify the Director of Public Health.

B6 Queensland

B6.1 Introduction

In Queensland, the regulation of the urban water and sewerage services sector is undertaken by a number of Queensland Government departments, with the aim of providing the State's urban communities with access to safe and reliable water and sewerage services and ensuring efficient business operations, efficient water use, water security, protection of the environment, competition, and the prevention of monopoly pricing.

B6.2 Establishment of water utilities

Chapter 2 of the Queensland *Water Supply (Safety and Reliability) Act 2008* (the *Water Supply Act*) provides a framework for the delivery of water and sewerage services throughout Queensland. It sets out certain requirements relating to water and sewerage service providers and the provision of services (water, sewerage, and irrigation). Chapter 3 provides a framework for the use and provision of recycled water.

The Queensland *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009* provides for council-owned distributor–retailers and the operation of council water businesses in southeast Queensland (SEQ). The Queensland Department of Energy and Water Supply (DEWS) administers these *Acts*.

Chapter 4 of the Queensland *Water Act 2000* provides the administrative and reporting frame work for category 1 water authorities. The Queensland *South-East Queensland Water (Restructuring) Act 2007* provides for bulk water service providers in SEQ. DEWS jointly administers this *Act* with the Queensland Department of Treasury and Trade.

B6.3 Operation of water utilities

Water utilities are referred to as 'water service providers' in Queensland's legislative framework. They operate within the following framework of regulation:

Water quality—health

- Queensland Water Supply (Safety and Reliability) Act 2008—administered by DEWS; and
- Queensland *Public Health Act 2005* and Regulations, Queensland *Water Fluoridation Act 2008* and the Queensland Water Fluoridation Regulation 2008—administered by the Queensland Department of Health.

Water quality—discharges to the environment

- Queensland *Environmental Protection Act 1994* and regulations—administered by the Queensland Department of Environment and Heritage Protection

Infrastructure

- Queensland *Water Supply (Safety and Reliability) Act 2008*, Queensland *South–East Queensland Water (Distribution and Retail Restructuring) Act 2009*, and Queensland South-East Queensland Water (Restructuring) Act 2007, Queensland Water Act 2000—administered by DEWS;
- Queensland *Environmental Protection Act 1994* and regulations—administered by the Queensland Department of Environment and Heritage Protection;
- Queensland *Local Government Act 2009* and Regulations—administered by the Queensland Department of Local Government, Community Recovery and Resilience;
- Queensland *Plumbing and Drainage Act 2002* and Queensland Development Code—administered by the Queensland Department of Housing and Public Works; and
- Queensland *Sustainable Planning Act 2009*—administered by the Queensland Department of State Development, Infrastructure and Planning.

Pricing

- Queensland South–East Queensland Water (Distribution and Retail Restructuring) Act 2009, Water Act 2000—administered by DEWS;
- Queensland *Local Government Act 2009* and regulations—administered by the Queensland Department of Local Government, Community Recovery and Resilience; and
- *Queensland Competition Authority Act 1997*—administered by the Queensland Competition Authority.

The regulatory framework for water service providers in Queensland in the Queensland *Water Supply (Safety and Reliability) Act 2008* was amended in May 2014 after consultation with the water industry. The new performance reporting framework under the *Act* has transformed water service provider regulation by facilitating a focus on outcomes rather than process.

The new regulatory approach aligns with the NPR framework and uses mandatory reporting on key performance indicators and public and comparative performance reporting. It is anticipated to drive service improvement, improved planning, and infrastructure management by fostering a reputational incentive for better performance, and enhancing accountability to customers by opening provider performance to public scrutiny. Transparency for customers should be improved as service providers are now required to consult on and publish customer service standards as well as publish annual reports.

The reforms removed the regulatory requirement to submit most regulatory management plans and associated reports, reviews, and audits to the regulator, although drinking water service providers will still be required to prepare and comply with an approved drinking water quality management plan to protect public health. The requirements for drinking water quality management plans took full effect from 1 July 2014, and all drinking water providers have submitted their plans to DEWS.

The Department of Environment and Heritage Protection licenses wastewater treatment plant discharges and requires monitoring and environment reporting.

The Queensland Competition Authority (QCA) is responsible for monitoring retail and distribution pricing in SEQ, and investigating and recommending pricing for bulk supply from Seqwater, and SunWater. In 2013, the authority was directed to investigate and develop a long-term regulatory framework (and pricing principles) for Unitywater and Queensland Urban Utilities, as well as Logan, Redland and Gold Coast councils, to apply from 1 July 2015.

B6.4 Water utilities in Queensland

Queensland has a total of 174 registered water service providers, of which 86 are potable water and sewerage service providers and 88 are nonpotable water service providers.[12]

With the exception of Mt Isa in the northwest of the State, all residential water service providers with more than 5,000 connections are concentrated in southeast Queensland and along the east coast north to Douglas Shire.

The smaller providers commonly service small populations over a large and/ or remote location, such as Indigenous council areas and rural towns. The majority (68%) of residential water service providers in Queensland have less than 5,000 residential connections. In many cases, these connections are spread over a number of isolated supply schemes within the council water supply area.

In SEQ, there are five distribution and retail providers: the two local Government-owned distributor–retailers (Queensland Urban Utilities and Unitywater) and three local Governments providing water and sewerage services directly (Gold Coast, Logan and Redland city councils). Seqwater now performs all bulk production and transport services in SEQ.

B6.5 Performance reporting

The Queensland Water Supply Regulator is part of DEWS. It is responsible for issuing notices to relevant service providers requiring them to report on particular key performance indications (KPIs). It receives annual performance reports, undertakes data validation, administers compliance with the Queensland *Water Supply (Safety and Reliability) Act 2008*, and incident or quarterly reporting requirements under the that *Act*, including managing the systems that store information.

KPIs

From 1 July 2014, service providers will report on their performance against a set of KPIs for each year to DEWS for analysis and compliance purposes. The annual performance reporting requirement will only apply to drinking water and sewerage service providers, although other water service providers can be required to complete annual performance reporting if prescribed by regulation.

Monitoring and compliance

The *Water Supply Act* outlines a process for the regulator to monitor performance, trigger investigations, and require improvement plans or, in crisis situations, to direct providers to undertake actions to address an imminent threat to water security or continuity of supply (including for a sewerage service).

