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National performance report 2021–22: urban water utilities

Part A



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GPO Box 1289 Melbourne VIC 3001
(03) 9669 4000
water@bom.gov.au



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Disclaimer

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National Performance Report 2021–22: urban water utilities

Part A



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A guide to this report

The following explanatory notes are provided to assist you to read and interpret the report.

Key terms and abbreviations

Utilities that form part of a city, shire or regional council, or a similar local government entity, are reported under the town or city name within the tables and charts in the report. For example, Dubbo Regional Council is referred to as 'Dubbo' in tables and charts throughout the report.

In addition, several utilities are represented by shorter names to aid presentation in charts and tables:

- Aqwest–Bunbury Water Corporation (W) = Aqwest–Bunbury (W)
- Busselton Water (W) = Busselton (W)
- City of Kalgoorlie–Boulder (S) = Kal–Boulder (S)
- Goldenfields Water County Council = Goldenfields Water (W)
- Queanbeyan–Palerang Regional Council = Queanbeyan
- Queensland Bulk Water Supply Authority = Seqwater.

Abbreviations used in utility names include:

- P&W = Power and Water
- WC = Water Corporation.

The majority of utilities in this report provide both water and sewerage services. Where a utility provides only a single service (for example, only water supply), it is denoted by the use of a code in brackets after the utility's name. The codes are:

- W = water supply only
- S = sewerage only.

Bulk water authorities

Bulk water authorities operate in a number of jurisdictions across Australia and provide wholesale water and wastewater services. These authorities do not have direct relationships with retail customers. For example, Melbourne Water supplies bulk water and wastewater services to the 7 retail utilities in and surrounding the Melbourne metropolitan region.¹

Utility groups

For the purpose of this report, the contributing utilities are grouped by number of connected properties. The utility groups used are:

- Major – 100,000+ connected properties
- Large – 50,000 to 100,000 connected properties
- Medium – 20,000 to 50,000 connected properties
- Small – 10,000 to 20,000 connected properties.

Bulk water authorities are grouped separately and are not included in the analysis unless explicitly stated.

¹ South East Water Ltd, Yarra Valley Water Corporation, Greater Western Water, Central Gippsland Water, Barwon Water, South Gippsland Water, and Westernport Water

Reporting year

References to the 'reporting year' or '2021–22' refer to the reporting year between 1 July 2021 and 30 June 2022 inclusive.

Missing or unavailable data

Missing or unavailable data are denoted in a table by a blank cell.

Interpreting 'overview of results' tables

Example Figure 1 shows how to interpret the 'Overview of results' table provided for each indicator.

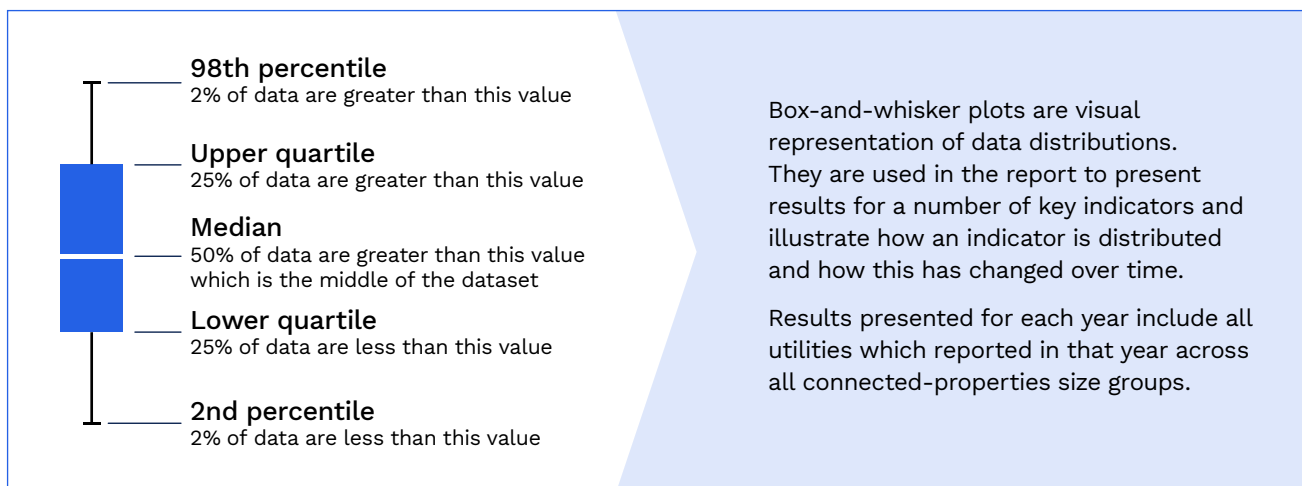
Size group	Range		Number of utilities with increase/decrease from previous year		Median or Total		Change from previous year (%)
	High	Low	Increase	Decrease	Previous year	Current year	
Major	249	140	10	1	158	162	3
	WC (Perth)	Logan					
Large	454	130	9	1	164	181	10
	P&W (Darwin)	Toowoomba					
Medium	479	143	17	1	175	201	15
	Lower Murray Water	MidCoast Water					
Small	450	80	19	5	174	179	3
	Multiply utilities	Ballina					
All size groups	479	80	55	8	166	177	7
	Lower Murray Water	Ballina					

- 1 The range shows the utilities with the highest and lowest result in the current reporting year for each utility group.
- 2 These columns show the number of utilities reporting an increase or decrease from the previous year's results for each utility group. Utilities that did not report in both years are included in this column. The figures do not include utilities that reported no change from the previous year.
- 3 The median value is the middle number in the range of results. For example, if five utilities reported for this indicator and their results are 190, 195, 206, 207, and 210, the median is 206 as it is the middle number. The median value is calculated using data from all utilities reporting against this indicator in that year. For indicators that are not represented as an 'average' for the utility (for example, average duration of water interruptions), or are divided by the number of properties (per property), the summary tables present the sum (total) of the results. The total value for a year is the sum of the results for that year of all the utilities that reported in both years.
- 4 This column shows the percentage change between the current and previous years and is rounded to the nearest integer, except in cases where additional precision is required.
- 5 'Multiple utilities' is used when more than one utility recorded the same value.

Example Figure 1 How to interpret an 'Overview of results' table

Interpreting box-and-whisker plots

The report uses box-and-whisker plots to show trends in the annual distribution of key indicators as shown in Example Figure 2.



Example Figure 2 How to interpret a box-and-whisker plot

Interpreting data and commentary

When interpreting data and commentary in the report, it is important to consider the following:

- The indicator codes are noted in the titles of each section (for example, W12, F3, P7) and can be cross-referenced with the *National urban water utility performance reporting framework: indicators and definitions handbook, January 2018*. The median is the preferred metric for the reporting dataset, as outlier results can affect the average (mean), which can skew results towards the outliers.
- The median is the value at which 50% of utilities fall above and 50% fall below that point. Where average results are presented in addition to the median, they are to be interpreted together with the full dataset.
- Many factors can influence the performance of a utility, and individual performance indicators need to be interpreted in context. A low ranking for one indicator may not accurately reflect the overall performance of a utility. 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' is often omitted to improve the flow of the commentary about indicators. 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'. In this case, it is not the absolute number of water main breaks, rather, the number of breaks per 100 km from the water main.
- Single-service utilities are only included in the analysis of an indicator when a comparison can be made on a like-for-like basis with utilities that provide both water and sewerage services. 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.
- Financial time series information is given in real 2021–22 dollars; the impact of inflation is removed to ensure that years can be compared on a like-for-like basis. Consumer price index (CPI) figures can be found in Appendix E (CPI indexation).
- The percentage (%) change is calculated from the 2020–21 reporting year to 2021–22 with figures rounded to the nearest integer, except in cases where additional precision is required.

Executive summary

The *National performance report 2021–22: urban water utilities* (2022 Urban NPR) compares the performance of 81 utilities and councils (utilities) and 5 bulk water authorities providing urban water services to over 25 million people across Australia. The 2022 Urban NPR is published by the Bureau of Meteorology (the Bureau) with information provided by utilities across Australia's states and territories. The report is the 17th in the series, and the ninth to be produced by the Bureau.

Part A of the report provides commentary on and analysis of key indicators. Part B of the report contains data for the full set of 166 indicators reported by utilities and bulk water authorities for all reporting years.

Increased urban water supply mainly sourced from surface water with wetter and warmer climate in 2021–22

On a national scale, the total rainfall was 9% above the 1961–90 average in 2021–22. The eastern part of mainland Australia (that is, New South Wales and Queensland) experienced periods of flooding multiple times during the first half of 2022. The mean daily temperature was 0.96 °C above the 1961–90 average, the eighth-warmest financial year on record since records commenced in 1910. The annual mean temperatures were above to very much above average across most of Australia.

For most parts of the country, water supplies were high as a result of the improved rainfall and streamflow conditions and high surface water storage levels in 2021–22. Nationally, total urban water supply from different water sources rose by over 3% in 2021–22, despite varying results in major urban centres and different water sources. Sydney and Canberra reported a decrease in their water supply, whereas other major cities reported an increase in water supply.

Similar to the previous year, surface water was the dominant source in all states and territories except Western Australia which relied mostly on groundwater. Overall, 80.3% of the total supplied water was sourced from surface water (5% increase from 2020–21), 6.3% from groundwater (6% decrease from 2020–21), 7.3% from desalinated water (10% decline from 2020–21) and 6.1% from recycled water (2% increase from 2020–21).

Decreased greenhouse gas emissions in most major cities

Nationally, the total net greenhouse gas emissions decreased by 6% in 2021–22 compared to 2020–21. All major cities managed to decrease their greenhouse gas emissions in 2021–22, except Darwin which reported a 12% increase in its greenhouse gas emissions. Among all major cities, Perth reported the highest net greenhouse gas emissions, as the result of the higher use of desalinated water, but also reported a high decrease (18%) in greenhouse gas emissions compared to the previous year.

Decreased typical residential bills (water supply and wastewater)

Nationally, water and wastewater services for urban customers were 2% cheaper than the previous year. This continued the overall downward trend reported over the last several years. The total typical residential bill decreased across all major urban centres. Melbourne and Darwin reported the lowest and the highest total typical residential bills among the Major urban centres, respectively.

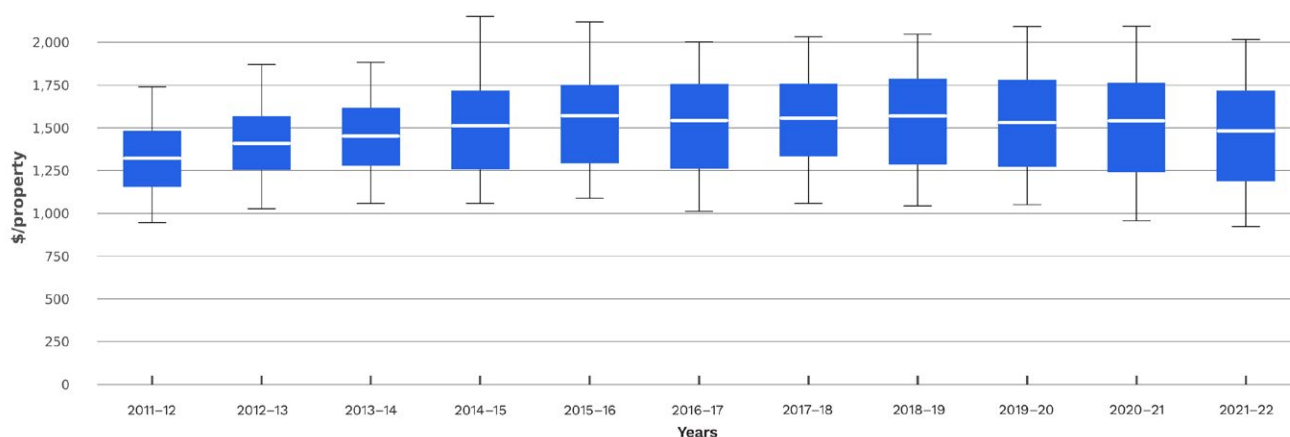


Figure 1 Typical residential bill: water supply and wastewater (\$), 2011–12 to 2021–22

For more information about bills, see Chapter 4 Pricing and Tables A3 and A4, Appendix A.

Unchanged total capital expenditure on water supply and wastewater services

Nationally, the total capital expenditure on water supply and wastewater services remained almost unchanged (slightly increased by 0.9%) compared to 2020–21. However, among major cities, Canberra and Adelaide reported the largest decreases (27% and 15%, respectively), whereas Sydney and Darwin reported the largest increases (19% and 17%, respectively).

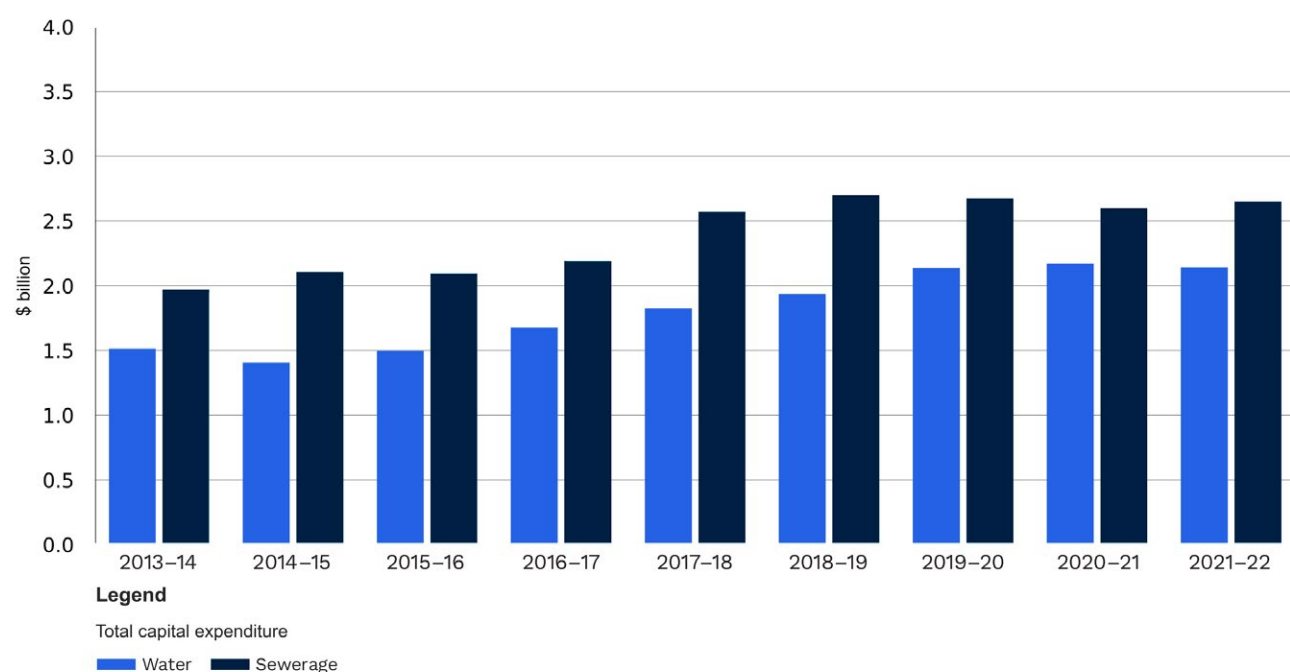


Figure 2 Total capital expenditure: water supply and sewerage (\$ billion) for utilities that reported all 9 years (excluding bulk water utilities)

For more details about capital expenditure see Chapter 5 Finance and Tables A5, Appendix A.



1 Introduction

1.1 Context and overview

This *National performance report 2021–22: urban water utilities* (2022 Urban NPR) supports the commitments made by states and territories under the National Water Initiative (NWI) to report publicly and independently on the performance of water utilities.²

The 2022 Urban NPR compares the performance of 81 utilities and councils (utilities) and 5 bulk water authorities providing urban water and sewerage services to over 23 million people across Australia. It is produced by the Bureau of Meteorology (the Bureau), in conjunction with state and territory governments and the Water Services Association of Australia.

Part A of this report provides commentary on, and analysis of, key indicators that apply to retail and distribution utilities (the major urban centre analysis in Chapter 2 includes performance data for bulk water suppliers). Part B of this report contains data for the full set of 166 indicators that are reported on by urban water utilities and bulk water authorities for all reporting years.

The analysis and commentary provide a context for each indicator, discuss changes in reporting methods, and highlight trends within and/or between different utility groups. The utilities are grouped according to the number of properties they are connected to, as explained in ‘A guide to this report’.

The commentary and analysis in the 2022 Urban NPR are not intended to be a comprehensive explanation of every reported indicator. They present some of the more apparent trends or differences between years and utilities. Most of the information is sourced from publicly available sources, such as annual reports, regulatory decisions and utility websites.

1.2 Reporting

The 86 utilities contributing data to the 2022 Urban NPR (including 5 bulk water authorities) are listed in Appendix C. Table 1.1 summarises the utility size groups by jurisdiction.

Seventy-two of the 86 utilities included in this report provide both reticulated water supply and wastewater (sewerage) services. The remaining utilities provide only water supply or sewerage services. In summary, the report includes data for:

- 72 utilities providing water supply and sewerage services
- 5 utilities providing only water supply services
- 4 utilities providing only sewerage services
- 5 bulk water authorities.

City West Water and Western Water merged on 1 July 2021 creating Greater Western Water. Mount Barker District Council reported for the first time in the small size group.