Investigation

The new framework enables the regulator to investigate a provider's water or sewerage service if the regulator reasonably believes there is a risk to water security or the continuity of supply for that service. Information contained within a performance report or audit report or other information held by the regulator would be used to assess the risk and may trigger an investigation. An investigation may be triggered, for example, if a provider has less than six months' supply.

12 Data is supplied by the Queensland Water Supply Regulator, current as at 1/1/15 https://www.google.com.au/url?url=https://www.dews.qld.gov.au/__data/assets/excel_doc/0011/88967/service-provider-register.xlsx&rct=j&frm=1&q=&esrc=s&sa=U&ei=3njhVI_eNc-m8AWCwILg-Dw&ved=0CBoQFjAB&usg=AFQjCNFJqlG_2SZVSrtGXD_2g9y4N4VMpw.

Improvement plans

If an investigation reveals risks to water security or service continuity, and adequate measures are not in place, a service provider may be required to develop and implement an improvement plan. This plan must address how the identified risks to water security or service continuity will be managed. If the provider is required to make an improvement plan, an improvement notice together with an information notice about the decision will be sent to the provider. The improvement notice will specify the outcomes that must be achieved by implementing the plan and the timeframes for providing a copy of the improvement plan to the regulator. Prior to this step, the regulator will issue a show cause notice and consider any responses from the provider.

Comparative report

DEWS will publish an annual comparative report on water industry performance statewide in consultation with industry. Performance information including water security, customer service, and financial sustainability will be published. The first comparative report will be published in late 2015/early 2016 after the first annual reporting cycle is completed. All service provider performance data will also be made publicly available as part of the open data requirements.

The DEWS administers the urban national performance reporting process for Queensland and holds meetings and interacts with participating water service providers.

B7 Victoria

B7.1 Introduction

In Victorian, the State Department of Environment, Land, Water and Planning (DELWP) has overall governance oversight, on behalf of the Minister for Environment, Climate Change and Water (the Minister), for the establishment of water utilities and their performance. The oversight of certain aspects of water utility performance is also shared with the Victorian Department of Treasury and Finance (DTF) (business financial risks), the Victorian Department of Health and Human Services (DHHS) (water quality), the Victorian Environment Protection Authority (EPA Victoria) (environmental performance) and the Essential Services Commission (ESC) of Victoria (price regulation and service standards).

Reporting and compliance obligations are imposed by Victorian legislation including the *Water Act 1989, the Water Industry Act 1994, the Financial Management Act 1994, the Safe Drinking Water Act 2003, the Environment Protection Act 1970*, and the *Planning and Environment Act 1987*. In addition, regulatory instruments such as the Statement of Obligations (2012), the Water Industry Regulatory Order 2014, and the State Environment Protection Policy (Waters of Victoria) also impose some compliance and reporting obligations.

B7.2 Establishment of water utilities

The Victorian water sector is made up of 19 water utilities (corporations) constituted under the *Water Act 1989*. The key aspects of the governance frameworks covering drinking water quality, environmental protection, price regulation, and consumer protection are the same across all 19 water utilities.

Under sections 4I of the *Water Industry Act 1994*, water utilities are subject to statements of obligations, issued by the Minister following consultation with the Treasurer and the ESC, that impose obligations in relation to the performance of their functions and the exercise of their powers.

B7.3 Operation of water utilities

Apart from Department of Environment, Land, Water and Planning, the regulatory oversight of water utility operation in Victoria is shared between four other agencies.

The Department of Treasury and Finance has governance oversight for the water corporations' proposed strategic directions and business management activities in terms of their potential for financial risk to the business and its implications for the Government, focusing on the state's budget, net debt position, and credit rating.

The Department of Health has governance oversight for water quality under the *Safe Drinking Water Act 2003* and the Safe Drinking Water Regulations 2005. This 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. The Regulations establish an auditing framework.[13] Under the legislation, the Department of Health is required to publish an annual water quality report that is tabled in parliament by the Minister for Health.

EPA Victoria regulates the environmental performance of the water utilities, particularly as it relates to treated sewage effluent quality, through a corporate licence (previously, each sewage treatment plant was licensed). The level of sewage treatment required usually depends on the type of waterway into which the treated sewage is discharged. Under the licence provisions, water businesses must regularly sample and monitor sewage effluent quality and advise the EPA if there are specific incidents of noncompliance. A corporate licence also includes a requirement to submit an annual performance statement to the EPA.

Most 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 EPA Victoria. The schedules require sewage treatment plant operators to ensure that the sustainable reuse of treated effluent and biosolids is maximised wherever possible.

Water businesses are also subject to EPA works approval permits before works such as new treatment plants or major alterations can begin.[14]

The ESC is responsible for price regulation and setting service standards for water services in Victoria under Part 1A of the *Water Industry Act 1994*, the *Essential Services Commission Act 2001* and the Water Industry Regulatory Order. The legislative framework provides the ESC with powers and functions to:

- make price determinations;
- regulate standards and conditions of service and supply; and
- require regulated businesses to provide information.

B7.4 Water utilities in Victoria

All 19 water utilities in Victoria are owned by the State Government. There are four water utilities in metropolitan Melbourne: Melbourne Water, City West Water, South East Water, and Yarra Valley Water. The three retailers (City West Water, South East Water, and Yarra Valley Water) deliver retail water supply and sewerage services to customers in the Melbourne metropolitan area.

Melbourne Water provides bulk water and bulk sewerage services in the Melbourne metropolitan area and manages rivers and creeks and major drainage systems in the Port Phillip and Westernport regions. Melbourne Water also controls the catchment for most of its supply.

[13] Details of the drinking water regulatory framework, the audit arrangements and the annual drinking water quality report are available at http://www.health.vic.gov.au/water/drinkingwater/annualreport.htm.

[14] Details of the environmental regulatory framework and how it applies to water businesses are available from www.epa.vic.gov.au/water/EPA/controls.asp.

Outside Melbourne, 13 regional urban water utilities provide water and sewerage services (Barwon Water, Central Highlands Water, Coliban Water, East Gippsland Water, Gippsland Water, Goulburn Valley Water, Grampians Wimmera Mallee Water (GWMWater), Lower Murray Water, North East Water, South Gippsland Water, Wannon Water, Western Water, and Westernport Water).

GWMWater and Lower Murray Water are hybrid water utilities that provide both urban water services and rural water services.

Additionally, two rural water utilities (Goulburn–Murray Water and Southern Rural Water) provide irrigation and groundwater services.

Most water utilities in regional Victoria have their own bulk water supplies. Goulburn–Murray Water, Southern Rural Water, and GWMWater also provide both wholesale (bulk) and retail services. In metropolitan Melbourne, Melbourne Water provides both bulk water and sewerage services, and three separate retail water utilities deliver retail water supply and some localised sewerage services.

Victoria has an integrated catchment management system established under the Victorian *Catchment and Land Protection Act 1994*. Under this *Act*, the State is divided into 10 catchment regions; a catchment management authority is established for each region. Catchment management authorities are provided with regional waterway, floodplain, drainage, and environmental water reserve management powers under the *Water Act 1989*.

Although owned by the Government, all 19 water utilities act as stand-alone entities and are responsible for their own management and performance. Each water utility has a chairperson and a board of directors appointed by the Minister. The board has a range of responsibilities, including:

- steering the entity;
- setting objectives and performance targets; and
- ensuring compliance with legislation and Government policy.

Public sector directors must comply with the statutory directors' duties in the Victorian *Public Administration Act 2004*, the Directors' Code of Conduct and common law directors' duties. In addition, directors of water utilities must also comply with requirements as set out in the *Water Act 1989*.

Each board appoints a managing director who is responsible for the day-to-day management of the water utility under delegation from the board.

Each managing director sits on the board and is the primary link between the board and the water utility staff, communicating board priorities and policies to the staff and presenting reports, submissions, and budgets to the board.

The board of each water utility reports to the Minister via DELWP. In turn, the Minister is responsible for reporting to parliament on the performance of each water utility.

To assist with the management of the water industry, the Minister is supported by the Water and Catchments Group within DELWP.

The principal legislation governing financial reporting by water entities is the *Financial Management Act 1994*. The Minister for Finance through the Department of Treasury and Finance (DTF) issues financial reporting directions under the *Financial Management Act 1994* for the preparation of annual reports. The Minister issues ministerial reporting directions to water utilities for performance reporting as part of their annual reports. DELWP is responsible for reviewing the annual reports of the water utilities and advising the Minister for tabling the reports in parliament.

The Victorian Auditor–General's Office is responsible for the auditing of the annual financial statements and the performance report of water utilities before their annual reports are tabled in parliament. The data reported in the NPRs is either taken directly from the published annual reports or derived from the annual reports.

In accordance with the *Water Act 1989*, each water utility must submit an annual corporate plan that provides a statement of corporate intent, lists expected activities, and provides a financial forecast for the following five years. The Minister (through DELWP) issues guidelines to the water utilities for the preparation of the plans. DELWP and DTF are responsible for reviewing the corporate plans (and business cases for major capital projects above a threshold value) and advising the Minister and the Treasurer, respectively.

Price submissions (previously called water plans) are required every five years or so. They include details about proposed revenue requirements and tariff and pricing structures and are assessed by the ESC.

B7.5 Performance reporting

One of the ESC's regulatory functions is to monitor and report publicly on the performance of the Victorian water utilities. The ESC's annual water performance reports are available on its website (www.esc.vic.gov.au/Water/Performance-reports/).

Under the Water Industry Regulatory Order, the ESC has the function of auditing:

- the compliance of a regulated water utility with the standards and conditions of service and supply specified by the ESC in any code or set out in the utility's price determination, and the systems and processes established by the water utility to ensure such compliance;
- the reliability and quality of information reported by a water utility to the ESC, and the conformity of that information with any specification issued by the ESC; and
- the compliance of a water utility with asset management obligations imposed in any statement of obligations issued to it.

The annual audits are an important element of the regulatory framework. They verify that the information collected and reported by water utilities is accurate and reliable and provide evidence to customers and other stakeholders that regulatory obligations are being complied with. Most Victorian data reported in the NPRs is audited under those arrangements.

The audit approach is set out in the ESC's guideline for approving, conducting and reporting audits, which is available from the ESC's website (www.esc.vic.gov.au/Water/Codes-and-Guidelines).

B8 Western Australia

B8.1 Introduction

The Western Australian Department of Water has prime responsibility for water resource policy, planning, management and regulation, and the administration of water entitlements and water rights in Western Australia. The reporting of water utility performance is primarily the responsibility of the Economic Regulation Authority (ERA); however, the Western Australian Department of Health, the Western Australian Department of Environment Regulation, and the Western Australian Environmental Protection Authority also have some reporting responsibilities.

Reporting and compliance obligations are imposed by Australian Government legislation including the *Corporations Act 2001* and the *Privacy Act 1988*, and by Western Australian legislation including the *Water Services Act 2012*,[15] the *Metropolitan Water Supply, Sewerage and Drainage Act 1909*, the *Health Act 1911*, the *Environmental Protection Act 1986,* and the *Planning and Development Act 2005*.

[15] The Western Australian *Water Services Act 2012*, which commenced in November 2013, repealed and replaced the water services licencing provisions in the *Water Services Licensing Act 1995*.

B8.2 Establishment of water service providers

The ERA is the independent regulator responsible for administering the licensing scheme for water service providers (WSPs) pursuant to the requirements of the Western Australian *Water Services Act 2012*, and for reporting on industry performance. To obtain an operating licence, a WSP has to demonstrate that it has the financial and technical capacity to provide the required service or services and that the grant of the licence is not contrary to the public interest.

The *Water Services Code of Conduct (Customer Service Standards) 2013* prescribes the customer service standards by the licensee. The licensee is also required to provide the ERA with data for performance-monitoring purposes, as set out in the licence and the ERA's *Water, sewerage and irrigation licence performance reporting handbook*. The Handbook specifies performance-reporting obligations for each type of licence. Licensees are required to submit completed performance reports to the ERA for each year ending 30 June. The performance indicators for licensees who are not required to report under the NWI Agreement have been aligned with the NPR indicator set for consistency.

The *Water compliance reporting manual* requires licensees to provide a report to the ERA on their compliance with the terms and conditions of their licence for each year ending 30 June. The ERA uses the compliance reports to monitor the overall level of compliance by licensees; the content of each report is confidential to the licensee and the ERA.

The licence terms and conditions for WSPs who supply drinking water require the licensee to enter into a memorandum of understanding, which specifies drinking water quality standards, with the Department of Health, which audits compliance. The memorandums of understanding are reviewed every three years.