² National Water Initiative clauses 75–76

Table 1.1 Utilities reporting in the 2022 Urban NPR by size group and jurisdiction

Jurisdiction	Bulk	Major	Large	Medium	Small	Total
Australian Capital Territory		1				1
New South Wales	2	3	1	13	12	31
Northern Territory			1		1	2
Queensland	2	4	4	5	7	22
South Australia		1			1	2
Tasmania		1				1
Victoria	1	4	5	5	1	16
Western Australia		1	1		9	11
Total	5	15	12	23	31	86

1.3 Locations of utilities

Figure 1.1 shows the administrative boundaries of all utilities reporting data for the 2022 Urban NPR. Further details about the utilities are available from the relevant utility websites. While SA Water Corporation provides services across South Australia, it does not provide water and wastewater services to all communities, which are also serviced by councils and private entities.³

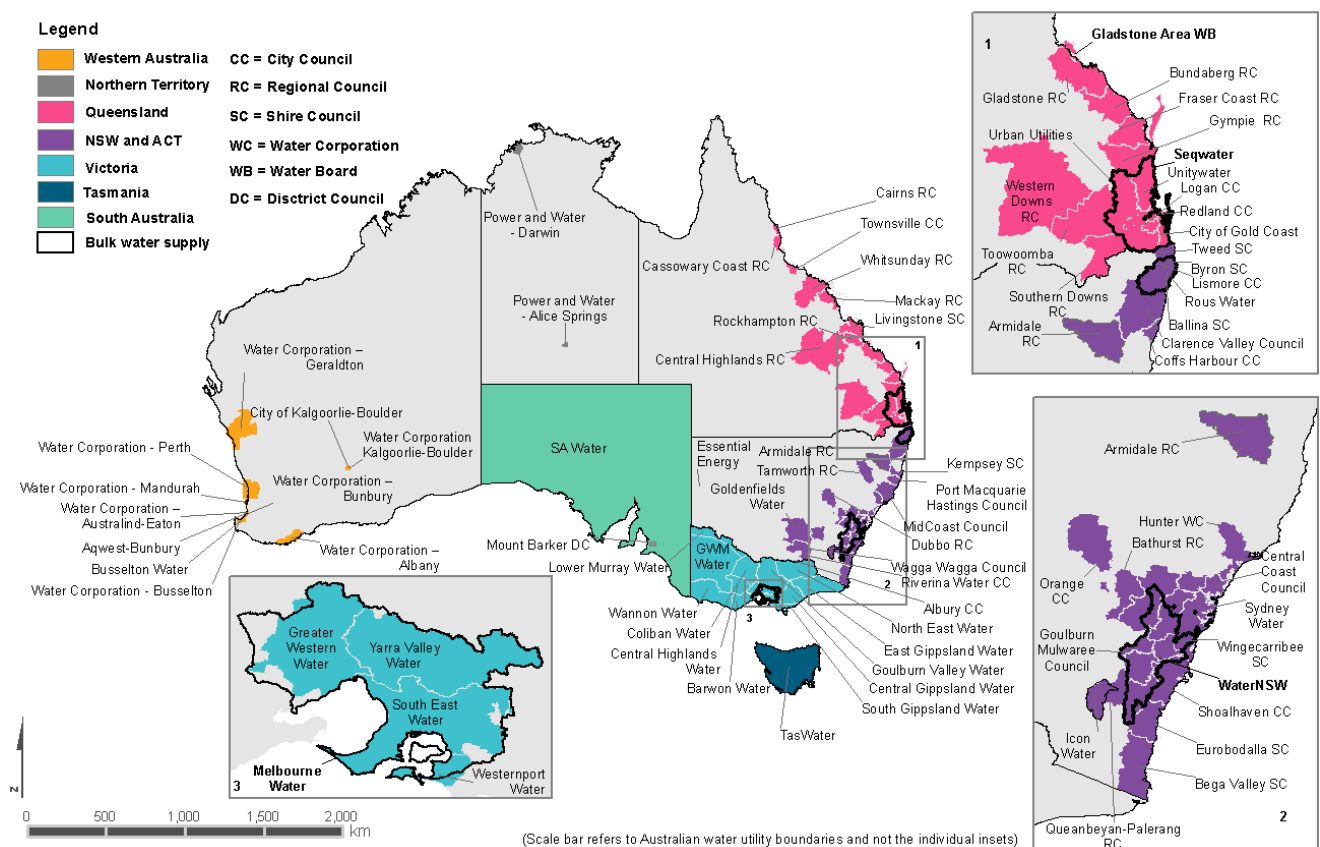


Figure 1.1 The administrative boundaries of all utilities reporting data for 2021–22

³ Maps of cities and towns serviced by SA Water are available in SA Water's 2021–22 annual report pp 6. [2021-22-Annual-Report-2022.pdf \(sawater.com.au\)](https://www.sawater.com.au/2021-22-Annual-Report-2022.pdf)



1.4 Key drivers

Key drivers of water utility performance presented in the 2022 Urban NPR include rainfall, temperature, utility size and sources of water.

Other factors also affect performance but are not discussed in detail. This includes:

- network density
- soil types
- the age and condition of infrastructure
- impacts of the COVID-19 pandemic
- government policy and regulation.

1.4.1 Rainfall

Rainfall can affect utility performance in many ways.

- Significant droughts with prolonged periods of low rainfall can stress urban water supply systems. Depending on the severity of the drought, security of the system and availability of climate-resilient water sources (for example, desalinated or recycled water), the utility may impose water restrictions to conserve water and ensure continuity of the water supply.
- Wet or dry conditions can affect demand for outdoor watering, resulting in a change in the volume of urban water and recycled water supplied to residents, councils and parklands to be used for outdoor leisure activities such as golf courses (Water resource indicators W12, W26). Changes in water consumption affect the revenue collected by utilities, their profitability and the strength of their water-usage pricing signal.
- Wet or dry conditions can affect decisions about the water sources used (Water resource indicators W1 to W7). Persistent dry conditions can trigger thresholds for production from desalination plants and the use of groundwater and recycled water sources, which affect the operating costs of utilities (Finance indicators F11 to F13). Also, to mitigate against the risk of variable raw water quality due to the ongoing severe wet weather and possible flooding condition, the utility might decide to use more desalination water (increasing W3.1).
- Increased rainfall can result in infiltration of water into sewer systems, which can increase the volume of sewage to be pumped and treated, increasing the operating costs of utilities (Finance indicators F12, F13) and greenhouse gas emissions from sewage (Environment indicators E10, E12). Additional rainfall and sewer infiltration can also result in additional sewer overflows, especially during heavy rainfall.
- Extreme wet or dry conditions can cause expansion and shrinking of reactive clay soils in some parts of Australia. This can result in ground movement causing an increase in water or sewer main breaks (Asset indicators A8, A14), especially when conditions fluctuate rapidly from wet to dry or dry to wet. In periods of more consistent rainfall, the soils maintain more even moisture levels, resulting in less ground movement.

In 2021–22, Australia's total rainfall was 9% above average (above the 1961–90 average, at 509.4 mm) compared to all observations since national records began in 1900. Rainfall for the financial year was above average for much of the eastern mainland states, pastoral South Australia, and Central Australia (Figure 1.2). Rainfall was highest on record for parts of south-eastern Queensland and north-east New South Wales.

In November 2021, rainfall was 124% above average for Australia as a whole, making it the wettest November on record, surpassing the previous record set in November 1973. Rainfall was above or very much above average for most of mainland Australia.

November 2021 was also Australia's wettest on record, with more than twice the long-term national average November rainfall, and flooding across large areas of New South Wales and Queensland from November into December. Periods of flooding occurred across the eastern mainland multiple times during the first half of 2022.

For New South Wales, area-average rainfall for autumn was the highest since 1990 and the seventh-wettest on record. More information is available in the [Bureau's 2021–22 Climate Report](#). In contrast, rainfall during August 2021 was 39% below average for Australia with most parts of the mainland south of the tropics recording below average rainfall.

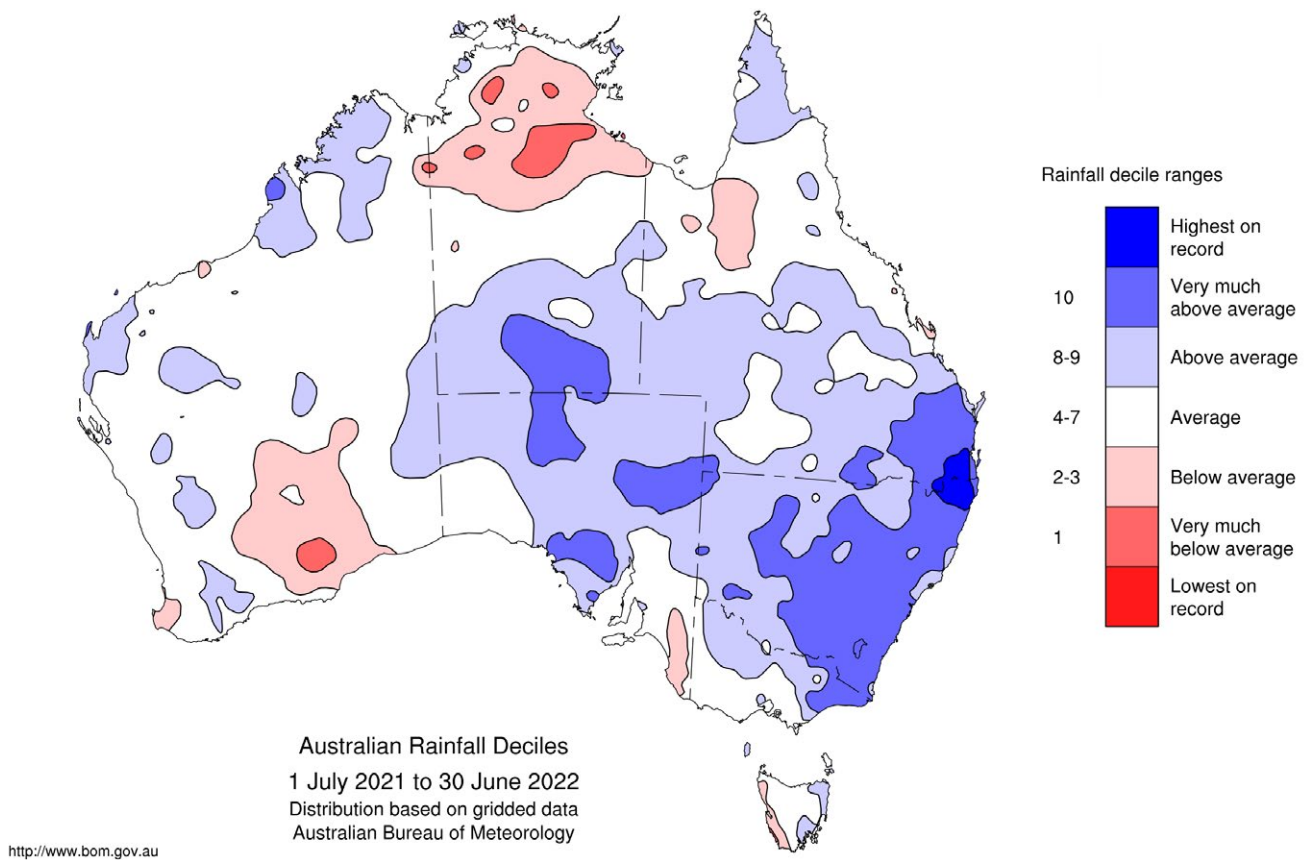


Figure 1.2 Rainfall decile map for 2021–22 (based on all years of data since 1900)

1.4.2 Temperature

There are many relationships between temperature and utility performance.

- Temperature can influence demand, particularly residential and non-residential outdoor demand. Prolonged periods of above-average temperatures can result in increased potable and recycled water (Water resource indicators W12, W26, W27) supply to residents, councils and parklands to be used for outdoor leisure activities such as golf courses. Changes in water consumption affect the revenue collected by water utilities, their profitability (Finance indicators F3, F24) and the strength of their water-usage pricing signal (Finance indicator F4).
- Hot weather can increase the risk of bushfires, resulting in resources being deployed to protect water supply catchments and mitigate the impacts of a bushfire. Emergency deployments can affect operating expenditure (Finance indicators F11 to F13). When responding to a bushfire, temporary water restrictions may be put in place to ensure the availability of supply and to meet firefighting requirements during extreme fire weather. These restrictions can affect the volume of water supplied by a utility and its operating cost and revenue. Poor water quality in a burnt catchment can affect water available for supply and the treatment cost.
- Extended periods of heat or cold can affect the quality of water sources and supply, and thus decisions about water sources used (Water resource indicators W1 to W7) and the level of treatment required. For example, a heatwave can contribute to the decline in dissolved oxygen levels in a waterbody and can trigger the need to supply water from an alternative source, or increase water treatment, which affects the operating costs of utilities (Finance indicators F11 to F13).

- Changes in temperature can affect the quality of treated water as biological processes are particularly sensitive to extremes of heat or cold and rapid fluctuations in temperature. These events can have consequences for the quality of water supplied (Health indicators H1 to H5) and the need for treatment, which affect the operational costs of a utility (Finance indicators F11 to F13).
- Extended hot conditions cause dry soil conditions. Consequently, many trees will seek out moisture, and their roots can enter the sewer system, causing blockages and breaks (Asset indicators A14, A15), as well as increasing the number of water main breaks (Asset indicator A8).

In 2021–22, the mean daily temperature was 0.96 °C above the 1961–90 average, the 8th-warmest financial year on record since records commenced in 1910. Annual mean temperatures were above to very much above average across most of Australia (Figure 1.3). The mean annual minimum temperature was the 5th-warmest on record for Australia, at 0.91 °C above average. While the mean annual maximum temperature was 1.00 °C above average, it placed outside the 10 warmest on record. Both mean annual maximum and minimum temperatures were above average for much of Australia, and record-warm for parts of northern Australia. Mean annual maximum temperatures were cooler than average for parts of eastern New South Wales (for more information see the [Bureau's 2021–22 Climate Report](#)).

Warmth was widespread and persistent through much of 2021–22, with the Australian mean temperature amongst the 10 warmest on record for July, August, December, March and April. November bucked the trend, the only month during July 2021 to June 2022 with a cooler than average mean temperature (–0.64 °C), with record-high rainfall contributing to it being Australia's coolest November since 1999.

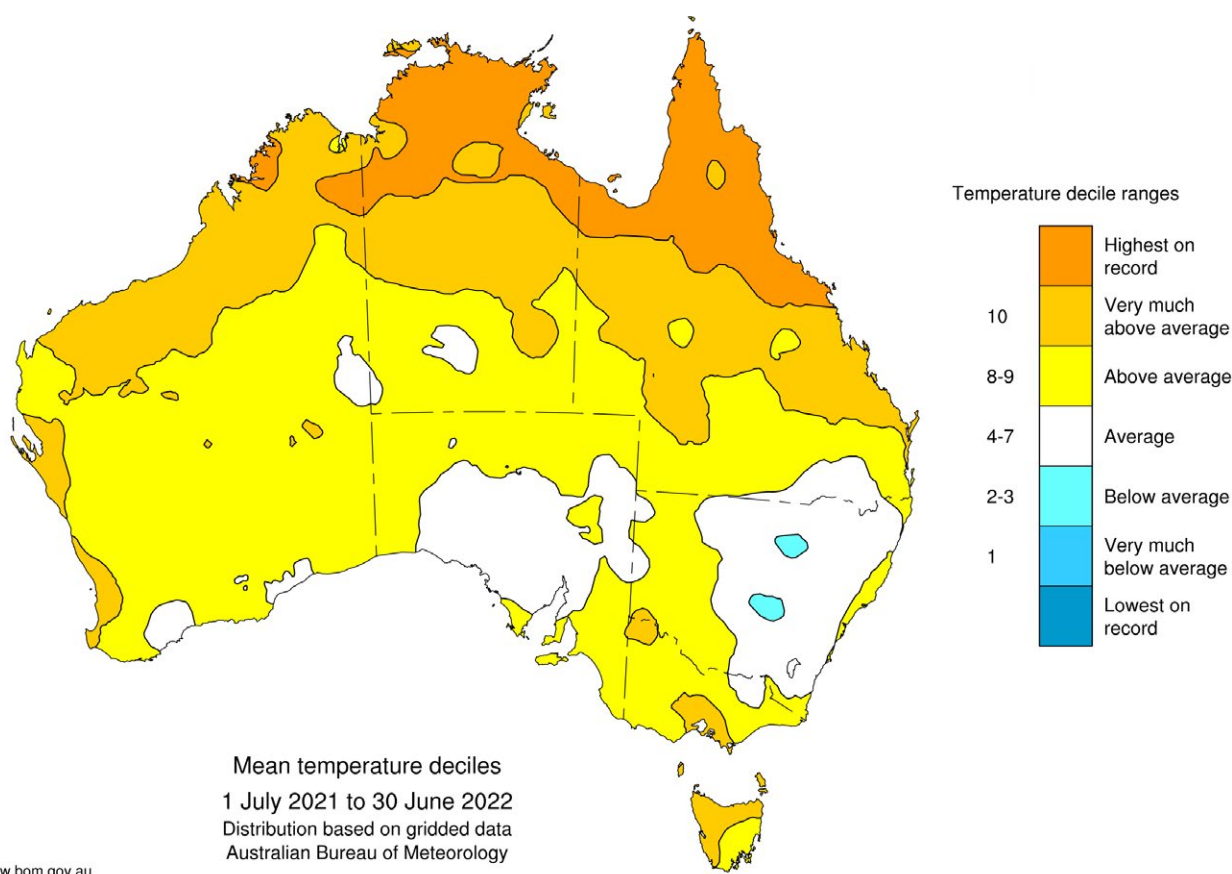


Figure 1.3 Mean daily temperature deciles for 2021–22 (based on all years of data since 1910)

1.4.3 Utility size

The size of a utility's customer base influences its performance on a range of indicators. This relationship may be causal, coincidental or due to a related matter (for example, larger utilities are subject to price regulation, unlike smaller utilities).

1.4.4 Sources of water

Two important drivers of performance are the sources of water used by a utility and the geographical relationship between the source and the urban centre it supplies. The combination and interaction of these drivers serve to create wide variations in engineering, operations and social challenges between utilities across the country.

The sources of water available to a utility are an important driver of several key performance indicators. For example, the cost of treating water to an acceptable standard and supplying it to users affects the revenue collected by water utilities, their profitability (Finance indicators F3, F24) and the strength of their water-usage pricing signal (Finance indicator F4).

Traditionally, Australians have relied on surface water and, to a lesser extent, groundwater to meet their urban consumption needs. The increased demand for urban water – resulting in a need to further develop and maintain ongoing water supply – is driven by many factors, including population growth and the reliability and security of existing sources (predominantly driven by water quality and climate variability). Financial, environmental and social factors reduce the feasibility of developing additional traditional sources of water also considering that most suitable dam sites have already been developed. In response to this situation, utilities and bulk water authorities across the country are developing non-traditional supply sources – such as desalinated and recycled water – while continuing to explore options for harvesting stormwater and rainwater.

The diversification of water sources affects the performance of utilities by increasing the cost to treat water to an acceptable standard (to meet regulatory requirements) and to supply multiple water types to end users. For example, water from a ‘protected’ or ‘closed’ storage catchment is usually higher quality than water from an ‘open’ storage catchment and requires less treatment, which reduces the cost of supply.

The quality of water from groundwater sources varies greatly depending on the type and depth of the aquifer and has a significant impact on the extraction and treatment processes used and subsequent infrastructure and operational costs. Urban water supplied from recycled sources typically requires dual-pipe supply systems to separate recycled water from potable water, incurring greater infrastructure costs.

Figure 1.4 shows the annual supply from different sources of water, and the total supply, for utilities in each state and territory from 2017–18 to 2021–22.