B8.3 Operation of water utilities

The oversight of water utility operation in Western Australia is shared by the ERA and other agencies.

The Department of Health sets standards for drinking water quality and regulates activities and the provision of services relating to public health, pursuant to the *Health Act 1911*. The department also supports the Advisory Committee for the Purity of Water, which advises the Minister for Health and the Minister for Water on issues associated with protecting public drinking water.

The Department of Water's responsibilities include the collection and analysis of water resources information, the protection of water quality and water resources, and water industry planning and policy, management, and regulation.

The Department of Environment Regulation regulates the environmental impacts of WSPs through the *Environmental Protection Act 1986*. This *Act* prescribes an environmental registration and licensing scheme, which sets limits on the type and volume of waste that can be discharged from a site. In some circumstances, WSPs may be required to arrange for audits of their compliance with the conditions attached to their registration and provide a copy of the audit report to the department. WSPs must notify the department if there is an unauthorised discharge of waste from registered premises.

The Environmental Protection Authority is an independent adviser to Government on a broad range of environmental matters. The functions of the authority include conducting environmental impact assessments, preparing statutory policies for environmental protection, publishing guidelines for managing environmental impacts, and providing strategic advice to the Minister for Environment.

The Western Australian Planning Commission, a statutory authority that operates with the support of the Department of Planning, oversees the land-use planning implications of WSP operations, according to requirements of the *Planning and Development Act 2005*.

The ERA does not have water price setting powers but receives a reference from Government requesting it to undertake an independent review of water prices for the Water Corporation, Aqwest, and Busselton Water. The ERA's report makes recommendations to the Government on pricing.

The *Water Services Act 2012* requires licensees to arrange for an operational audit and a review of asset management system effectiveness at least once every two years. The audit and review are to be conducted by independent auditors appointed by the ERA. The ERA approves the final audit and review reports and arranges for their publication on its website. The ERA provides a report on each audit and review to the Minister for Water.

B8.4 Water utilities in Western Australia

A number of WSPs are involved in delivering urban drinking water in Western Australia. They include the Water Corporation, Aqwest, and Busselton Water.

The Water Corporation is a statutory State-owned corporation that provides potable and nonpotable water, irrigation water, sewerage services, and drainage services to most areas of Western Australia. It also undertakes catchment management activities under delegation from the Department of Water according to an operational agreement for catchment management between the two organisations. The Water Corporation is the principal supplier of water, sewerage, and drainage services to hundreds of thousands of homes, businesses, and farms, and provides bulk water to farms and growers' cooperatives for irrigation. Its services, projects, and activities span more than 2.5 million square km. It has regional offices in Perth, Bunbury, Albany, Karratha, Geraldton, Northam, and Kalgoorlie.

In November 2013, Aqwest became the Bunbury Water Corporation, a Government trading enterprise operating under the Western Australian *Water Corporations Act 1995*. It provides potable water services to the regional centre of Bunbury, approximately 190 km south of Perth. Its licence permits Aqwest to also provide nonpotable water.

In November 2013, Busselton Water became the Busselton Water Corporation, a Government-trading enterprise operating under the *Water Corporations Act 1995*. It provides potable water services to the regional centre of Busselton, approximately 250 km south of Perth. The Busselton Water licence permits the supply of nonpotable water services. Busselton Water also supplies raw water to the Water Corporation in Dunsborough.

As State-owned corporations, the utilities are subject to performance reporting requirements under the Western Australian *Financial Management Act 2006*. The annual reports prepared by Aqwest, Busselton Water, and the Water Corporation include non-financial performance indicators that are independently audited by the Office of the Auditor–General.

The City of Kalgoorlie–Boulder provide sewerage and nonpotable water services to Kalgoorlie–Boulder, located 600km east of Perth in the Goldfields district. The nonpotable water is sourced from recycled effluent.

Other, smaller water and sewerage service providers include Hamersley Iron, the Rottnest Island Authority, and a number of small rural local Governments.

B8.5 Performance reporting

The ERA produces the annual 'Water, sewerage and irrigation performance report', which presents performance data provided by licensed urban and rural WSPs, including the WSPs that report under the Urban NPR, and other WSPs that supply schemes with more than 1,000 connected properties. Most of the performance indicators are consistent with the NPRs but, with the exception of the licensees that report under the Urban NPR, they are not subject to the audit requirements of the NPRs. The operational audits of the licensees that are not required to report under the Urban NPR verify the annual performance data that is reported to the ERA.

Appendix C: Utilities reporting

Jurisdiction	Utility name	Size group
Australian Capital Territory	ACTEW	100,000+
New South Wales	Albury City Council	20,000–50,000
New South Wales	Ballina Shire Council	10,000–20,000
New South Wales	Bathurst Regional Council	10,000–20,000
New South Wales	Bega Valley Shire Council	10,000–20,000
New South Wales	Byron Shire Council	10,000–20,000
New South Wales	Clarence Valley Council	20,000–50,000
New South Wales	Coffs Harbour City Council	20,000–50,000
New South Wales	Dubbo City Council	10,000–20,000
New South Wales	Essential Energy	10,000–20,000
New South Wales	Eurobodalla Shire Council	10,000–20,000
New South Wales	Fish River Water	Bulk utility
New South Wales	Goldenfields Water (bulk water supply)	Bulk utility
New South Wales	Goldenfields Water (reticulation)	10,000–20,000
New South Wales	Gosford City Council	50,000–100,000
New South Wales	Goulburn Mulwaree Council	10,000–20,000
New South Wales	Hunter Water Corporation	100,000+
New South Wales	Kempsey Shire Council	10,000–20,000
New South Wales	Lismore City Council	10,000–20,000
New South Wales	MidCoast Water	20,000–50,000
New South Wales	Orange City Council	10,000–20,000
New South Wales	Port Macquarie Hastings Council	20,000–50,000
New South Wales	Queanbeyan City Council	10,000–20,000
New South Wales	Riverina Water (water only)	20,000–50,000
New South Wales	Rous Water	Bulk utility
New South Wales	Shoalhaven City Council	20,000–50,000
New South Wales	Sydney Catchment Authority	Bulk utility
New South Wales	Sydney Water Corporation	100,000+
New South Wales	Tamworth Regional Council	20,000–50,000
New South Wales	Tweed Shire Council	20,000–50,000
New South Wales	Wagga Wagga Council (sewerage only)	20,000–50,000
New South Wales	Wingecarribee Shire Council	10,000–20,000
New South Wales	Wyong Shire Council	50,000–100,000
Northern Territory	Power and Water–Alice Springs	10,000–20,000
Northern Territory	Power and Water–Darwin	50,000–100,000
Queensland	Cairns Water and Waste (Cairns Regional Council)	50,000–100,000
Queensland	Fitzroy River Water (Rockhampton Regional Council)	20,000–50,000
Queensland	Gladstone Area Water Board	Bulk utility
Queensland	Gold Coast Water	100,000+
Queensland	Gympie Regional Council	10,000–20,000
Queensland	Logan City Council	100,000+
Queensland	Mackay Water	20,000–50,000
Queensland	Queensland Urban Utilities	100,000+
Queensland	Seqwater	Bulk utility
Queensland	Townsville City Council	50,000–100,000
Queensland	Toowoomba Regional Council	50,000–100,000
Queensland	Unitywater	100,000+
Queensland	Wide Bay Water	20,000–50,000