- Water sourced from surface waters (that is, rivers, streams, and dams; Water resource indicator W1) is the dominant water source in all states and territories except Western Australia, where most of the water is sourced from groundwater (Water resource indicator W2),
- In 2021–22, total water sourced nationally slightly increased by 3%, driven by a 5% increase in water sourced from surface water. With above-average rainfall and increased surface water available in storages in many parts of the country, there was a shift towards surface water sourced, with a decline in total water sourced from groundwater (6%) and desalinated water (10%).
- The national increase in total surface water supplied (5%) can be mostly attributed to a 23% increase in surface water supplied in Western Australia. Surface water supplied to Northern Territory, Queensland, Victoria and Tasmania also increased compared to 2020–21. The Australian Capital Territory and New South Wales reported decreases in surface water supplied compared to 2020–21, with New South Wales reporting the highest percentage decrease (8%).
- The volume of water sourced from groundwater across the country decreased by 6% from 2020–21. Except Tasmania and Victoria with a small increase of 9% and 2%, all other states recorded a decrease in water sourced from groundwater compared to 2020–21. Similar to last year, New South Wales reported the highest percentage decrease (19%) in water sourced from groundwater compared to 2020–21.
- The volume of water sourced from desalinated water in 2021–22 decreased (10%) for the second time since 2019–20. This follows the 18% decrease reported in the 2020–21 financial year. Tasmania didn’t source any water from the desalination of marine water this year after reporting a small volume of 10 megalitres in 2020–21. All other states reported a decrease in the volume of water sourced from desalinated water in 2021–22. This decrease coincided with increased surface water availability. For the first time, Victoria exceeded Western Australia and sourced the highest volume of water from desalination. This is as a result of a decrease in the volume of water sourced from desalinated water in Western Australia.
- The total volume of recycled water supplied across the country increased slightly (by 2%) from 2020–21.

Water source breakdown (W1, W2, W3.1, W4/W26) in each state and territory in ML, 2017–18 to 2021–22



Figure 1.4a Water source breakdown in each state and territory, 2017–18 to 2021–22

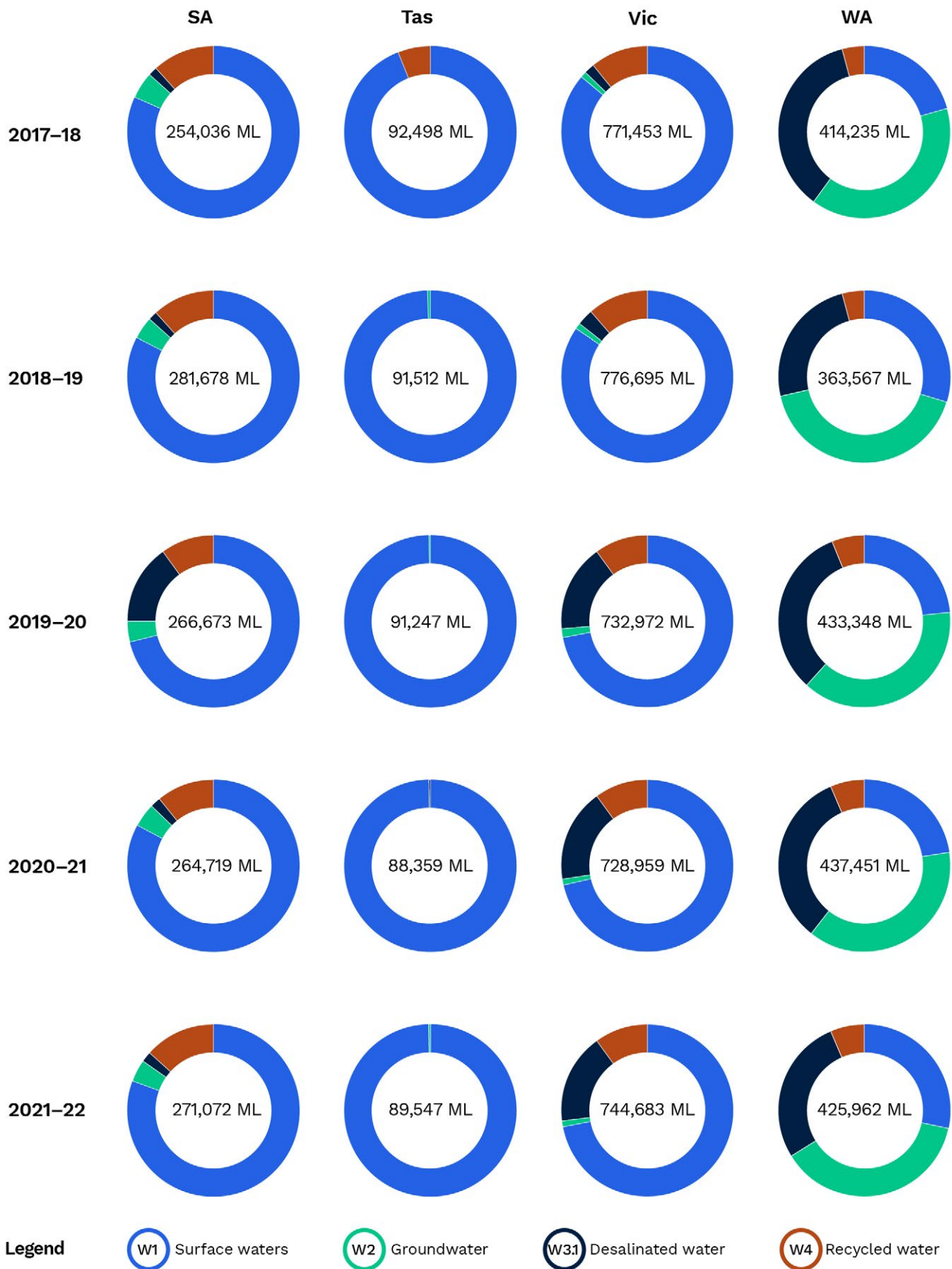


Figure 1.4b Water source breakdown in each state and territory, 2017-18 to 2021-22

2 Major urban centres

This chapter provides comparative tables and figures for a selection of key indicators for major urban centres.

The figures and tables are compiled using data supplied by the utilities detailed in Table 2.1.

Utilities' structures vary. The figures in this chapter should be treated with some caution and read in conjunction with the notes for each table. For example, to provide figures that represent Sydney and South East Queensland, it may be necessary to aggregate the numbers for both bulk water authorities and utilities servicing those areas. Melbourne (urban centre) data is not comparable with last year due to the creation of Greater Western Water. This has resulted in the service area previously managed by Western Water being included in the calculations for Melbourne for the first time in 2021–22. The historical values for all financial indicators have been adjusted using consumer price index (CPI) data to facilitate comparisons in real terms.

Table 2.1 Data sources for capital city analyses

Major urban centre	Utility (B denotes bulk supplier)
Perth	Water Corporation – Perth
Adelaide	SA Water Corporation
Canberra	Icon Water Limited
South East Queensland	Queensland Bulk Water Supply Authority (Seqwater) (B), Urban Utilities, Unitywater, City of Gold Coast, Redland City Council, and Logan City Council
Sydney	WaterNSW (B), Sydney Water Corporation
Melbourne	Melbourne Water (B), Greater Western Water, South East Water Ltd, Yarra Valley Water Corporation
Hobart	No data – TasWater services this area; performance data are available only on an aggregated basis for the entire state of Tasmania
Darwin	Power and Water – Darwin

2.1 Water resources

2.1.1 Volume of water sources – W1, W2, W3.1, W26

Table 2.2 presents the volume (ML) of water sourced from surface water (W1), groundwater (W2), desalinated marine water (W3.1) and recycled water (W26) for each city.

Nationally, total water sourced for major urban centres increased by 1% from 2020–21 to 2021–22. Canberra and Sydney reported an 8% and 1% decrease respectively in water sourced by volume, but total water sourced increased for all other major cities reporting a 2% or 3% increase.

Perth remains the largest supplier of groundwater (130,257 ML) and Melbourne was the largest supplier of desalinated marine water (125,382 ML) to urban centres. Melbourne also sourced the highest volume of recycled water (45,242 ML) followed by Sydney (37,693 ML). Sydney sourced the highest total volume of water in 2021–22. A continuation on the previous year.

Among all water source types, desalinated marine water was used to supply low volumes of water by Adelaide (similar to the previous year) while groundwater and surface water were used less than other types by Melbourne and Darwin, respectively.

Table 2.2 Volume of water sourced in each urban centre (ML)

Major urban centre	Surface water (W1)		Groundwater (W2)		Desalinated marine water (W3.1)		Recycled water (W26)		Total	
	2020–21	2021–22	2020–21	2021–22	2020–21	2021–22	2020–21	2021–22	2020–21	2021–22
Adelaide	163,007	161,965	-	-	5,139	5,323	26,627	33,122	194,773	200,410
Canberra	49,267	45,336	-	-	-	-	27	24	49,294	45,360
Darwin	36,313	38,401	4,271	3,334	-	-	-	-	40,584	41,735
Melbourne ^a	313,791 ^b	322,381 ^c	-	60	125,381	125,382	42,950 ^b	45,242 ^c	482,122	n/a ^a
Perth	17,157 ^d	57,206 ^d	137,064	130,257	143,641	116,198	22,579	21,759	320,441	325,420
South East Queensland ^e	290,939	314,032	13,699	10,090	19,486	12,714	15,468	13,554	339,592	350,390
Sydney ^f	510,487	503,707	-	-	19,609	22,480	37,669	37,693	567,765	563,880

Notes:

- a Melbourne values are not comparable with last year due to the merging of City West Water and Western Water to form Greater Western Water on 1 July 2021. Values displayed in this table pre-2021–22 do not include the service area previously managed by Western Water.
- b Melbourne's surface water in 2020–21 was sourced from Melbourne Water, while its recycled water was sourced from Melbourne Water and the 3 retailers at the time (Yarra Valley Water, South East Water and City West Water). Western Water was not included in the Melbourne major urban centre.
- c Melbourne's surface water in 2021–22 is sourced from Melbourne Water and Greater Western Water, while its recycled water is sourced from Melbourne Water and the 3 retailers (Yarra Valley Water, Greater Western Water and South East Water).
- d Perth's surface water (W1) volume reflects Water Corporation transferring water into surface water storages. In 2021–22, it diverted 121,325 ML from surface water (W1) and returned 64,119 ML. In 2020–21, WC (Perth) diverted 98,358 ML from surface water (W1) and returned 81,201 ML.
- e South East Queensland's surface water, groundwater, and desalinated water are sourced from Seqwater. South East Queensland's recycled water is sourced from Seqwater and the retailers (Urban Utilities, Unitywater, City of Gold Coast, Logan City Council and Redland City).
- f Sydney's surface water (W1) is the total of the water received by Sydney Water from WaterNSW and water it sources directly.

2.1.2 Average volume of residential water supplied per property – W12

Table 2.3 reports the annual average volume (kL/property) of residential water supplied to customers in each major urban centre.

The volume of residential water supplied decreased from 2020–21 to 2021–22 for most major urban centres. The exceptions were Perth, whose annual average volume of residential water supplied was almost steady at 228 kL/property and Darwin which reported an increase of 3.9% to 374 kL/property of annual average volume of residential water supplied.

South East Queensland had the highest decrease (7.5%), closely followed by Canberra (7.4%) which reflects the high rainfall both capital cities received during the period. Canberra's annual average volume per property in 2021–22 is the lowest it has been over the past 6 years. Sydney continued a downward trend, reporting a 4% decrease from 2020–21 to 2021–22; its 2021–22 average is 17% lower than that of 2017–18.

Table 2.3 Average volume of residential water supplied per property (kL/property)

Major urban centre ^a	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Adelaide	195	202	198	196	195	-0.5
Canberra	197	204	202	176	163	-7.4
Darwin	368	380	373	360	374	3.9
Melbourne ^{bc}	148	151	148	147	146	n/a ^c
Perth	219	219	227	227	228	0.4
South East Queensland ^b	155	158	162	159	147	-7.5
Sydney	215	199	189	186	178	-4.0

Notes:

- a The figures exclude bulk utilities because they do not supply to customers.
- b Melbourne and South East Queensland figures are the weighted averages for their respective retailers in each year (that is, W8 – Total volume of water supplied to residential customers/C2 – Number of connected residential properties: water supply).
- c Melbourne figures are not comparable with last year due to the merging of City West Water and Western Water to form Greater Western Water on 1 July 2021. Values displayed in this table pre-2021-22 do not include the service area previously managed by Western Water.

2.1.3 Total volume of recycled water supplied – W26

Table 2.4 reports the total volume (ML) of recycled water supplied to customers (W26), aggregated by major urban centre. Unlike W4 (volume of water sourced from recycling plants), W26 includes all recycled water supplied for various uses.

Total recycled water supply across the major urban centres increased by 5.1% from 2020–21. This is an increase of 14% from 2017–18 levels. Adelaide reported the largest increase in the supply of recycled water at 24.4%. South East Queensland and Canberra had the largest decreases in volumes. This reflects the high rainfall both capital cities received during the period. Darwin did not supply any recycled water to customers in this reporting year.

See Section 3.2 for recycled water supplied by all utilities.

Table 2.4 Total volume of recycled water supplied (ML)

Major urban centre	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Adelaide	26,564	30,533	23,803	26,627	33,122	24.4
Canberra	77	60	75	27	24	-11.1
Darwin	451	488	0	0	0	0.0
Melbourne ^{ab}	38,147	45,535	42,877	41,716	45,242	n/a ^b
Perth	12,100	9,817	20,681	22,579	21,759	-3.6
South East Queensland ^a	13,056	15,445	14,874	15,468	13,554	-12.4
Sydney	42,833	44,020	46,919	37,669	37,693	0.1

Notes:

- a Melbourne and South East Queensland figures are the aggregated figures for the bulk utility and the existing retailers in that reporting year.
- b Melbourne values are not comparable with last year due to the merging of City West Water and Western Water to form Greater Western Water on 1 July 2021. Values displayed in this table pre-2021-22 do not include the service area previously managed by Western Water.

2.2 Pricing

2.2.1 Total typical residential bill – P8

Table 2.5 reports the total typical residential bill (\$) for water supply and wastewater in each major urban centre.

Melbourne reported the lowest total typical residential bill of \$976. This was lower than the previous year, however, the values are not comparable due to the merge of City West Water and Western Water to create Greater Western Water.

All major urban centres reported decreases in total typical residential bill for 2021–22 in real terms.

See Section 4.1 for the typical bills charged by all utilities.

Table 2.5 Total typical residential bill (\$)

Major urban centre ^a	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Adelaide	1,389	1,415	1,396	1,147	1,109	-3.3
Canberra	1,278	1,227	1,242	1,149	1,089	-5.2
Darwin	1,990	2,003	1,971	1,913	1,902	-0.6
Melbourne ^{bc}	1,111	1,081	1,073	1,068	976	n/a ^c
Perth	1,601	1,664	1,705	1,669	1,620	-2.9
South East Queensland ^b	1,456	1,538	1,579	1,570	1,483	-5.5
Sydney	1,232	1,186	1,192	1,067	1,027	-3.7

Notes:

- a The figures exclude bulk utilities as they do not supply to customers.
- b Melbourne and South East Queensland figures are the weighted average of the retail utilities in that year (that is, P3 – Typical residential bill: water supply/C2 – Number of connected residential properties: water supply and P6 – Typical residential bill: wastewater/C6 – Number of connected residential properties: wastewater).
- c Melbourne figures are not comparable with last year due to the merging of City West Water and Western Water to form Greater Western Water on 1 July 2021. Values displayed in this table pre-2021-22 do not include the service area previously managed by Western Water. The service area previously managed by Western Water makes up approximately 3.5% of total connections in the Melbourne urban centre in 2021-22.

2.3 Environment

2.3.1 Total net greenhouse gas emissions per 1,000 properties – E12

The contribution of the utilities' operations to greenhouse gas emissions (t CO₂ equivalent/1,000 properties), aggregated by major urban centre, is reported in Table 2.6.

Emissions decreased for all major cities, except for Darwin. Adelaide had the highest decrease in emissions at 58%. This is due to a reduction in fuel and electricity use, as well as a reduction in sludge production and an increase in sludge removal. It was followed by Perth with the emission decrease of 18% compared with the previous year.

Melbourne's decrease compared to prior year was despite the inclusion service area previously managed Western Water, which has historically reported larger total net greenhouse gas emissions per 1,000 properties than three metropolitan retailers included in historical calculations before the creation of Greater Western Water in 2021-22.

Canberra's decrease (10%) was a result of a 47% decrease in net greenhouse gas emissions on its water supply network due to reduced pumping at Angles Crossing of water between the Murrumbidgee River and Googong Reservoir, as well as the reduction of pumping at the Cotter Station to the Mount Stromlo Treatment Plant.

The increase of 12% for Darwin was due to a 26% increase in greenhouse gas emissions in its water supply system.

Perth continued to report the highest net greenhouse gas emissions per 1,000 properties, which correlates with the high percentage of water sourced from desalination in that city.

See Section 8.1 for total net greenhouse gas emissions by all utilities.

Table 2.6 Total net greenhouse gas emissions per 1,000 properties (t CO₂ equivalent/1,000 properties)

Major urban centre	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Adelaide	285	434	332	342	143	-58
Canberra	268	363	331	196	177	-10
Darwin	229	215	213	199	223	12
Melbourne ^{ad}	272	249	278	249	245	n/a ^d
Perth	754	510	701	695	567	-18
South East Queensland ^b	179 ^c	200	204	205	202	-1
Sydney	173	180	175	169	168	-1

Notes:

- a Melbourne figures are the weighted average of the 3 retailers (that is, E12/C4 – Total connected properties) and Melbourne Water. Melbourne Water's emissions are calculated based on the total connected properties of the 3 active retailers in each year.
- b South East Queensland figures are the weighted average of the retailers (that is, E12/C4 – Total connected properties).
- c City of Gold Coast did not report against this indicator in 2017–18.
- d Melbourne figure are not comparable with last year due to the merging of City West Water and Western Water to form Greater Western Water on 1 July 2021. Values displayed in this table pre-2021-22 do not include the service area previously managed by Western Water.

2.4 Finance

2.4.1 Combined operating cost per property: water supply and wastewater – F13

Table 2.7 reports the combined operating cost (\$/property) of the utilities' water and sewerage operations, aggregated by major urban centre.

In real terms, combined operating costs per property decreased for all major urban centres except Adelaide and Perth, which reported increases of 2% and 7% respectively. Darwin, which experienced a large increase from 2018–19 to 2019–20 due to changes in corporate overheads and COVID-19, reported a large decrease of 21% in 2021–22.

See Section 5.3 for combined operating costs for all utilities.

Table 2.7 Combined operating cost: water supply and wastewater (\$/property)

Major urban centre	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Adelaide	598	628	570	586	599	2
Canberra	1,089	1,059	1,008	912	890	-2
Darwin	1,006	953	1,269	1,198	943	-21
Melbourne ^a	973	982	976	938	877	n/a ^a
Perth	656	589	659	630	675	7
South East Queensland	1,166	1,255	1,289	1,236	1,188	-4
Sydney	726	774	776	707	688	-3

Notes:

- a Melbourne figures are not comparable with last year due to the merging of City West Water and Western Water to form Greater Western Water on 1 July 2021. Values displayed in this table pre-2021–22 do not include the service area previously managed by Western Water.

2.4.2 Total capital expenditure: water supply and wastewater – F16

Table 2.8 reports the combined capital expenditure (\$000s) related to the utilities' water and sewerage operations, aggregated by major urban centre.

The sum of total capital expenditure for water supply and wastewater decreased in 3 out of 7 capital cities from 2020–21 to 2021–22. The largest decreases were reported by Canberra (27%) and Adelaide (15%). The largest increases were reported by Sydney (19%) and Darwin (17%).

See Section 5.1 for combined capital expenditure for all utilities.

Table 2.8 Total capital expenditure: water supply and wastewater (\$000s)

Major urban centre	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Adelaide	229,395	303,141	360,964	298,195	252,319	-15
Canberra	96,091	94,799	108,435	91,111	66,895	-27
Darwin	49,743	36,012	21,727	21,482	25,053	17
Melbourne ^{ab}	958,141	1,043,762	1,097,264	1,138,134	1,014,360	n/a ^b
Perth	517,241	496,054	423,209	387,882	345,529	-11
South East Queensland ^a	650,431	739,812	874,322	864,573	873,553	1
Sydney ^a	884,624	1,247,992	1,076,831	1,032,543	1,233,832	19

Note:

- a Melbourne, South East Queensland and Sydney figures are the aggregate for the bulk utility and the respective retailers.
b Melbourne figures are not comparable with last year due to the merging of City West Water and Western Water to form Greater Western Water on 1 July 2021. Values displayed in this table pre-2021-22 do not include the service area previously managed by Western Water.

2.5 Customers

2.5.1 Total water and sewerage complaints per 1,000 properties – C13

Table 2.9 reports the total number of complaints per 1,000 properties received by utilities for water and sewerage services, aggregated by major urban centre.

Three out of the 7 major urban centres experienced improved customer satisfaction (based on complaints as an indicator of satisfaction) with a decrease in the number of complaints received in 2021–22 compared to 2020–21. Perth had the lowest levels of complaints with 0.4 total water and sewerage complaints per 1,000 properties, and Canberra had the largest increase in complaints (from 2.2 in 2020–21 to 20.3 in 2021–22). However, this increase is the result of system and process changes which now capture complaints via all channels including where the complaint is resolved at the first point of contact.

Darwin and South East Queensland also experienced an improvement in customer satisfaction.

See Section 6.2 for water and sewerage complaints for all utilities.

Table 2.9 Total number of water and sewerage complaints per 1,000 properties (complaints/1,000 properties)

Major urban centre	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Adelaide ^a	2.5	2.1	2.2		2.9	
Canberra	3.7	2.8	3.4	2.2	20.3	822.7
Darwin	68.5	60.4	50.9	59.2	49.0	-17.2
Melbourne ^b	6.2	6.9	7.0	7.7	6.2	n/a ^b
Perth	1.2	0.8	0.8	0.6	0.4	-33.3
South East Queensland	4.5	5.3	5.7	5.7	4.9	-14.0
Sydney	2.2	2.5	2.1	2.0	2.4	20.0

Notes:

- a No data was available for Adelaide in 2020–21.
b Melbourne figures are not comparable with last year due to the merging of City West Water and Western Water to form Greater Western Water on 1 July 2021. Values displayed in this table pre-2021-22 do not include the service area previously managed by Western Water.

2.5.2 Average duration of an unplanned interruption: water supply – C15

Table 2.10 reports the average duration (minutes) of unplanned interruptions to water supply in a utility's operation, aggregated by major urban centre.

Darwin had the highest decrease in average duration of unplanned interruption to water supply in 2021–22, reporting a decrease of 27%. Adelaide has continued to decrease its average duration of unplanned interruption to water supply from 237 minutes in 2017–18 to 181 minutes in 2021–22, a decrease of 24%.

South East Queensland experienced an increase (10%) from 2020–21 levels reporting 134 minutes of average duration of unplanned interruption of water supply.

See Section 6.1 for unplanned interruption to water supply for all utilities.

Table 2.10 Average duration of an unplanned interruption: water supply (minutes)

Major urban centre	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Adelaide	237	243	204	188	181	-4
Canberra	125	135	136	147	136	-7
Darwin ^a				139	102	-27
Melbourne ^b	101	95	101	98	103	n/a ^b
Perth	112	103	111	140	141	1
South East Queensland	125	124	119	121	134	10
Sydney	155	143	187	200	192	-4

Note:

- a No data is available for Darwin before 2020–21.
- b Melbourne values are not comparable with last year due to the merging of City West Water and Western Water to form Greater Western Water on 1 July 2021. Values displayed in this table pre-2021–22 do not include the service area previously managed by Western Water.

3 Water resources

3.1 Average annual residential water supplied – W12

The average annual residential water supplied indicator (W12) reports the average volume (kL/property) of metered and estimated non-metered potable and non-potable water supplied to residential properties during the reporting year. It is derived by dividing the total volume of residential water supplied (W8) by the number of connected residential water properties (C2). The average volume is influenced by a number of factors, including:

- climate
- rainfall
- water conservation measures (for example, water restrictions)
- availability of water supply
- housing density
- water prices.

Rainfall is the most influential factor affecting residential consumption. An increase in rainfall should reduce demand and a decrease in rainfall should increase demand. A decrease in rainfall can result in a significant decrease in runoff into storages and trigger demand-management measures such as water restrictions.

Average annual residential water supply (W12) data for all utilities reporting in 2021–22 is given in Table A1, Appendix A.

3.1.1 Key findings

Table 3.1 presents a summary of the median average annual volume of water supplied to residential customers by utility size group.

Table 3.1 Overview of results: Average annual residential water supplied (kL/property)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	228	135	3	11	159	157	-1
	WC (Perth)	Logan					
Large	374	120	5	7	197	185	-6
	P&W (Darwin)	Shoalhaven					
Medium	461	113	5	17	174	166	-5
	Lower Murray Water	Eurobodalla					
Small	420	92	7	17	193	184	-5
	P&W (Alice Springs)	Westernport Water					
All size groups (national)	461	92	20	52	176	165	-6
	Lower Murray Water	Westernport Water					

Note: The median average annual residential water supplied (kL/property) for each year is calculated using data from all this year's active utilities providing water supply services in that reporting year.

Nationally, there was a 6% decrease in the average annual water supplied in 2021–22. This decrease is consistent with the increased rainfall experienced across most of the country.

The number of utilities reporting a decrease in the average annual residential water supplied was higher than the number of utilities reporting an increase in all size groups (overall 52 out of 72 utilities reported a decrease). Kempsey Shire Council reported the highest percentage decrease (28.6%) in average annual residential water supplied and Mackay Regional Council reported the highest percentage increase (16.5%).

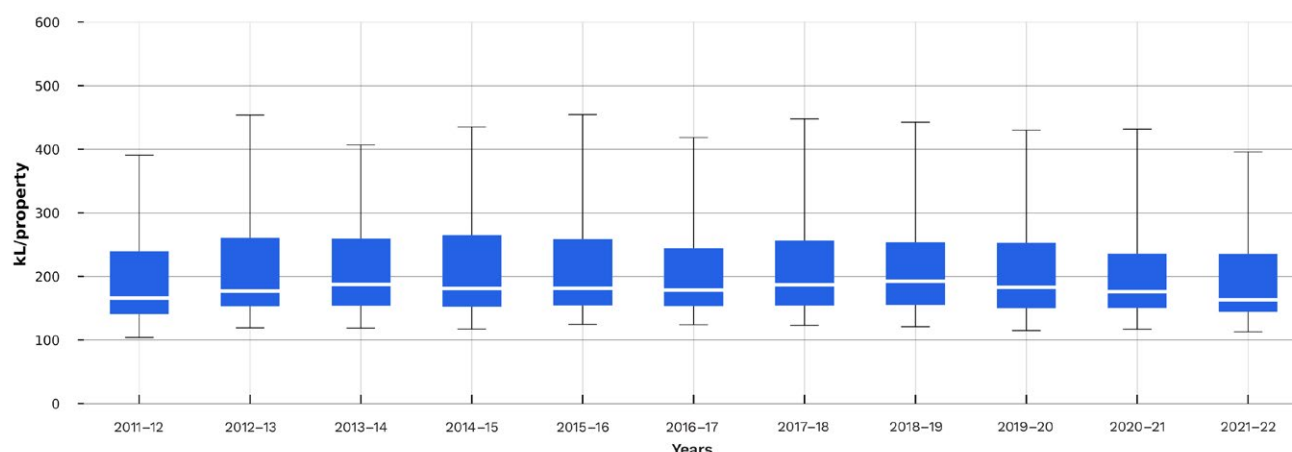


Figure 3.1 Average annual residential water supplied (kL/property)

Figure 3.1 shows a box-and-whisker plot of the average annual volume of residential water supplied for all utilities reporting W12. Across all utilities, the distribution of median residential water supply was the smallest it has been for 11 years due to the above average rainfall received across Australia over the last 3 years.

3.1.2 Results and analysis – Major utility group

Figure 3.2 shows a ranked breakdown of the average volume of residential water supplied for each utility in the Major utility group from 2017–18 to 2021–22.

The largest volumes supplied to residential customers occurred in the Water Corporation – Perth and SA Water Corporation regions (228 and 193 kL/property, respectively).

Variations ranged from a 11.4% decrease by Urban Utilities (Queensland) to a 0.9% increase by SA Water Corporation.

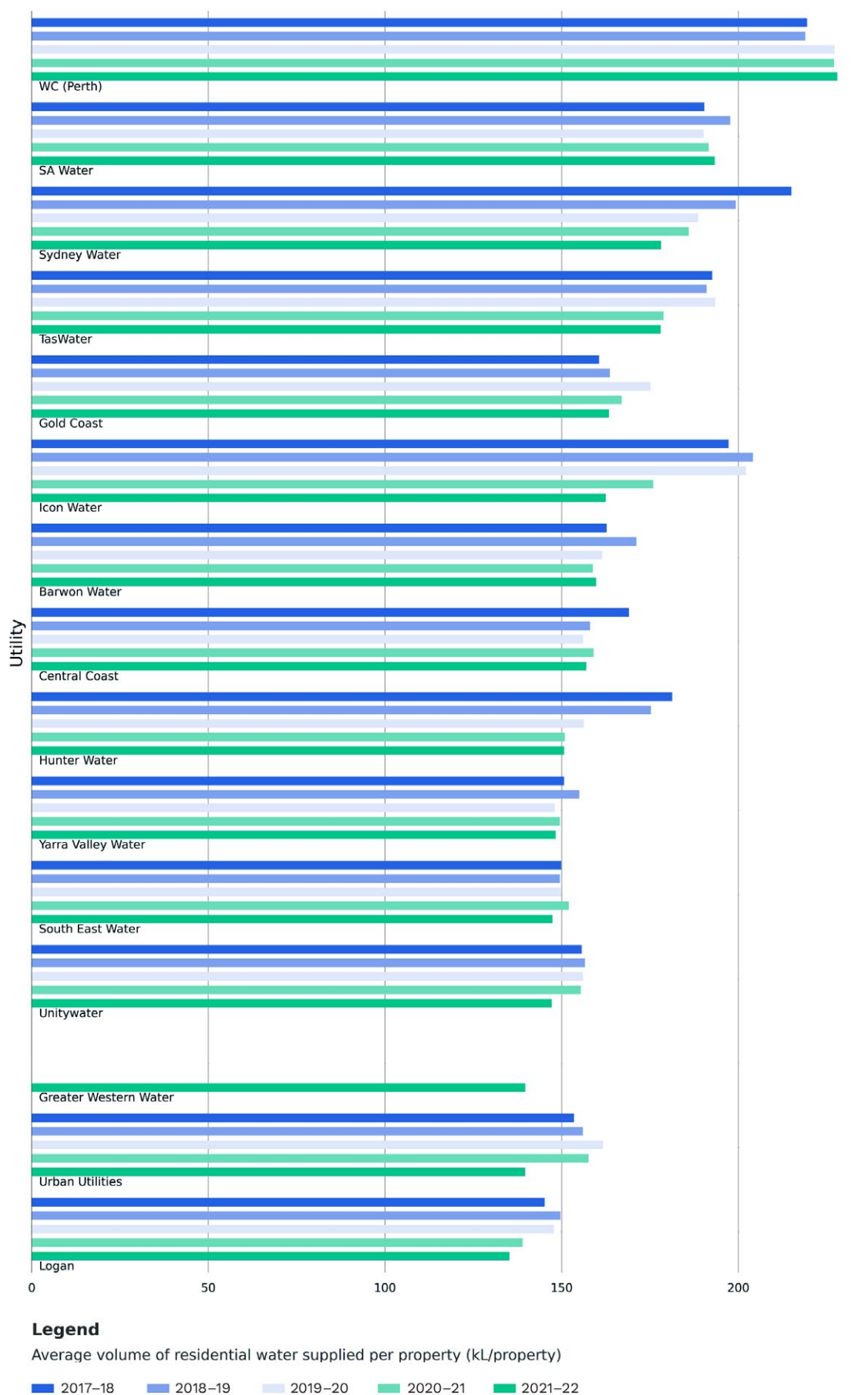


Figure 3.2 Average annual residential water supplied (kL/property) – Major utility group

3.2 Total recycled water supplied – W26

Total recycled water supplied (ML) is the sum of all treated sewage effluent used by the utility and its customers. It includes residential, commercial, industrial, agricultural and environmental use as well as on-site use by the utility.

The volume of recycled water supplied is affected by a number of factors, including:

- availability of potable water
- size of the utility
- the utility's proximity to potential customers (for example, agricultural users, major industrial customers, and recreational facilities)
- fluctuations in sewage received and effluent available for recycling
- government policy.

Total recycled water supplied (W26) data for all utilities reporting in 2021–22 is presented in Table A2, Appendix A.


3.2.1 Key findings

Table 3.2 presents a summary of the total recycled water supplied by utility size group.

Table 3.2 Overview of results: Total recycled water supplied (ML)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	37,693	24	4	9	119,011	135,010	13
	Sydney Water	Icon Water					
Large	10,628	0	7	4	20,752	23,804	15
	North East Water	P&W (Darwin)					
Medium	5,458	102	9	12	33,851	33,354	-1
	Wagga Wagga (S)	Wingecarribee					
Small	2,351	0	9	16	17,554	16,513	-6
	WC (Albany)	Cassowary Coast					
All size groups (national)	37,693	0	29	41	191,168	208,681	9
	Sydney Water	Multiple utilities					

Note: The total recycled water supplied (ML) is calculated using data from all utilities that reported data for W26 in both the 2020–21 and 2021–22 reporting years.



Nationally, the total volume of recycled water supplied increased by 9% in 2021–22. The Major and Large utility group reporting showed increases of 13% and 15% respectively and the Medium and Small Utility Groups reporting decreases of 1% and 6% respectively.

There was a large variation in the changes between reporting periods, with Lismore City Council in the Small size group having the highest percentage increase in recycled water supplied 1,481% (change from 21 ML in 2020–21 to 332 ML in 2021–22), while Unitywater reported the highest decrease of 74.10% (change from 772 ML in 2020–21 to 200 ML in 2021–22).

3.2.2 Results and analysis – Major utility group

In 2021–22, the total volume of recycled water supplied was 208,681 ML, and over half of this was supplied by the Major utility group (65%). Sydney Water Corporation was the largest supplier of recycled water with 37,693 ML and Icon Water Limited reported the lowest level (24 ML) amongst utilities which provided recycle water.

4 Pricing

4.1 Typical residential bill: water supply and wastewater – P8

The typical residential bill (\$) for water supply and wastewater (P8) is the sum of fixed charges and volumetric-usage charges for water and sewage billed to a residential customer. The typical bill is based on each utility's average annual volume of residential water supplied (W12) and its pricing structure (P1, P1.2 to P1.7, P4.1 to P4.3). Prices are set by government or, in some jurisdictions, by a regulator, council or utility.

Water bills are influenced by a number of factors, including:

- size of the utility's customer base
- geographical location
- distribution of the customer base
- local topography
- climate
- available sources of water
- government policy and legislation.

The mix of fixed and usage charges, and the level of water consumption, affect the typical residential bill.

When drawing comparisons between utilities, it is important to note that changes in a typical bill may result from both changes to average consumption and changes to the price of water.

Historically, residential water bill pricing models have varied across the nation. Most utilities now have a water supply pricing model based on a 2-part structure. A fixed component and a component based on volumetric usage.

Townsville City Council and Whitsunday Regional Council remain exceptions as ratepayers have a choice between a fixed allocation and a 2-part structure.⁴

Unlike residential water supply pricing, most utilities have a fixed price model for wastewater services. The exceptions are the Melbourne utilities⁵, Central Coast Council, Essential Energy, Queanbeyan–Palerang Regional Council, Shoalhaven City Council and Unitywater. These utilities have both a fixed and volumetric component in their wastewater charges.

Billing data is indexed using the consumer price index (CPI) to facilitate comparison in real terms.

Typical residential bill (P8) data for all utilities reporting in 2021–22 is presented in Table A3, Appendix A.

4.1.1 Key findings

Table 4.1 presents a summary of the median typical residential bills by utility size group.

Nationally, median typical residential bills for water and wastewater services decreased by 2% from 2020–21. This means a \$33 decrease in the median typical residential bill. Overall, the water and wastewater utilities in the Major utility group reported the highest decrease of 4% from 2020–21 compared with other utility groups. Central Highlands Water in the Small size group reported the highest and Goulburn Valley Water in the Large size group reported the lowest typical residential bill.

⁴ <https://www.whitsundayrc.qld.gov.au/our-council/about-council/rates-fees-and-charges/water-billing-options-and-water-tariff-calculator>

⁵ Greater Western Water, Yarra Valley Water, and South East Water

A few utilities reported an increase in their typical residential bill from 2020–21 including Southern Downs Regional Council from the Small utility group (the highest increase of 4.9%) and Armidale Regional Council from the Small utility group (the lowest increase of 1.5%).

Table 4.1 Overview of results: Typical residential bill: water supply and wastewater (\$)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	1,661	923	0	14	1,144	1,096	-4
	Gold Coast	Central Coast					
Large	1,902	851	1	11	1,432	1,415	-1
	P&W (Darwin)	Goulburn Valley Water					
Medium	1,801	979	0	21	1,583	1,523	-4
	MidCoast Council	Lower Murray Water					
Small	2,080	975	3	19	1,732	1,710	-1
	Central Highlands	Mount Barker					
All size groups (national)	2,080	851	4	65	1,523	1,490	-2
	Central Highlands	Goulburn Valley Water					

Note: The typical residential bill in each year is calculated using data from all active utilities supplying both water and wastewater services in that year.