Jurisdiction	Utility name	Size group
South Australia	SA Water Corporation	100,000+
Tasmania	Tasmanian Water and Sewerage Corporation Pty Ltd (TasWater)	100,000+
Victoria	Barwon Water	100,000+
Victoria	Central Gippsland Water	50,000–100,000
Victoria	Central Highlands Water	50,000–100,000
Victoria	City West Water	100,000+
Victoria	Coliban Water	50,000–100,000
Victoria	East Gippsland Water	20,000–50,000
Victoria	Goulburn Valley Water	50,000–100,000
Victoria	GWMWater	20,000–50,000
Victoria	Lower Murray Water	20,000–50,000
Victoria	Melbourne Water	Bulk utility
Victoria	North East Water	20,000–50,000
Victoria	South East Water	100,000+
Victoria	South Gippsland Water	10,000–20,000
Victoria	Wannon Water	20,000–50,000
Victoria	Western Water	50,000–100,000
Victoria	Westernport Water	10,000–20,000
Victoria	Yarra Valley Water	100,000+
Western Australia	Aqwest–Bunbury Water Board (water only)	10,000–20,000
Western Australia	Busselton Water (water only)	10,000–20,000
Western Australia	City of Kalgoorlie–Boulder (sewerage only)	10,000–20,000
Western Australia	Water Corporation–Albany	10,000–20,000
Western Australia	Water Corporation–Australind-Eaton	10,000–20,000
Western Australia	Water Corporation–Bunbury (sewerage only)	10,000–20,000
Western Australia	Water Corporation–Busselton (sewerage only)	10,000–20,000
Western Australia	Water Corporation–Geraldton	10,000–20,000
Western Australia	Water Corporation-Kalgoorlie–Boulder (water only)	10,000–20,000
Western Australia	Water Corporation–Mandurah	20,000–50,000
Western Australia	Water Corporation (Perth)	100,000+

Appendix D: Urban performance indicators

Indicator category	Indicator subcategory	Indicator code	Indicator name
Water resources	Sources of water	W1	Volume of water sourced from surface water (ML)
Water resources	Sources of water	W2	Volume of water sourced from groundwater (ML)
Water resources	Sources of water	W3	Volume of water sourced from desalination (ML)
Water resources	Sources of water	W4	Volume of water sourced from recycling (ML)
Water resources	Sources of water	W5	Volume of water received from bulk supplier (ML)
Water resources	Sources of water	W6	Volume of bulk recycled water purchased (ML)
Water resources	Sources of water	W7	Total sourced water (ML)
Water resources	Uses of water supplied	W8	Volume of water supplied—residential (ML)
Water resources	Uses of water supplied	W9	Volume of water supplied—commercial, municipal and industrial (ML)
Water resources	Uses of water supplied	W10	Volume of water supplied—other (ML)
Water resources	Uses of water supplied	W11	Total urban water supplied (ML)
Water resources	Uses of water supplied	W12	Average annual residential water supplied (kL/property)
Water resources	Uses of water supplied	W13	Volume of water supplied—environmental flows (ML)
Water resources	Uses of water supplied	W14	Volume of bulk water exports (ML)
Water resources	Uses of water supplied	W15	Volume of bulk recycled water exports (ML)
Water resources	Sewage collected	W16	Volume of sewage collected—residential sewage, non-residential sewage and non-trade waste (ML)
Water resources	Sewage collected	W17	Volume of sewage collected—trade waste (ML)
Water resources	Sewage collected	W18	Total sewage collected (ML)
Water resources	Sewage collected	W19	Sewage collected per property (kL/property)
Water resources	Uses of recycled water and stormwater	W20	Volume of recycled water supplied—residential (ML)
Water resources	Uses of recycled water and stormwater	W21	Volume of recycled water supplied—commercial Commercial, municipal and industrial (ML)
Water resources	Uses of recycled water and stormwater	W22	Volume of recycled water supplied—agrigultural (ML)
Water resources	Uses of recycled water and stormwater	W23	Volume of recycled water supplied—environmental (ML)
Water resources	Uses of recycled water and stormwater	W24	Volume of recycled water supplied—on-site (ML)
Water resources	Uses of recycled water and stormwater	W25	Volume of recycled water supplied—other (ML)
Water resources	Uses of recycled water and stormwater	W26	Total recycled water supplied (ML)
Water resources	Uses of recycled water and stormwater	W27	Recycled water (percent of effluent recycled)
Asset	Water treatment plants	A1	Number of water treatment plants providing full treatment (no.)
Asset	Other water assets	A2	Length of water mains (km)
Asset	Other water assets	A3	Properties served per km of water main (no./km)
Asset	Sewerage assets	A4	Number of sewage treatment plants (no.)
Asset	Sewerage assets	A5	Length of sewerage mains and channels (km)
Asset	Sewerage assets	A6	Properties served per km of sewer main (no./km)
Asset	Recycled water treatment plants	A7	Number of recycled water treatment plants (no.)
Asset	Water main breaks	A8	Water main breaks (no. per 100 km of water main)
Asset	Water losses	A9	Infrastructure leakage index (ILI)
Asset	Water losses	A10	Real losses (L/service connection/d)
Asset	Water losses	A11	Real losses (kL/km water main/d)