Figure 4.1 shows a box-and-whisker plot of typical residential bills for all utilities reporting data in a given year. The typical residential bill was steady for 6 successive years from 2015–16 to 2020–21 but slightly decreased in 2021–22. The national median also decreased by 2% in comparison with 2020–21.

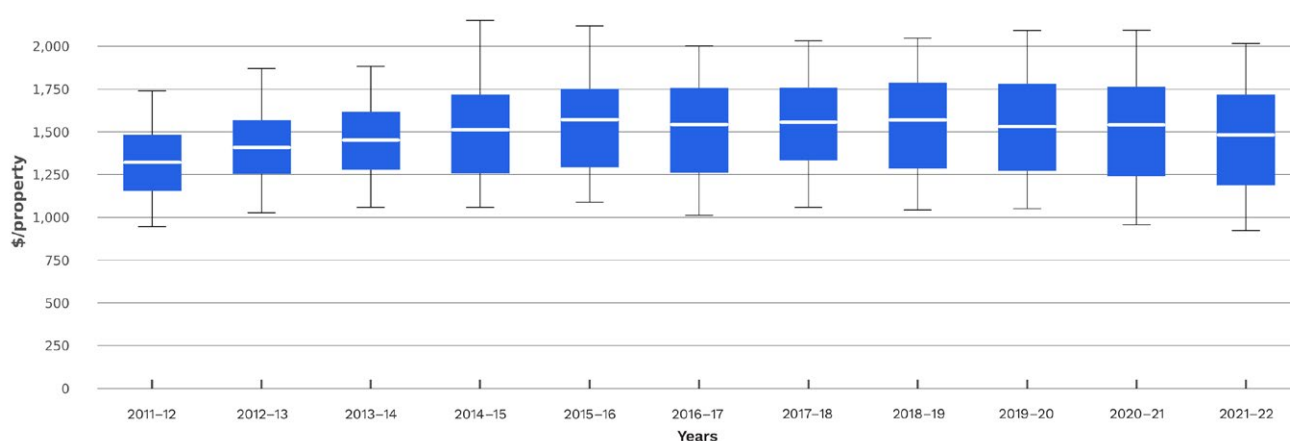


Figure 4.1 Typical residential bill: water supply and wastewater (\$), 2011–12 to 2021–22

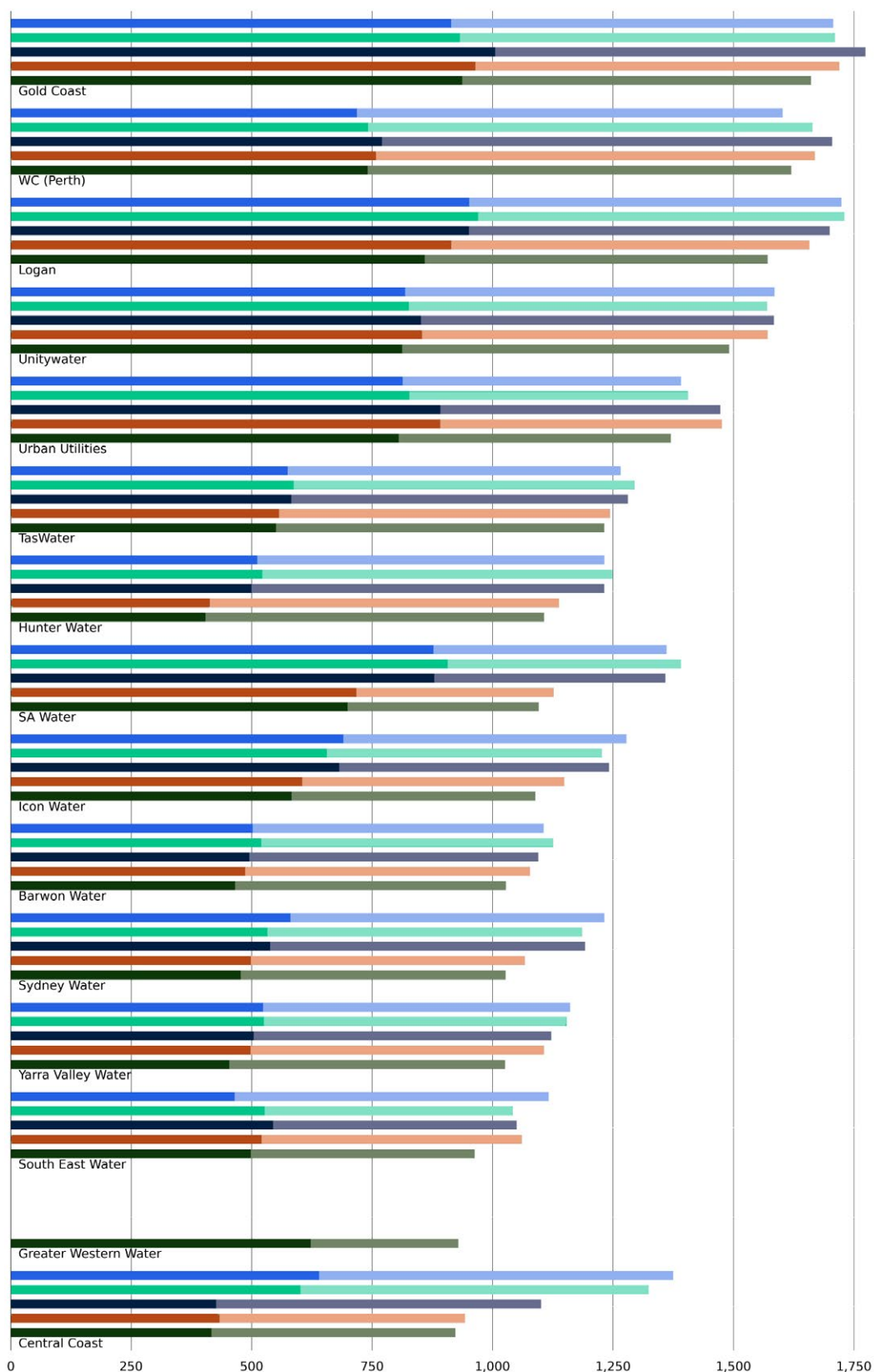
4.1.2 Results and analysis – Major utility group

Figure 4.2 presents a ranked breakdown of the typical residential bill for the Major utility group. The figure shows the water (P3) and wastewater (P6) components of the bill for active utilities that have reported their information in 2021–22.

The median typical residential bill in all utilities in the Major size group decreased from 2020–21. Similar to 2020–21, Central Coast Council reported the lowest typical residential bill (\$923/property) and City of Gold Coast reported the highest typical residential bill (\$1,661/property) in this size group. Compared with 2017–18, the customers in all utilities within the Major size group experienced lower typical residential bills, except for Water Corporation – Perth. There is an annual decreasing trend in the typical residential bill since 2017–18 for Central Coast Council customers (from \$1,375 in 2017–18 to \$923 in 2021–22). For Water Corporation – Perth, there has been a slight increase in the typical residential bill from \$1,602 in 2017–18 to \$1,620 in 2021–22 (1.1%).

City of Gold Coast, Water Corporation – Perth and Logan City Council remained the 3 top retailers with high water and wastewater service costs in Major utility group, consistent with previous years.

Compared with 2020–21, the highest percentage decrease (9.6%) in typical residential bill was reported by Queanbeyan–Palerang Regional Council.



Legend

Typical residential bill (\$)

2017-18	Water	Wastewater	2020-21	Water	Wastewater
2018-19	Water	Wastewater	2021-22	Water	Wastewater
2019-20	Water	Wastewater			

Figure 4.2 Typical residential bill: water supply and wastewater (\$) – Major utility group

4.2 Annual residential bill based on 200 kL per annum: water supply and wastewater – P7

The annual bill (\$) based on 200 kL for water and wastewater services (P7) is the sum of the annual bill for the supply of 200 kL of water (P2) and the annual bill for the provision of wastewater services for a residential customer using 200 kL of water (P5).

While the typical residential bill (P8) is the best guide to determining the impact of pricing on customers, the annual bill based on 200 kL aids comparisons between utilities. Adopting a consistent 200 kL as the basis for the bill partially normalises the data, correcting for differences in the volumes of water supplied and providing insight into price variations.

Billing data is indexed using the consumer price index (CPI) to facilitate comparison in real terms.

Annual bill based on 200 kL (water supply and wastewater) data for related utilities is presented in Table A4, Appendix A.


4.2.1 Key findings

Table 4.2 presents a summary of the median 200 kL/annum residential bill data by utility size group.

Table 4.2 Overview of results: Annual residential bill based on 200 kL per annum: water supply and wastewater (\$)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	1,865	1,014	0	14	1,265	1,213	-4
	Logan	Central Coast					
Large	1,810	806	1	11	1,445	1,420	-2
	Toowoomba	Goulburn Valley Water					
Medium	3,085	787	0	21	1,566	1,536	-2
	Tweed	Lower Murray Water					
Small	2,230	975	5	18	1,718	1,692	-2
	Kempsey	Mount Barker					
All size groups (national)	3,085	787	6	64	1,592	1,552	-3
	Tweed	Lower Murray Water					

Note: The 200 kL residential bill data for water supply and wastewater for each year are calculated using data from all active utilities reporting against the P2 and P5 indicators in that year.



On a 200 kL/annum basis, the national median bill in 2021–22 decreased slightly (3%) from 2020–21. All utility size groups experienced a decrease in their median annual residential bill based on 200 kL/annum with the Major size group showing the highest percentage of decrease (4%) from 2020–21. The Small utility group had a large variation in changes, from a 6% increase by Livingston Shire Council to a decrease of 4.3% by Goulburn Mulwaree Council. Compared with 2020–21, Yarra Valley Water Regional Council in the Major size group reported the highest (7.4%) and Clarence Valley Council in the Medium size group reported the lowest (0.3%) decrease in the annual residential bill based on 200 kL. Livingstone Shire Council in the Small size group reported the highest (6%) and Southern Downs Regional Council in the Small size group reported the lowest (0.4%) increase from 2020–21.

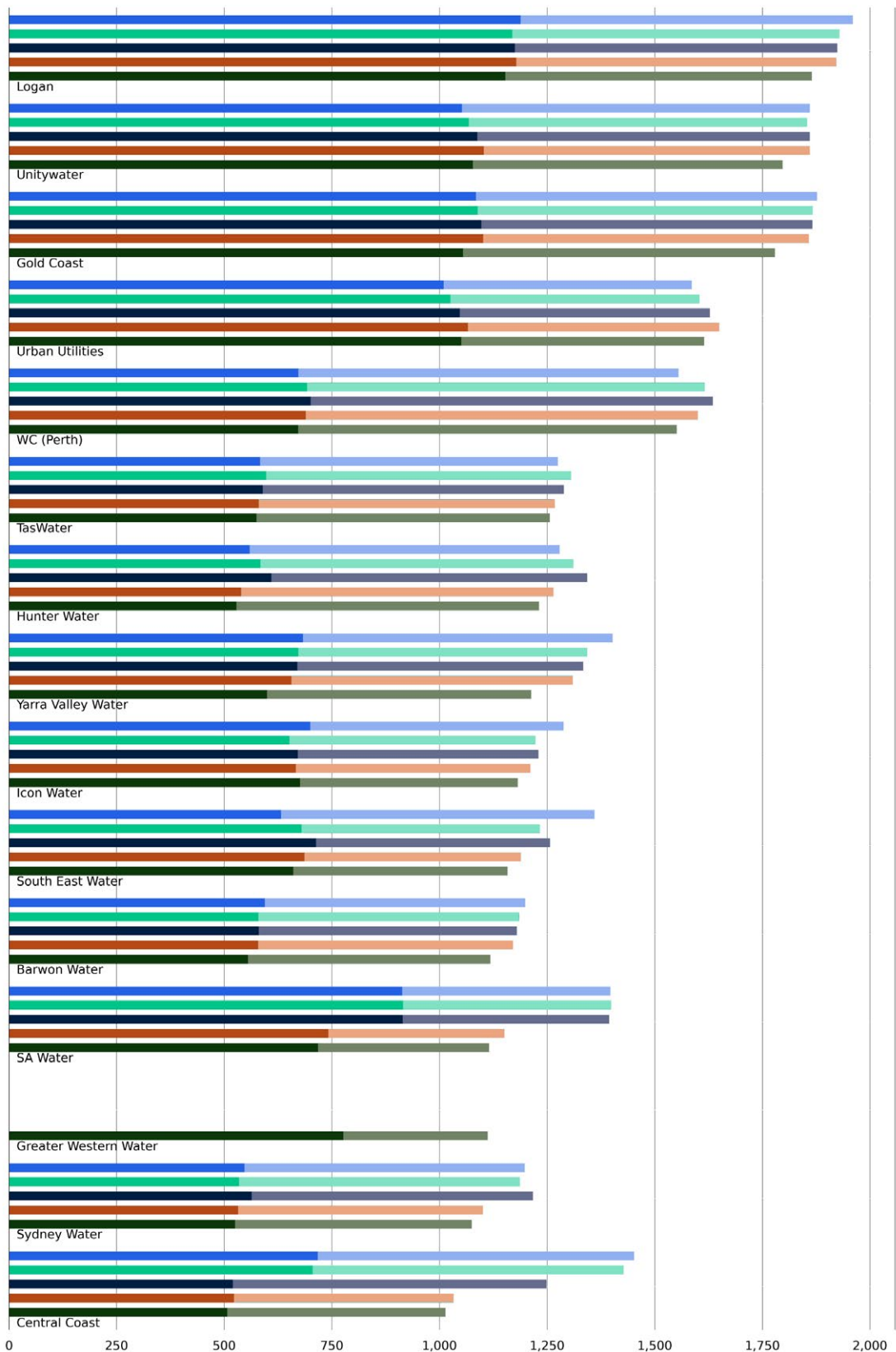
4.2.2 Results and analysis – Major utility group

Figure 4.3 presents a ranked breakdown of the annual residential bill based on 200 kL for the active utilities within the Major utility group that have reported their information in 2021–22.

The annual residential bill based on 200 kL decreased from 2020–21 in all utilities in the Major size group in this reporting year. Similar to 2020–21, Logan City Council in Queensland had the highest (\$1,865) and Central Coast Council in New South Wales had the lowest (\$1,014) 200 kL/annum residential bill in this utility group.

The annual residential bill based on 200 kL in 2021–22 increased in Queensland's Urban Utilities by 1.83% while slightly decreased (almost remained unchanged) in TasWater and Water Corporation – Perth utilities from 2017–18. Customers of all other utilities in the Major size group experienced lower annual residential bill based on 200 kL in 2021–22 compared with 2017–18.

The variation in the annual residential bill based on 200 kL for 2021–22 is smaller than that in 2020–21 within the Major size group. In this group, Yarra Valley Water Corporation had the highest (7.4%) and TasWater had the lowest percentage of decrease (0.9%) from 2020–21 in the annual residential bill based on 200 kL.



Legend

Annual bill based on 200kL (\$)

2017-18	Water	Wastewater	2020-21	Water	Wastewater
2018-19	Water	Wastewater	2021-22	Water	Wastewater
2019-20	Water	Wastewater			

Figure 4.3 Annual bill based on 200 kL: water supply and wastewater (\$) – Major utility group.

5 Finance

5.1 Total capital expenditure: water supply and wastewater – F16

Total capital expenditure (\$000s) on water supply and wastewater (F16) provides a measure of the total level of capital investment by each utility and the size of the utility and its capital responsibilities.

Capital expenditure programs often affect operational expenditure. They are influenced by several factors, including the:

- age of a utility's infrastructure
- stage of each asset's lifecycle
- time and duration of a project.

Capital expenditure data is indexed using the consumer price index (CPI) to facilitate comparison in real terms.

Total capital expenditure for water supply and wastewater data for all utilities reporting in 2021–22 is presented in Table A5, Appendix A.

5.1.1 Key findings

Table 5.1 presents a summary of total capital expenditure for water and wastewater by utility size group. In real terms, total capital expenditure increased slightly by 0.9% to \$4.5 billion. The Small utility group had the highest decrease (6%) in the total capital expenditure. This follows a 4.7% decrease in capital expenditure from the Medium utility group in the previous year. The Major and Large utility groups reported an increase in capital expenditure from 2020–21 to 2021–22.

Table 5.1 Overview of results: Total capital expenditure: water and wastewater (\$000s)

Utility group	Range (\$ million)		No. utilities with increase/decrease from 2020–21		Total		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	1,216,441	36,723	6	8	3,657,295	3,716,911	1.6
	Sydney Water	Central Coast					
Large	87,643	3,472	5	7	405,681	408,224	0.6
	Townsville	Redland City					
Medium	42,809	458	7	12	303,878	289,637	-4.7
	Port Macquarie Hastings	Queanbeyan					
Small	17,623	0	8	11	144,357	135,701	-6.0
	Snowy Monaro	Byron					
All size groups (national)	1,216,441	0	26	38	4,511,211	4,550,473	0.9
	Sydney Water	Byron					

Note: Total capital expenditure for water and wastewater services in each year is calculated using data from active utilities reporting against F14 and F15 in both years.

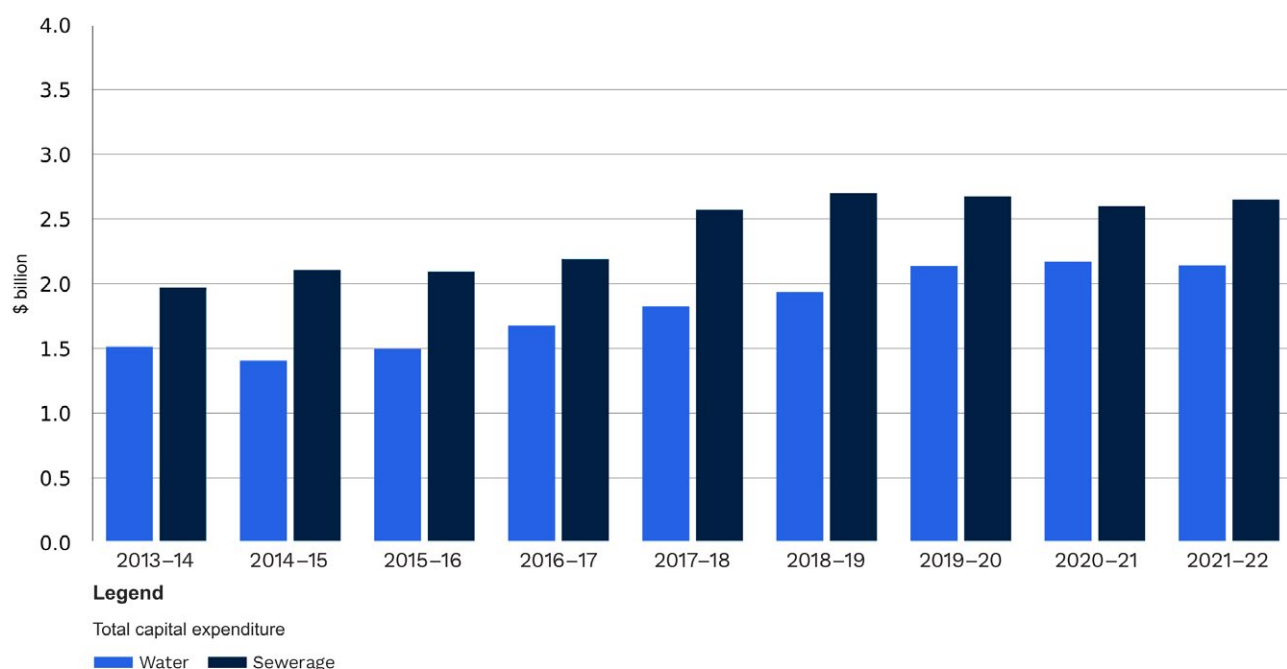


Figure 5.1 Total capital expenditure: water supply and wastewater (\$ billion) for active utilities that reported all 9 years (excluding bulk water utilities)

5.1.2 Results and analysis – Major utility group

An increase in capital expenditure across water and wastewater operations was reported by 5 of the 14 utilities in the Major utility group. Central Coast Council reported a \$3.67 million increase after not having any capital expenditure: water and wastewater last year (100% increase from last year). Icon Water had the highest percent decrease of 26.6% from last year. This decrease follows a decrease of 16% in capital expenditure from 2020–21 to 2019–20.