Indicator category	Indicator subcategory	Indicator code	Indicator name
Customers	Connected properties and population	C1	Population receiving water supply services (000s)
Customers	Connected properties and population	C2	Connected residential properties—water supply (000s)
Customers	Connected properties and population	C3	Connected non-residential properties—water supply (000s)
Customers	Connected properties and population	C4	Total connected properties—water supply (000s)
Customers	Connected properties and population	C5	Population receiving sewerage services (000s)
Customers	Connected properties and population	C6	Connected residential properties—sewerage (000s)
Customers	Connected properties and population	C7	Connected non-residential properties—sewerage (000s)
Customers	Connected properties and population	C8	Total connected properties—sewerage (000s)
Customers	Water quality complaints	C9	Water quality complaints (per 1,000 properties)
Customers	Water service complaints	C10	Water service complaints (per 1,000 properties)
Customers	Sewerage service complaints	C11	Sewerage service complaints (no. per 1,000 properties)
Customers	Billing and account complaints	C12	Billing and account complaints—water and sewerage (per 1,000 properties)
Customers	Total water and sewerage complaints	C13	Total water and sewerage complaints (per 1,000 properties)
Customers	Connect time to a telephone operator	C14	Percentage of calls answered by an operator within 30 seconds (%)
Customers	Average duration of unplanned water supply interruptions	C15	Average duration of an unplanned interruption—water (minutes)
Customers	Average sewerage interruption	C16	Average sewerage interruption (minutes)
Customers	Water interruption frequency	C17	Average frequency of unplanned interruptions—water (no. per 1,000 properties)
Customers	Restrictions or legal action for non-payment of water bill	C18	Number of restrictions applied for non-payment of water bill (per 1,000 properties)
Customers	Restrictions or legal action for non-payment of water bill	C19	Number of legal actions applied for non-payment of water bill (per 1,000 properties)
Environment	Comparative sewage treatment levels	E1	Percentage of sewage treated to a primary level (%)
Environment	Comparative sewage treatment levels	E2	Percentage of sewage treated to a secondary level (%)
Environment	Comparative sewage treatment levels	E3	Percentage of sewage treated to a tertiary or advanced level (%)
Environment	Sewage treatment plant compliance	E4	Percentage of sewage volume treated that was compliant (%)
Environment	Number of sewage treatment plants compliant at all times	E5	Number of sewage treatment plants compliant at all times (e.g., 5 of 6)
Environment	Public disclosure of your sewage treatment plant performance	E6	Public disclosure of your sewage treatment plant's performance (yes/ no)
Environment	Compliance with environmental regulator—sewerage	E7	Compliance with environmental regulator: sewerage (yes/no)
Environment	Biosolids reuse	E8	Per cent of biosolids reused (%)
Environment	Net greenhouse gas emissions	E9	Greenhouse gas emissions—water (t CO_2 equivalents per 1,000 properties)

Indicator category	Indicator subcategory	Indicator code	Indicator name
Environment	Net greenhouse gas emissions	IE9	Greenhouse gas emission—water (t CO_2 equivalents)
Environment	Net greenhouse gas emissions	E10	Greenhouse gas emissions—sewerage (t CO_2 equivalents per 1,000 connected sewerage properties)
Environment	Net greenhouse gas emissions	IE10	Greenhouse gas emissions—sewerage (t CO_2 equivalents)
Environment	Net greenhouse gas emissions	E11	Net greenhouse gas emissions—other (net t CO_2 equivalents per 1,000 properties)
Environment	Net greenhouse gas emissions	IE11	Net greenhouse gas emissions—other (net t CO_2 equivalents)
Environment	Net greenhouse gas emissions	E12	Total net greenhouse gas emissions (net t CO_2 equivalents per 1,000 connected water properties)
Environment	Net greenhouse gas emissions	IE12	Total net greenhouse gas emissions (net t CO equivalents)
Environment	Sewer overflows	E13	Sewer overflows reported to the environmental regulator (no. per 100km of sewer main)
Pricing	Residential tariff structure	P1	Tariff structure—water (text)
Pricing	Residential tariff structure	P1.1	Free water allowance—water (kL/property)
Pricing	Residential tariff structure	P1.2	Fixed charge—water ($/property)
Pricing	Residential tariff structure	P1.3	Usage charge—1st step ($/kL)
Pricing	Residential tariff structure	P1.4	Usage charge—2nd step ($/kL)
Pricing	Residential tariff structure	P1.5	Usage charge—3rd step ($/kL)
Pricing	Residential tariff structure	P1.6	Usage charge—4th step ($/kL)
Pricing	Residential tariff structure	P1.7	Usage charge—5th step ($/kL)
Pricing	Residential tariff structure	P1.8	Usage charge—6th step ($/kL)
Pricing	Residential tariff structure	P1.9	Usage charge—7th step ($/kL)
Pricing	Residential tariff structure	P1.10	Usage charge—8th Step ($/kL)
Pricing	Residential tariff structure	P1.11	Usage charge—9th step ($/kL)
Pricing	Residential tariff structure	P1.12	Special levies—water ($)
Pricing	Residential tariff structure	P1.13	Income from special levies retained by utility?—water (yes/no)
Pricing—annual bill	Annual bill (based on 200 kL residential water supplied)	P2	Annual bill based on 200kL/a—water ($)
Pricing	Residential tariff structure	P2.1	Average annual residential water supplied (kL per property)
Pricing—annual bill	Annual bill (based on average residential annual water supplied)	P3	Typical residential bill—water ($)
Pricing	Residential tariff structure	P3.1	Number of meter readings per annum—water (no)
Pricing	Residential tariff structure	P3.2	Number of bills per annum—water (no.)
Pricing	Residential tariff structure	P4	Tariff structure—sewerage
Pricing	Residential tariff structure	P4.1	Fixed charge—sewerage ($/property)
Pricing	Residential tariff structure	P4.2	Usage charge ($/kL)—sewerage
Pricing	Residential tariff structure	P4.3	Special levies—sewerage ($/property)
Pricing	Residential tariff structure	P4.4	Income from special levies retained by utility?—sewerage (yes/no)
Pricing—annual bill	Annual bill (based on 200 kL residential water supplied)	P5	Annual bill based on 200kL/a—sewerage ($)
Pricing—annual bill	Annual bill (based on average residential annual water supplied)	P6	Typical Residential Bill—sewerage ($)
Pricing	Residential tariff structure	P6.1	Number of Bills per annum—sewerage (no)