5.2 Capital expenditure per property: water supply – F28 and wastewater – F29

Capital expenditure (\$/property) on water supply (F28) and wastewater (F29), on a per connected property basis, provides a measure of capital investment by each utility relative to its customer base. The normalisation on a per connected property basis facilitates a comparison between utilities.

Capital expenditure data is indexed using the consumer price index (CPI) to facilitate comparison in real terms.

Capital expenditure data per connected property, for water and wastewater services, for all utilities reporting in 2021–22 is presented in Tables A6 and A7, Appendix A.

5.2.1 Key findings

Tables 5.2 and 5.3 present a summary of the median capital expenditure of utilities providing water and wastewater services, respectively, by utility size group.

Table 5.2 Overview of results: Capital expenditure per property: water supply (\$/property)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	802	78	7	7	171	155	-9
	TasWater	South East Water					
Large	701	14	4	8	217	242	11
	Townsville	Redland City					
Medium	738	10	9	10	246	245	-0.5
	Port Macquarie Hastings	Queanbeyan					
Small	689	0	7	13	360	222	-38
	Central Highlands	Byron					
All size groups (national)	802	0	27	38	249	217	-13
	TasWater	Byron					

Note: Median capital expenditure per property: water supply (\$/property) for each year is calculated using data from utilities providing water and wastewater services that reported against F28 in that year.

Table 5.3 Overview of results: Capital expenditure: wastewater (\$/property)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	718	122	6	8	282	234	-17.0
	Logan	Greater Western Water					
Large	389	47	4	8	228	260	14.0
	North East Water	Redland City					
Medium	1,102	10	8	11	219	195	-11.0
	Eurobodalla	Queanbeyan					
Small	1,867	0	12	8	252	251	0.4
	Snowy Monaro	Byron					
All size groups (national)	1,867	0	30	35	235	222	-6.0
	Snowy Monaro	Byron					

Note: Median capital expenditure: wastewater (\$/property) in each year is calculated using data from all active utilities providing water and wastewater services that reported against F29 in that year.

In 2021–22, the national median per property capital expenditure on water supply services decreased by 13%. Utilities in the Small size group had the highest percentage decrease in median per property capital expenditure on water supply (38%) (Table 5.2).

The national median per property capital expenditure on wastewater services also decreased by 6% from 2020–21 to 2021–22 (Table 5.3). Major and Medium utility groups reported decreases for both water and wastewater services, while the Large utility group reported increases of 11% and 14% for median per property expenditure on water services and wastewater services, respectively.

5.2.2 Results and analysis – Major utility group

Figure 5.2 shows a ranked breakdown of capital expenditure on a per connected property basis for the Major utility group. The figure shows the water supply (F28) and wastewater (F29) components of the total expenditure and reinforces the year-to-year variation.

The capital expenditure on water and wastewater services combined increased by 1.6% compared to 2020–21.

Hunter Water Corporation reported the highest percentage increase in capital expenditure water supply per connected property (96.5%) from 2020–21 to 2021–22. This large increase follows a large decrease in the previous year, with the volatility due to the uneven nature of capital expenditure on major projects. Icon Water reported the largest percentage decrease in capital expenditure on water services (62.1%).

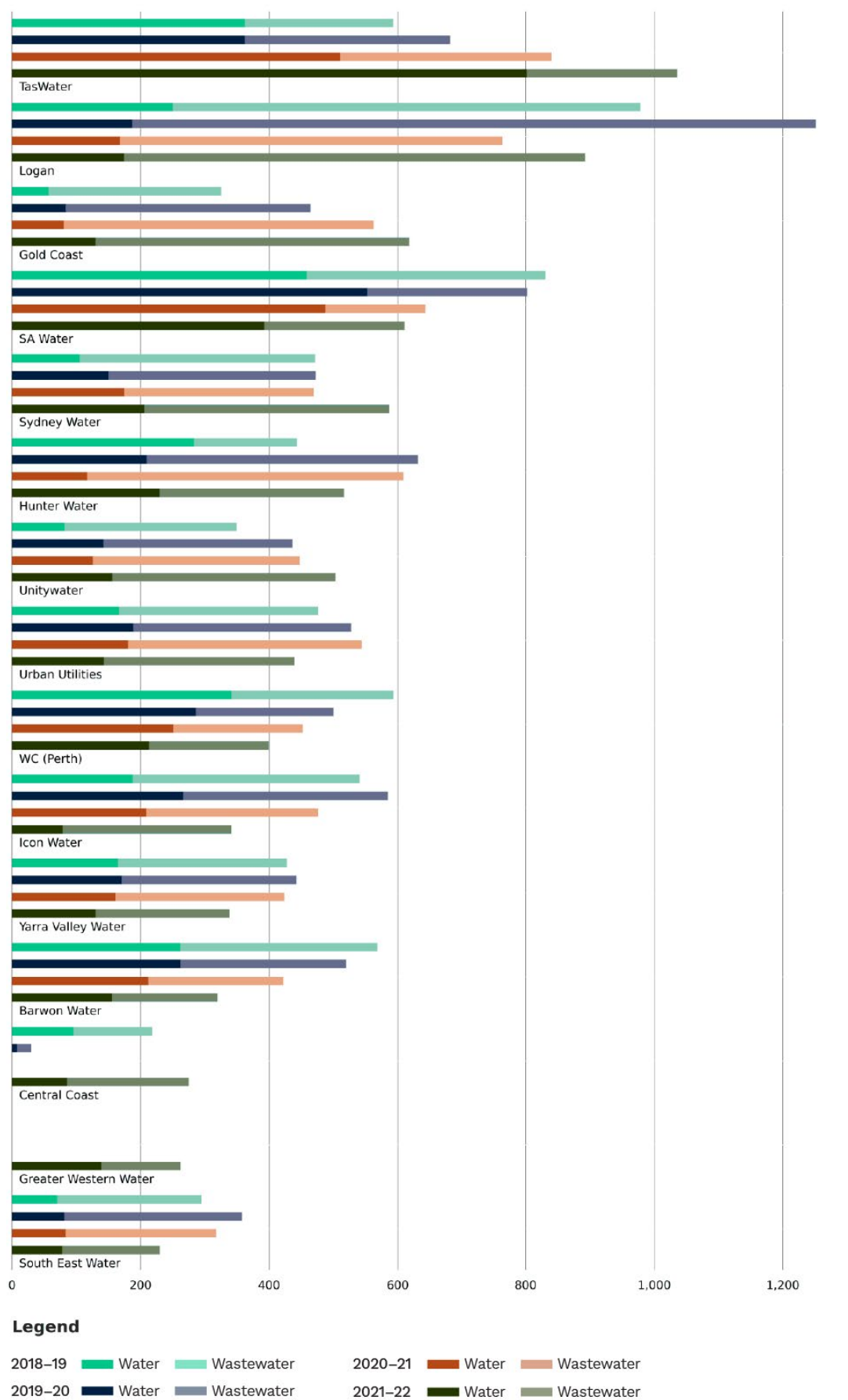


Figure 5.2 Capital expenditure: water supply and wastewater (\$/property) – Major utility group

5.3 Combined operating cost per property: water supply and wastewater – F13

Combined operating costs (\$/property) for water supply and wastewater on a per property basis (F13) provides a measure of a utility's operation, maintenance and administration costs in relation to the number of properties serviced. Operating costs are influenced by:

- utility size
- government policy
- climate and rainfall
- distance and method by which water is transported (for example, piped)
- sources of water (for example, purchased from a bulk utility or sourced from dams or alternative sources such as desalination plants)
- input costs (for example, fuel, chemicals, and labour)
- level of water and sewage treatment required
- capital procurement strategies (for example, public–private partnerships or build–own–operate–transfer [BOOT] schemes).

Operating costs are increasing, particularly for larger utilities. However, operating costs per property can fall as the size of the utility increases due to economies of scale.

Operating cost data are indexed using the consumer price index (CPI) to facilitate comparison in real terms.

Combined operating cost (water supply and wastewater) data for all utilities reporting in 2021–22 is presented in Table A8, Appendix A.

5.3.1 Key findings

Figure 5.3 shows a box-and-whisker plot of combined operating cost (water supply and wastewater) data for all utilities reporting F13 for a given reporting year from 2011–12 to 2021–22. Table 5.4 presents a summary of the median combined operating costs per property by utility size group.

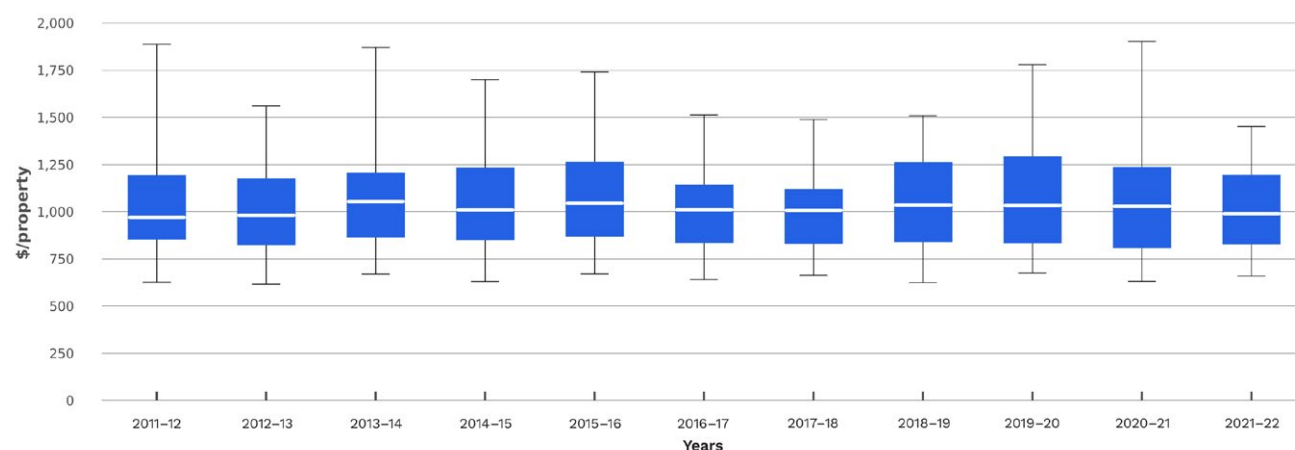


Figure 5.3 Combined operating cost per property: water supply and wastewater (\$/property)

The national 2021–22 median operating cost (on a per property basis for utilities delivering both water and wastewater services) was \$980, with a decrease of 4% from 2020–21. (Table 5.4).

All utility groups reported a decrease in combined median operating costs per property for water and wastewater from 2020–21 to 2021–22. Nationally, 41 utilities across all size groups reported decreases in their operating expenditure per property, while 22 utilities reported increases.

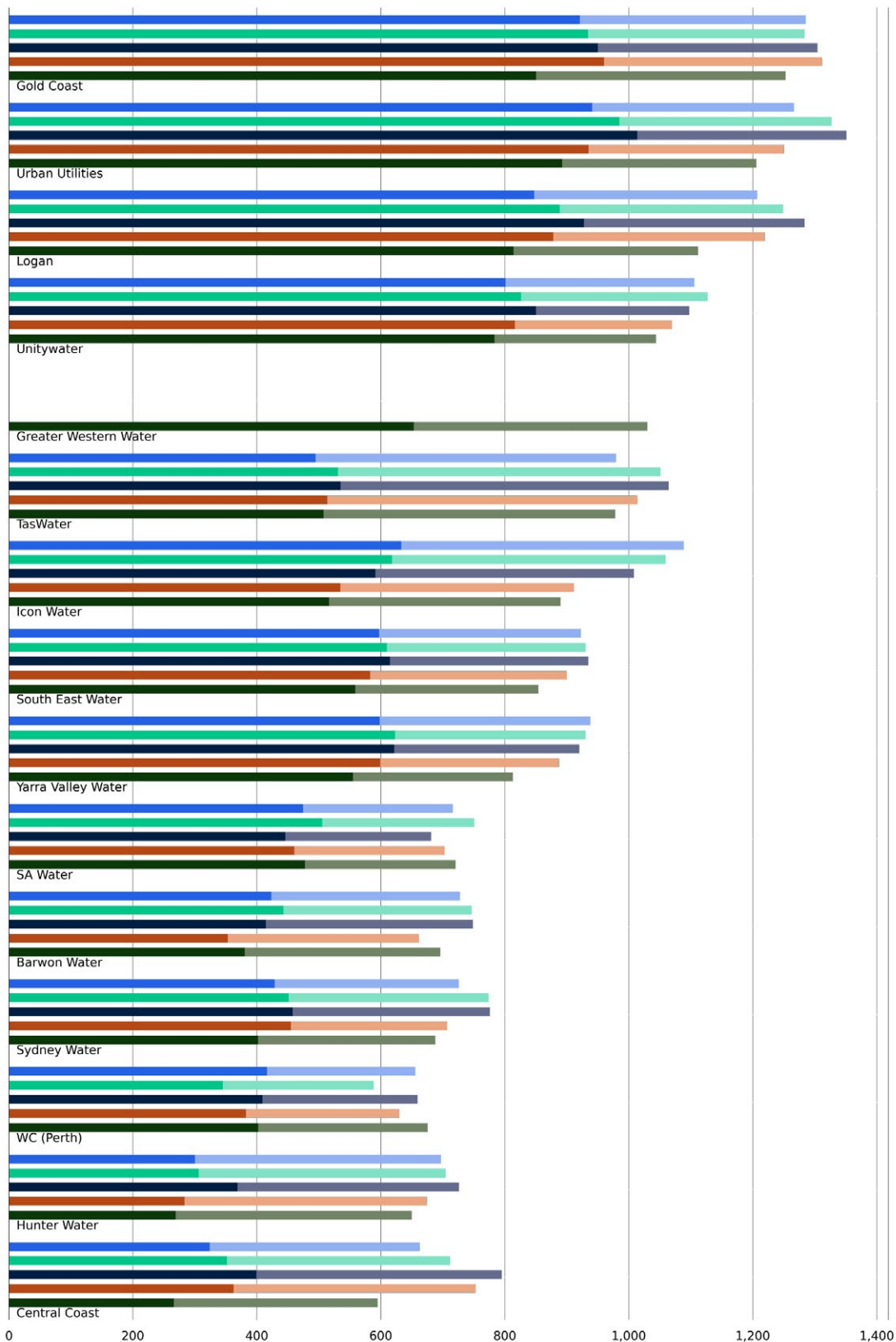
Table 5.4 Overview of results: Combined operating cost per property: water and wastewater (\$/property)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	1,253	595	3	11	894	854	-4
	Gold Coast	Central Coast					
Large	1,522	658	5	7	1,011	961	-5
	Townsville	WC (Mandurah)					
Medium	1,445	771	7	11	1,066	998	-6
	Gladstone	GWMWater					
Small	1,915	682	7	12	1,163	1,109	-5
	Byron	Cassowary Coast					
All size groups (national)	1,915	595	22	41	1,022	980	-4
	Byron	Central Coast					

Note: Table 5.4 is based on F13 Combined operating cost per property: water supply and wastewater for the reporting utilities that provide both reticulated water supply and wastewater services. This is not always a straight addition of F11 and F12 and depends 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.

5.3.2 Results and analysis – Major utility group

Figure 5.4 presents a ranked breakdown of operating expenditure per connected property for water supply and wastewater services for the Major utility group. The figure shows the component of operating expenditure for water (F11) and wastewater (F12) expenditure for each Major utility from 2017–18 to 2021–22.



Legend

Combined operating cost per property: water supply and wastewater

2017-18	Water	Wastewater	2020-21	Water	Wastewater
2018-19	Water	Wastewater	2021-22	Water	Wastewater
2019-20	Water	Wastewater			

Figure 5.4 Combined operating cost: water supply and wastewater (\$/property) – Major utility group

5.4 Community service obligations ratio – F8

Revenue from community service obligations (CSOs) as a percentage of a utility's total income (F8) is a measure of the extent to which activities undertaken by a utility are subsidised.

Payments for CSOs (F25) to a utility by a state or territory government are made when a utility is directed to undertake activities that they would not perform on a solely commercial basis. CSOs in the water sector may be provided to:

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

CSO data for all utilities reporting in 2021–22 is presented in Table A9, Appendix A.

5.4.1 Key findings

Table 5.5 presents a summary of the revenue from CSOs, by utility size group.

In 2021–22, the number of utilities that reported a decrease (27) were more than the number of utilities that reported an increase (22), and 13 utilities reported no change in the revenue received from CSOs. This resulted in a 9% decrease in the national median revenue from CSOs from 2020–21 to 2021–22.

Table 5.5 Overview of results: Community service obligations ratio

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	0.1104	0.0000	4	7	0.0455	0.0346	-24
	SA Water	Multiple utilities					
Large	0.0639	-0.1341	5	6	0.0283	0.0190	-33
	North East Water	WC (Mandurah)					
Medium	0.0673	0.0020	5	8	0.0100	0.0088	-12
	GWMWater	Mackay					
Small	0.1413	-0.4408	6	5	0.0070	0.0071	1
	P&W (Alice Springs)	WC (Geraldton)					
All size groups (national)	0.1413	-0.4408	20	26	0.0110	0.0130	18
	P&W (Alice Springs)	WC (Geraldton)					

Notes: Median revenue from community service obligations (%) for each year is calculated using data from all utilities providing data in that year.

In Western Australia, some regional schemes recover adequate revenue to cover the cost of service of the scheme, including the community service obligations, and these schemes partially offset the net loss of other regional services. When reported independently, these schemes will show a negative operating subsidy.

5.4.2 Results and analysis – Major utility group

The Major utility group reported a decrease in median CSO payments of 24% from 2020–21.

SA Water Corporation continued to have the highest proportion of revenue from CSOs with 11%. For this utility, CSO payments are used to subsidise non-profitable water services, to provide water services in country areas at metropolitan water prices.

City of Gold Coast reported the largest percentage increase, with its CSO revenue increasing from 4.0% to 4.3% in 2021–22. Icon Water reported the largest decrease, with a 18.3% reduction in the ratio of revenue coming from CSO.

6 Customer

6.1 Average duration of an unplanned interruption: water – C15

The average duration (minutes) of an unplanned interruption (C15), is the average time a customer is without water supply due to an unforeseen interruption that requires attention by the utility.

Unplanned interruptions include scheduled interruptions that exceed the time limit given in the original notification. The indicator is a measure of customer service, the condition of the water network and how effectively the network is managed.

The average duration is influenced by the:

- scale of the event causing the interruption
- location of the interruption (for example, the proximity to a repair crew and the depth of the burst pipe)
- utility's response policy for outlying areas
- number of maintenance and repair staff at the utility's disposal.

Note that a single event affecting a small number of properties for a long duration can cause large annual variations in this indicator, especially for smaller utilities.

Data on the average duration of an unplanned interruption (water supply) for all active utilities reporting in 2021–22 is presented in Table A10, Appendix A.

6.1.1 Key findings

Table 6.1 presents a summary of average duration of unplanned interruptions by utility size group.

Table 6.1 Overview of results: Average duration of an unplanned interruption: water (minutes)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	203.0	87.7	4	9	147.0	137.0	-7
	Central Coast	South East Water					
Large	800.1	36.7	7	4	93.7	108.9	16
	Townsville	Cairns					
Medium	2,289.0	11.9	10	9	125.0	95.0	-24
	Tamworth	Mackay					
Small	510.0	19.9	9	10	130.0	105.8	-19
	Bega Valley	Livingstone					
All size groups (national)	2,289.0	11.9	30	32	122.7	114.0	-7
	Tamworth	Mackay					

Note: Median average duration of an unplanned interruption: water (minutes) for each year is calculated for all active utilities that reported data for C15 in that year.

The median average duration of unplanned interruptions decreased by 7% from 122.7 minutes in 2020–21 to 114 minutes in 2021–22 on a national scale. Tamworth Regional Council in New South Wales from the Medium size group had the longest (2,289 minutes) and Mackay Regional Council in Queensland in the Medium size group, had the shortest (11.9 minutes) duration of unplanned interruption of all size groups.

Water Corporation – Busselton (sewerage) in the Small utility size group reported the largest decrease (70.8%, from 130 minutes in 2020–21 to 37.9 minutes in 2021–22) while Tamworth Regional Council in the Medium utility size group reported the largest increase (990.0%, from 210 minutes in 2020–21 to 2,289 minutes in 2021–22).

6.1.2 Results and analysis – Major utility group

Figure 6.1 presents a ranked breakdown of the average duration of an unplanned interruption for the Major utility group from 2017–18 to 2021–22. The figure highlights the large year-to-year variation in the indicator for all utilities in the Major size group that can result from a single major mains break.

Central Coast Council reported the highest (203 minutes) and South East Water Corporation reported the lowest (87.7 minutes) in average duration of unplanned interruptions in 2021–22. A general increasing trend exists for City of Gold Coast in the average duration of unplanned interruptions from 116 minutes in 2017–18 to 158.5 minutes in 2021–22.

Figure 6.1 demonstrates both increases and decreases in the average duration of unplanned interruptions for the Major size group in 2021–22. Compared with 2020–21, Logan City Council reported the highest (21.9%) and South East Water Corporation reported the lowest (2%) percentage decrease in the average duration of unplanned interruptions. In contrast, Urban Utilities reported the highest (38.3%) and Water Corporation – Perth reported the lowest (0.7%) percentage increase in the average duration of unplanned interruptions compared with 2020–21.



Figure 6.1 Average duration of an unplanned interruption: water (minutes) – Major utility group

6.2 Number of water and sewerage complaints per 1,000 properties – C13

The total number of water and sewerage complaints per 1,000 properties (C13) is a measure of a utility's customer satisfaction and operational performance. A complaint can be a written or verbal expression of dissatisfaction made about an action, a proposed action or a failure to act by the water utility, its employees, or contractors.

Complaints from different customers about the same issue are counted as separate complaints.

Total water and sewerage complaints data for all active utilities reporting in 2021–22 is presented in Table A11, Appendix A.

6.2.1 Key findings

Table 6.2 presents a summary of the total water and sewerage complaints by utility size group. Nationally, there was a 12% increase in the median number of complaints from 2020–21. The Major and Medium utility size groups reported decreases in their median number of complaints while the Large and Small utility size groups showed increases. The highest number of complaints per 1,000 properties for 2021–22 was reported by Snowy Monaro Regional Council (171) in the Small size group while the lowest number was reported by Coffs Harbour City Council (0) in the Medium size group.

Table 6.2 Overview of results: Number of water and sewerage complaints per 1,000 properties (complaints/1,000 properties)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	20.29	0.35	8	6	4.45	4.33	-3
	Icon Water	WC (Perth)					
Large	49.00	0.21	4	8	4.03	4.44	10
	P&W (Darwin)	WC (Mandurah)					
Medium	118.00	0.00	8	12	15.90	12.00	-25
	Clarence Valley	Coffs Harbour					
Small	171.00	0.06	9	10	4.50	10.40	131
	Snowy Monaro	WC (Albany)					
All size groups (national)	171.00	0.00	29	36	5.05	5.68	12
	Snowy Monaro	Coffs Harbour					

Note: The median number of water and sewerage complaints per 1,000 properties for each year is calculated for all active and non-bulk reporting utilities that provide both reticulated water supply and wastewater services in that year.

6.2.2 Results and analysis – Major utility group

Figure 6.2 shows a ranked breakdown of the total water and sewerage complaints per 1,000 properties from 2017–18 to 2021–22 for the Major utility group.

In this group, Icon Water in New South Wales reported the highest number (20.29) and Water Corporation – Perth in Western Australia reported the lowest number (0.35) of total complaints per 1,000 properties for 2021–22. Icon Water reported the highest (830.7%) and Unitywater in Queensland reported the lowest (8.2%) percentage increase compared with the previous year.

Water Corporation – Perth in Western Australia reported the highest (40.7%) and South East Water Corporation in Victoria reported the lowest (2.6%) percentage of decrease in the total water and sewerage complaints per 1,000 properties from 2020–21.

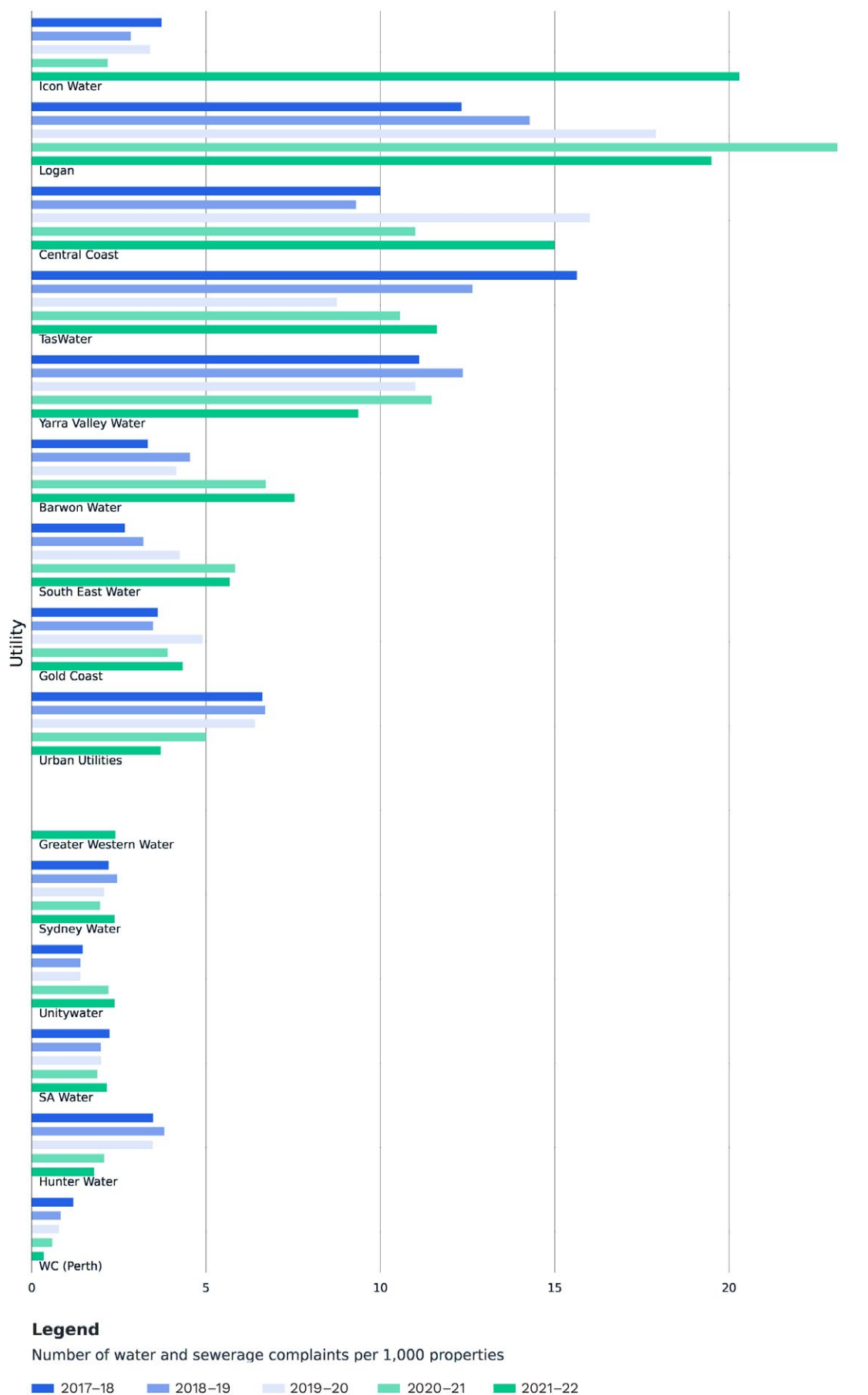


Figure 6.2 Total complaints: water and sewerage (per 1,000 properties) – Major utility group

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

The percentage of calls answered by an operator within 30 seconds (C14) measures the number of calls answered within 30 seconds after the 'operator' option is selected. It is a measure of the efficiency of a utility's customer service centre and is affected by:

- the ratio of customer service staff to customers
- severe events, such as storms or floods, that result in a large increase in customer calls.

Data on the percentage of calls answered by an operator within 30 seconds for all active utilities reporting in 2021–22 are presented in Table A12, Appendix A.

Table 6.3 Overview of results: Percentage of calls answered within 30 seconds (%)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	85.2	23.7	3	9	72.3	65.3	-10
	SA Water	Gold Coast					
Large	96.5	43.3	4	5	79.0	77.6	-2
	North East Water	Townsville					
Medium	99.4	0.0	5	8	83.5	78.0	-7
	East Gippsland Water	Gladstone					
Small	97.0	65.0	2	3	73.5	78.5	7
	Westernport Water	Cassowary Coast					
All size groups (national)	99.4	0.0	14	25	78.0	75.0	-4
	East Gippsland Water	Gladstone					

Note: Median percentage of calls answered by an operator within 30 seconds for each year is calculated for all active utilities reporting data in that year.

6.3.1 Key findings

Nationally, the median percentage of calls answered within 30 seconds for 2021–22 decreased by 4% from 2020–21. Compared with 2020–21, the Small size group utilities reported an increase of 7% while the other utility size groups reported decrease in the median percentage of calls answered within 30 seconds. Among all utility size groups, East Gippsland Water in Victoria answered 99.4% of the calls within 30 seconds while Gladstone Regional Council in Queensland answered no calls within 30 seconds (0%).

6.3.2 Results and analysis – Major utility group

Figure 6.3 shows a ranked breakdown of the percentage of calls answered by an operator within 30 seconds from 2017–18 to 2021–22 for the Major utility group.

Compared with 2020–21, the Major utility size group reported both increases and decreases in the percentage of calls answered within 30 seconds. In this size group, SA Water Corporation had the best performance, answering 85.2% of calls within 30 seconds while City of Gold Coast showed the lowest performance, answering 23.7% of calls within 30 seconds.

Sydney Water Corporation reported the largest decrease (53.4%) and Unitywater in Queensland reported the smallest decrease (3.8%) in the percentage of calls answered by an operator within 30 seconds from 2020–21 to 2021–22.

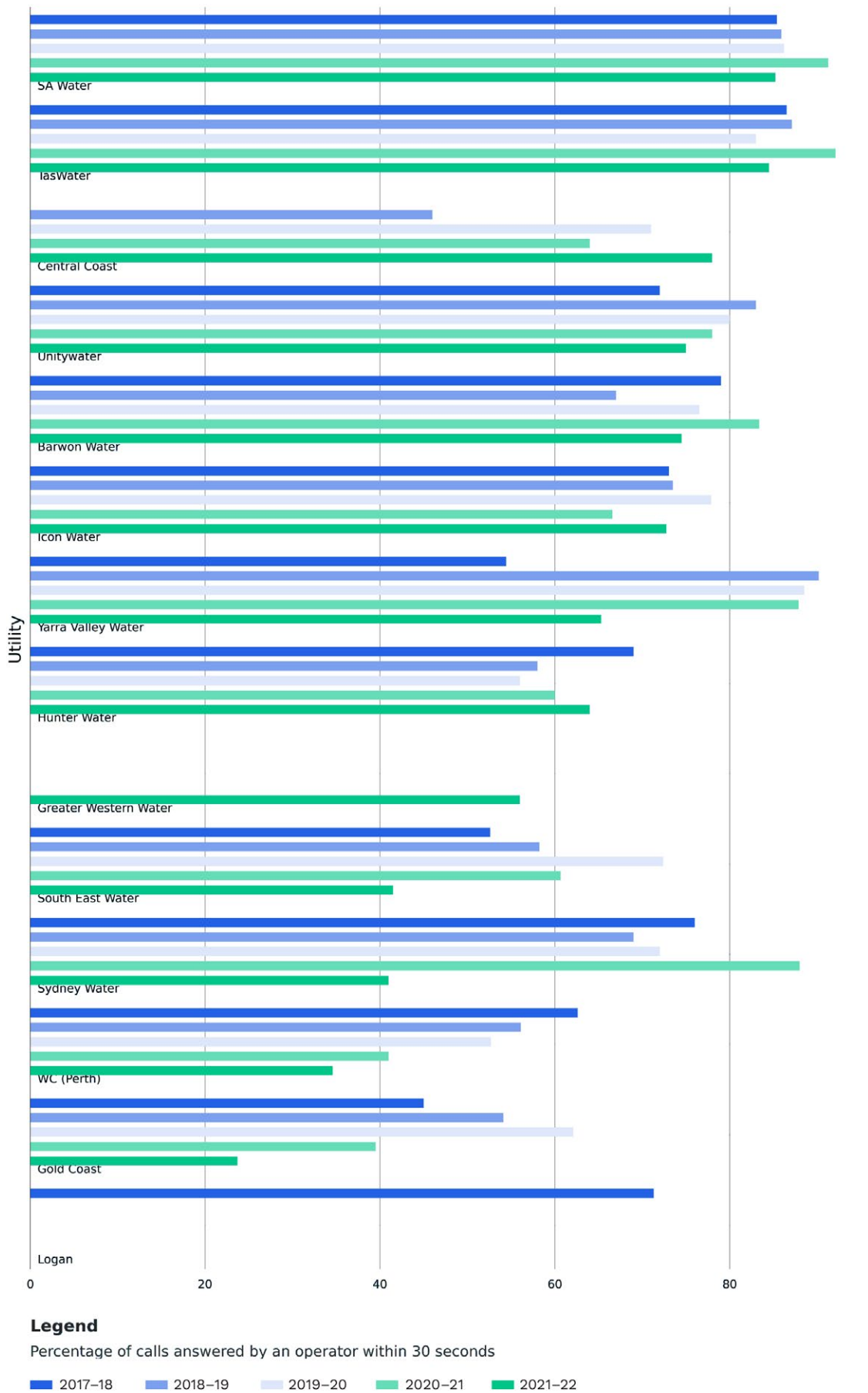


Figure 6.3 Percentage of calls answered by an operator within 30 seconds – Major utility group

7 Asset

7.1 Number of water main breaks, bursts and leaks per 100 km of water mains – A8

The number of water main breaks, bursts and leaks per 100 km of water mains (A8) is the total number of breaks, bursts and leaks in all distribution system mains⁶, excluding breaks associated with headworks and transfer mains. It provides an indication of both customer service and the condition of the network. The number of main breaks is influenced by various factors, including:

- soil type
- rainfall
- pipe material
- age and condition of the network.

Data on the number of water main breaks, bursts and leaks per 100 km of water mains for all utilities reporting in 2021–22 are presented in Table A13, Appendix A.

7.1.1 Key findings

Figure 7.1 shows the national median number of main breaks in 2021–22 was very similar to 2020–21, following 2 years of modest increases between 2018–19 and 2019–20.

Table 7.1 presents a summary of the number of water main breaks per 100 km of water main by utility size group.

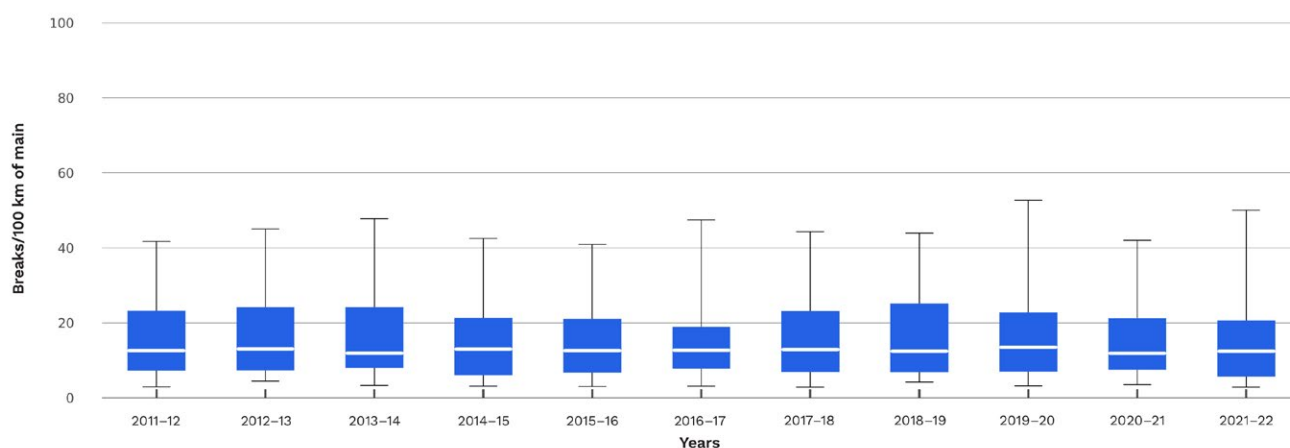


Figure 7.1 Number of water main breaks, bursts and leaks per 100 km of water mains

⁶ The figure includes both potable and non-potable water mains.