Indicator category	Indicator subcategory	Indicator code	Indicator name
Pricing—annual bill	Annual bill (based on 200 kL residential water supplied)	P7	Annual bill based on 200kL/a (water and sewerage) ($)
Pricing—annual bill	Annual bill (based on average residential annual water supplied)	P8	Typical residential bill (water & sewerage) ($)
Finance	Revenue	F1	Total revenue—water ($000)
Finance	Revenue	F2	Total revenue—sewerage ($000)
Finance	Revenue	F3	Total Income for utility ($000)
Finance	Revenue	F4	Residential revenue from usage charges—water (%)
Finance	Revenue	F5	Revenue per property for water supply services ($/property)
Finance	Revenue	F6	Revenue per property for sewerage services ($/property)
Finance	Revenue	F7	Income per property for utility ($/property)
Finance	Revenue from community service obligations (CSOs)	F8	Revenue from community service obligations (%)
Finance	Written down replacement costs of fixed assets	F9	Written-down value of fixed water supply assets ($000s)
Finance	Written down replacement costs of fixed assets	F10	Written-down value of fixed sewerage assets ($000s)
Finance	Costs	F11	Operating cost—water ($/property)
Finance	Costs	IF11	Operating cost—water (000s)
Finance	Costs	F12	Operating cost—sewerage ($/property)
Finance	Costs	IF12	Operating cost—sewerage (000s)
Finance	Costs	F13	Combined operating cost—water and sewerage ($/property)
Finance	Capital expenditure	F14	Total water supply capital expenditure ($000s)
Finance	Capital expenditure	F15	Total sewerage capital expenditure ($000s)
Finance	Capital expenditure	F16	Total capital expenditure for water and sewerage ($000s)
Finance	Economic real rate of return—water and sewerage	F17	Economic real rate of return—water (ratio)
Finance	Economic real rate of return—water and sewerage	F18	Economic real rate of return—sewerage (ratio)
Finance	Economic real rate of return—water and sewerage	F19	Economic real rate of return—water and sewerage (ratio)
Finance	Dividends	F20	Dividend ($000s)
Finance	Dividends	F21	Dividend payout ratio (%)
Finance	Net debt to equity	F22	Net debt to equity (%)
Finance	Interest cover	F23	Interest cover (ratio)
Finance	Net profit after tax	F24	Net profit after tax ($000s)
Finance	Community service obligations (CSOs)	F25	Community service obligations ($000s)
Finance	Capital works grants—water and sewerage	F26	Capital works grants—water ($000s)
Finance	Capital works grants— water and sewerage	F27	Capital works grants—sewerage ($000s)
Health	Water quality compliance	H1	Water quality guidelines (text)
Health	Water quality compliance	H2	Number of zones where microbiological compliance was achieved (e.g., 23/24)
Health	Water quality compliance	H3	Percentage of population where microbiological compliance was achieved (%)
Health	Water quality compliance	H4	Number of zones where chemical compliance was achieved (e.g., 23/24)
Health	Water quality compliance	H5	Risk-based drinking water management plan externally assessed? (yes/ no)

Indicator category	Indicator subcategory	Indicator code	Indicator name
Health	Water quality compliance	H6	Risk-based drinking water management plan (Please specify plan in place e.g., ISO9001, HACCP, ADWG A quality assessment)
Health	Water quality compliance	H7	Public disclosure of drinking water performance (yes/no)
Finance	Capital expenditure	F28	Water supply capital expenditure ($/property)
Finance	Capital expenditure	F29	Sewerage capital expenditure ($/property)
Finance	Net profit after tax	F30	NPAT Ratio (%)
Environment	Net greenhouse gas emissions	E9.1	Greenhouse gas emissions—bulk utility (t CO_2 equivalents per ML)
Environment	Net greenhouse gas emissions	E10.1	Greenhouse gas emissions—bulk utility sewerage (t CO_2 equivalents per ML)
Asset	Sewerage breaks and chokes	A14	Sewerage mains breaks and chokes (no. per 100km sewer main)
Asset	Sewerage breaks and chokes	A15	Property connection sewer breaks and chokes (no. per 1,000 properties)
Environment	Net greenhouse gas emissions	E11.1	Net greenhouse gas emissions—other: bulk utility (net t CO_2 equivalents per ML)
Environment	Net greenhouse gas emissions	E12.1	Total net greenhouse gas emissions—bulk utility (net t CO_2 equivalents per ML)
Finance	Revenue	F5.1	Revenue for water supply services: bulk utility ($/ ML)
Finance	Revenue	F6.1	Revenue for sewerage services: bulk utility ($/ML)
Finance	Revenue	F7.1	Income for utility—bulk utility ($/ML)
Finance	Costs	F11.1	Operating cost—water: bulk utility ($/ML)
Finance	Costs	F12.1	Operating cost—sewerage: bulk utility ($/ML)
Finance	Costs	F13.1	Combined operating cost—water and sewerage: bulk utility ($/ML)
Finance	Capital expenditure	F28.1	Water supply capital expenditure—bulk utility ($/ML)
Finance	Capital expenditure	F29.1	Sewerage capital expenditure—bulk utilities ($/ML)
Water resources	Sources of water	W3.1	Volume of water sourced from desalination of marine water (ML)
Water resources	Sources of water	W3.2	Volume of water sourced from desalination of groundwater (ML)
Water resources	Sources of water	W3.3	Volume of water sourced from desalination of surface water such as dams, rivers or irrigation channels (ML)
Water resources	Sources of water	W5.1	Volume of potable water received from bulk supplier
Water resources	Sources of water	W5.2	Volume of nonpotable water received from bulk supplier (ML)
Water resources	Uses of water supplied	W8.1	Volume of potable water supplied—residential (ML)
Water resources	Uses of water supplied	W8.2	Volume of non-potable water supplied—residential (ML)
Water resources	Uses of water supplied	W9.1	Volume of potable water supplied—commercial, municipal and industrial (ML)
Water resources	Uses of water supplied	W9.2	Volume of nonpotable water supplied—commercial, municipal and industrial (ML)
Water resources	Uses of water supplied	W10.1	Volume of potable water supplied—other (ML)
Water resources	Uses of water supplied	W10.2	Volume of non-potable water supplied—other (ML)
Water resources	Uses of water supplied	W10.3	Volume of water supplied—managed aquifer recharge (ML)
Water resources	Uses of water supplied	W10.4	Volume of water supplied—agricultural irrigation (ML)
Water resources	Uses of water supplied	W11.1	Total urban potable water supplied (ML)
Water resources	Uses of water supplied	W11.2	Total urban nonpotable water supplied (ML)
Water resources	Uses of water supplied	W11.3	Total volume of potable water produced (ML)
Water resources	Uses of water supplied	W14.1	Volume of potable bulk water exports (ML)
Water resources	Uses of water supplied	W14.2	Volume of non-potable bulk water exports (ML)
Water resources	Sewage collected	W18.1	Volume of sewage supplied to other infrastructure operators (ML)
Water resources	Sewage collected	W18.2	Volume of sewage taken from other infrastructure operators (ML)

Indicator category	Indicator subcategory	Indicator code	Indicator name
Water resources	Sewage collected	W18.3	Volume of sewage taken from sewer mining (ML)
Water resources	Sewage collected	W18.4	Volume of sewage measured at inlet to treatment works (ML)
Water resources	Sewage collected	W18.5	Volume of sewage treated effluent (ML)
Water resources	Uses of recycled water and stormwater	W25.1	Volume of recycled water supplied—managed aquifer recharge (ML)
Water resources	Uses of recycled water and stormwater	W28	Total volume of urban stormwater discharges from a stormwater discharge point (ML)
Water resources	Uses of recycled water and stormwater	W28.1	Volume of urban stormwater supplied to other infrastructure operators (ML)
Water resources	Uses of recycled water and stormwater	W28.2	Volume of urban stormwater received from other infrastructure operators (ML)
Water resources	Uses of recycled water and stormwater	W28.3	Volume of urban stormwater supplied for managed aquifer recharge (ML)
Water resources	Uses of recycled water and stormwater	W28.4	Volume of urban stormwater used (ML)
Water resources	Uses of recycled water and stormwater	W29	Total volume of treated and untreated sewage discharges from a sewage discharge point (ML)

References

Australian Bureau of Meteorology 2014, *Annual climate statement 2013*, Bureau, Melbourne

Australian Bureau of Meteorology 2015a, *State of the Climate 2014*, Bureau, Melbourne

Australian Bureau of Meteorology 2015b, *Annual climate statement 2014,* Bureau, Melbourne

Australian Government Clean Energy Regulator 2014, Liable Entities Public Information Database, viewed 16/01/2015, www.cleanenergyregulator.gov.au/Carbon-Pricing-Mechanism/Liable-Entities-Public-Information-Database/Pages/default.aspx

City of Gold Coast 2014, *Annual report 2013–14*, CGC, Gold Coast

City West Water Corporation 2014, *Annual report 2013–14*, CWW, Footscray

Coliban Water 2014, *Annual report 2013–14*, CW, Bendigo

East Gippsland Water, *Annual report 2013–14*, East Gippsland Water, Bairnsdale

Essential Services Commission Victoria 2012, *Monitoring the return of the unrequired desalination payments*, ESCV, Melbourne

Essential Services Commission Victoria 2013a, 'Regulator finalises Melbourne's water prices for next five years', media release (25 June 2013), ESCV, Melbourne

Essential Services Commission Victoria 2013b, *Regional water price review—Gippsland Water: what impact will the price increases have on my household bill?*, ESCV, Melbourne

Essential Services Commission Victoria 2013c, *Regional water price review—Wannon Water: what impact will the price increases have on my household bill?*, ESCV, Melbourne

Essential Services Commission of Victoria 2013d, 'Regulator cuts proposed household Water price rises for Melbourne', media release (23 April 2013), ESCV, Melbourne

Independent Competition and Regulatory Commission 2013, 'Releases of final report and price direction: regulated water and sewerage services', media release (26 June 2013), ICRC, Canberra

Gosford City Council 2013, *Annual report 2012–13*, GCC, Gosford

Grampians–Wimmera–MalleeWater 2014, *Annual report 2013–14*, GWMWater, Horsham

Kempsey Shire Council 2014, *Annual report 2013–14*, KSC, Kempsey

Melbourne Water 2014, *Annual report 2013–14: enhancing life and liveability*, MW, Melbourne

MidCoast Water 2014, *Annual report 2013–14*, Taree

National Health and Medical Research Council, National Resource Management Ministerial Council 2004, *Australian drinking water guidelines*, paper 6, National Water Quality Management Strategy, NHMRC and NRMMC, Canberra

North East Water 2014, *Annual report 2013–14*, NEW, Wodonga

NSW Office of Water 2012, 'NSW water and sewerage community involvement guidelines: consultation draft', NSW Office of Water, Sydney

NSW Office of Water 2014, *2012–13 NSW Water supply and sewerage benchmarking report,* NSW Office of Water, Sydney

NSW Health and NSW Office of Water 2013, *NSW guidelines for drinking water management systems*, NSW Health and NSW Office of Water, Sydney

Orange City Council 2014, *Annual report 2013–14*, Orange CC, Orange

Power and Water Corporation 2014a, *Annual report 2013–14*, P&WC, Darwin

Power and Water Corporation 2014b, *Statement of corporate intent 2013–14*, P&W, Darwin

Productivity Commission 2011, *Australia's urban water sector,* inquiry report no. 55, Productivity Commission, Canberra

Queanbeyan City Council 2014, *Annual report 2013–14*, Queanbeyan CC, Queanbeyan

Riverina Water Country Council 2014, *Annual report 2013–14*, RWCC, Wagga Wagga

South East Water 2014, *Annual report 2013–14*, SEW, Heatherton

South Gippsland Water 2014, *Annual report 2013–14*, SGW, Foster

Sydney Catchment Authority 2014, *Annual report 2013–14*, SCA, Sydney

Tamworth Regional Council 2014, *Annual report 2013–14*, Tamworth RC, Tamworth

Toowoomba Regional Council 2014, *Annual report 2013–14*, Toowoomba RC, Toowoomba

Townsville City Council 2014, *Annual report 2013–14*, Townsville RC, Townsville

Water Corporation 2014, *Annual report 2013–14*, Water Corporation, Perth

Western Water 2014, *Annual report 2013–14*, Western Water, Sunbury

Yarra Valley Water 2014, *Annual report 2013–14*, Yarra Valley Water, Mitcham