Table 7.1 Overview of results: Number of water main breaks, burst and leaks per 100 km of water mains (mains breaks/100 km)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	43.1	4.7	6	7	16.8	17.2	2
	TasWater	Unitywater					
Large	23.7	2.0	6	6	13.9	13.9	-1
	Coliban Water	WC (Mandurah)					
Medium	87.1	1.1	9	13	11.3	10.6	-6
	Gladstone	Port Macquarie Hastings					
Small	61.9	2.8	13	12	10.8	12.2	13
	Byron	Goulburn Mulwaree					
All size groups (national)	87.1	1.1	34	38	12.0	12.3	3
	Gladstone	Port Macquarie Hastings					

Note: The median for water main breaks, burst and leaks per 100 km of water mains in each year was calculated using data from all utilities (dual-service and single-service providers) reporting data against A8 in that year.

7.1.2 Results and analysis – Major utility group

Figure 7.2 presents a ranked breakdown of the water main breaks for each utility in the Major utility group from 2017–18 to 2021–22. The figure highlights both the variance within the utility group and a broad downward trend for some utilities (for example, Sydney Water and Icon Water).

Despite the Major utility group reporting a slight increase (2%) in number of main breaks per 100 km of water mains, only 6 out of the 15 Major utilities reported an increase from 2020–21 to 2021–22 (one utility reported no change and one utility did not report in 2021–22). Queensland Urban Utilities reported the largest percentage decrease of 26.8%, while Central Coast Council reported the largest percentage increase of 42.4% from 2020–21 to 2021–22.

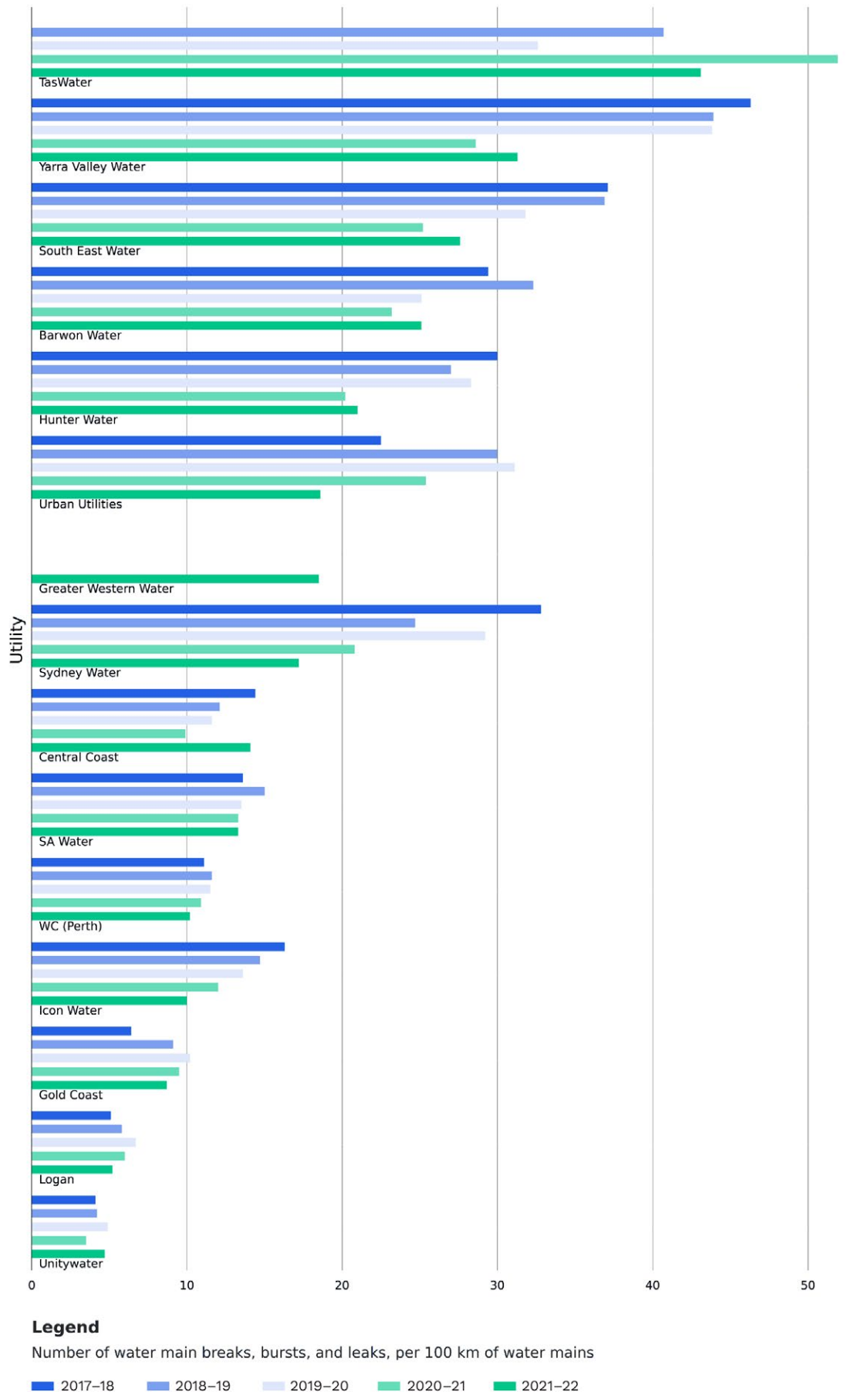


Figure 7.2 Water main breaks, bursts and leaks per 100 km of water mains – Major utility group

7.2 Number of sewer mains breaks and chokes – A14 and property connection sewer breaks and chokes – A15 per 1,000 properties

Indicator A14 reports the number of sewer breaks and chokes per 100 km of sewer mains, and A15 reports the number of property connection sewer breaks and chokes per 1,000 properties. The indicators are presented together to provide a complete picture of sewer system performance as utilities have sewer networks with various configurations.

- Some utilities have a very long property connection (for example, from the customer's sanitary drain to the middle of a road), while others have a very short or no property connection (that is, 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 own⁷ or maintain the property connections and therefore do not report on 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.

The performance of a sewerage system is influenced by:

- soil type
- pipe material
- sewerage configuration
- age
- tree root intrusion
- management of trade waste
- volume of sewage inflows
- rainfall.

Results reflect both the condition of the network and the level of customer service. For the reasons given above, care should be taken in comparing the performance of utilities against each other using these indicators.

Data on sewer mains breaks and chokes for all utilities reporting in 2021–22 is presented in Table A14, Appendix A. Property connection sewer breaks and chokes for all utilities reporting in 2021–22 is presented in A15, Appendix A.

7.2.1 Key findings

Table 7.2 presents a summary of the number of sewer mains breaks and chokes per 100 km of sewer main by utility group.

Table 7.3 presents a summary of the property connection sewer breaks and chokes per 1,000 properties by utility group.

In 2021–22, there was a national median of 16.7 sewer main breaks and chokes per 100 km of sewer main, which was a 7% increase from 2020–21 (Table 7.2). There was a 15% increase in the sewer breaks and chokes per 1,000 properties (Table 7.3). The overall increase in sewer breaks and chokes was due to a 5% increase in property connection sewer breaks and chokes for the Medium utility group and a 21% increase for the Large utility group.

⁷ For such utilities, the property owner is responsible for the property's sewer connections.

Table 7.2 Overview of results: Number of sewer mains breaks and chokes per 100 km of sewer main (breaks and chokes/100 km)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	53.9	5.7	2	11	31.1	27.3	-12
	Barwon Water	Gold Coast					
Large	57.4	3.4	7	5	13.2	15.9	21
	Townsville	Gippsland Water					
Medium	84.0	1.3	8	14	14.0	17.5	25
	Queanbeyan	Mackay					
Small	151.0	1.0	10	14	15.6	12.3	-21
	Essential Energy	Mount Barker					
All size groups (national)	151.0	1.3	27	44	15.6	16.7	7
	Essential Energy	Mackay					

Note: The median number of sewer mains breaks (per 100 km of sewer main) in each year is calculated using data from all utilities (dual-service and single-service providers) reporting data against A14 in that year.

Table 7.3 Overview of results: Number of property connection sewer breaks and chokes per 1,000 properties (breaks and chokes/1,000 properties)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	35.00	0.20	3	9	3.90	3.97	2
	SA Water	Sydney Water					
Large	5.70	0.99	4	7	2.20	2.10	-5
	Goulburn Valley Water	P&W (Darwin)					
Medium	23.73	0.40	10	11	3.40	4.60	35
	GWMWater	Multiple utilities					
Small	68.60	0.50	7	11	5.70	5.40	-5
	Essential Energy	Bega Valley					
All size groups (national)	68.60	0.20	24	38	3.40	3.90	15
	Essential Energy	Sydney Water					

Note: The median number of property connection sewer breaks and chokes per 1,000 properties in each year is calculated using data from all utilities (dual-service and single-service providers) reporting data against A15 in that year.

7.2.2 Results and analysis – Major utility group

Figure 7.3 shows a ranked breakdown of the sewer mains breaks and chokes (per 100 km of sewer main) for each Major utility from 2017–18 to 2021–22 and Figure 7.4 shows a ranked breakdown of property connection sewer breaks and chokes per 1,000 properties.

Only 2 of the 15 Major utilities reported an increase in sewer mains breaks and chokes per 100 km sewer main, and only 3 reported an increase in sewer breaks and chokes per 1,000 properties from 2020–21 to 2021–22. City of Gold Coast reported the largest percentage increase (50%) in breaks and chokes per 100 km of sewer main compared with 2020–21 (Figure 7.3). The overall decrease in sewer main breaks and chokes is consistent with the continuation of above-average rainfall for much of eastern Australia in 2021–22, leading to wet soil conditions and a decreased risk of breaks and chokes.

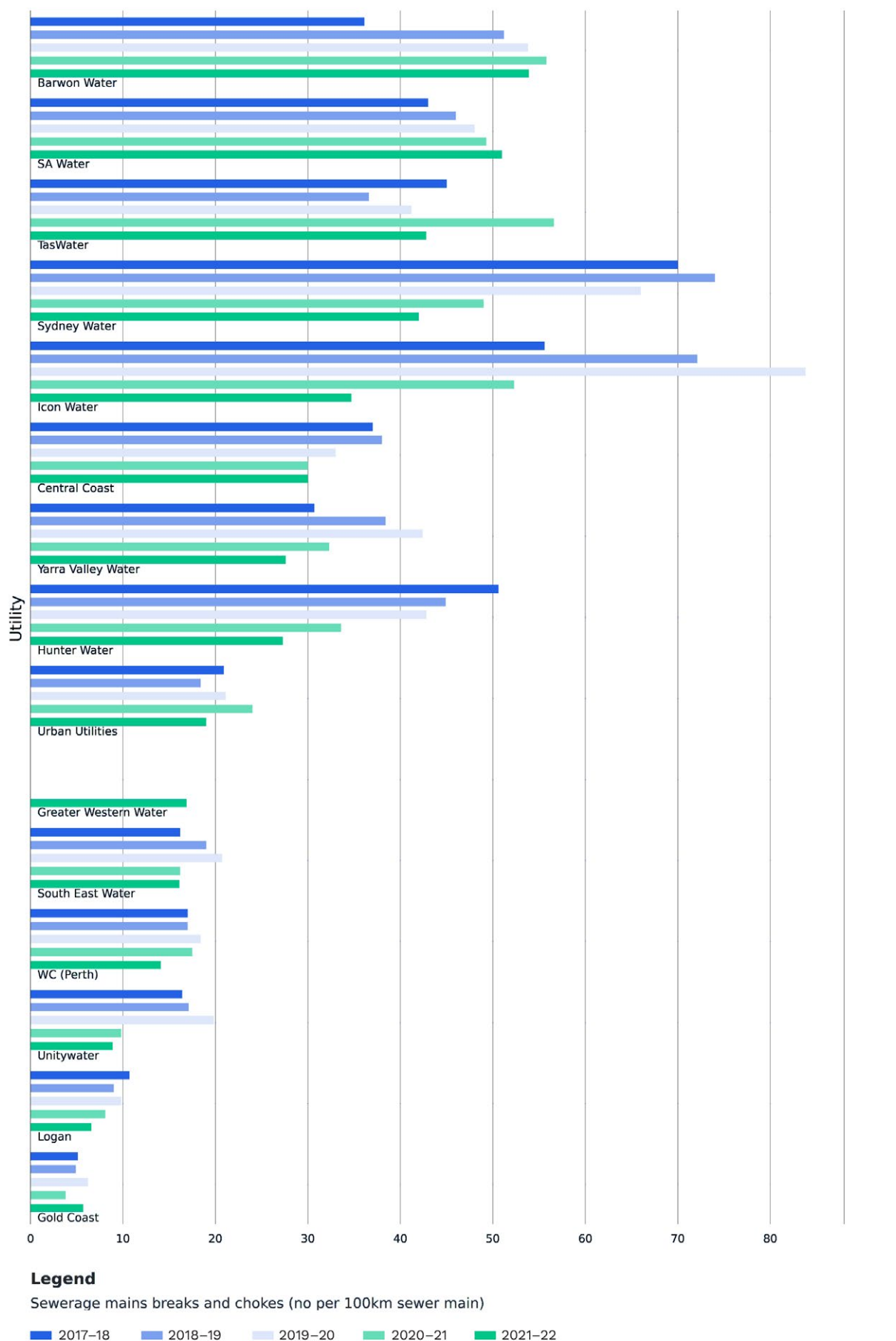


Figure 7.3 Sewer mains breaks and chokes per 100 km of sewer main – Major utility group

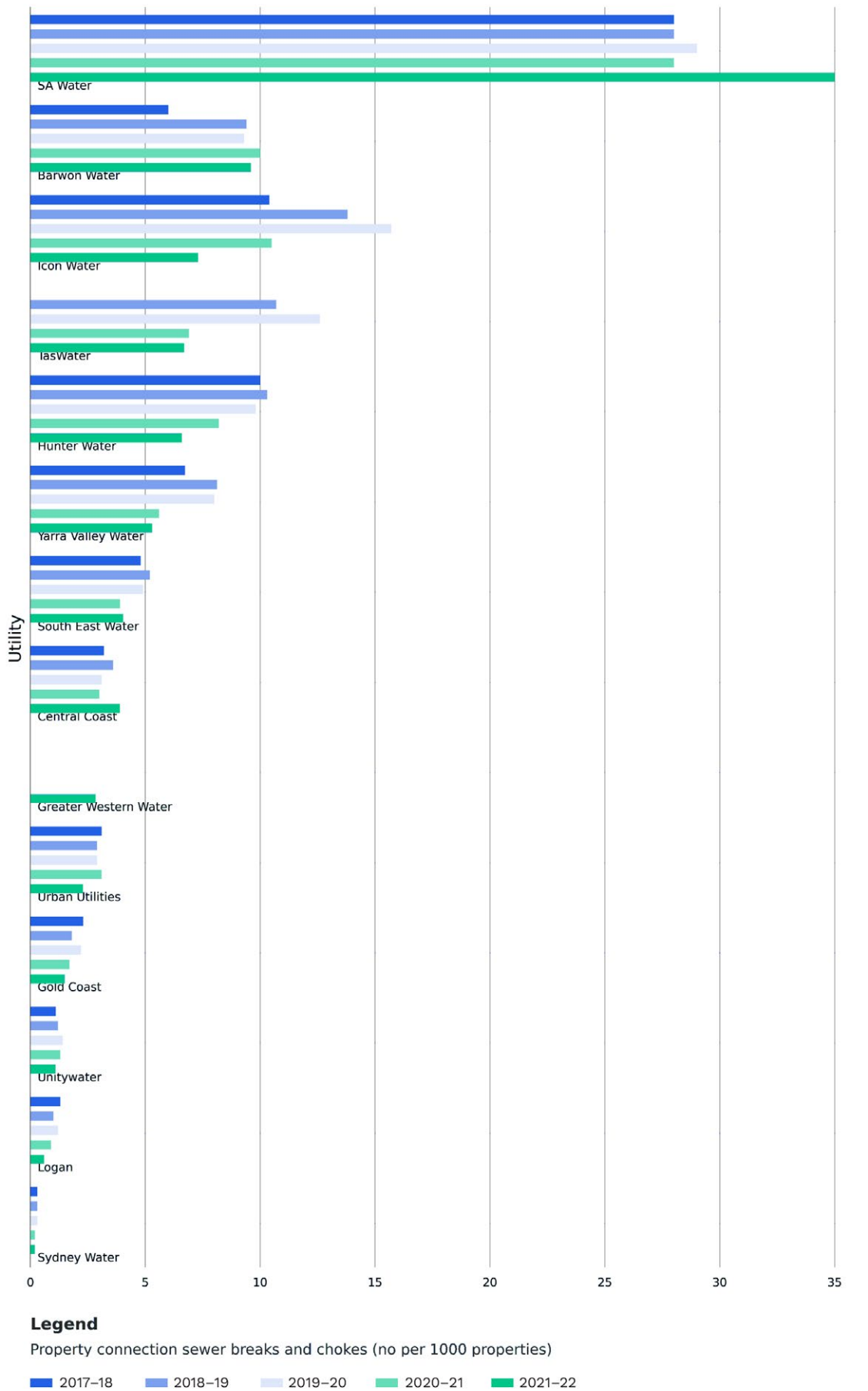


Figure 7.4 Property connection sewer breaks and chokes per 1,000 properties – Major utility group

7.3 Real losses: service connections – A10

‘Real’ losses (A10) are leakages and overflows from potable water mains, service reservoirs and service connections before the customer meter (L/service connection/day). This indicator excludes metering errors, unauthorised consumption (apparent losses), and unbilled authorised consumption (for example, water used for firefighting). Performance of this indicator may be influenced by the condition of mains, infrastructure, and 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, and may not be as accurate as other indicators (such as water main breaks) when comparing utilities.

Real loss data for all utilities reporting in 2021–22 is presented in Table A16, Appendix A.

7.3.1 Key findings

Table 7.4 presents a summary of the real losses by utility size group.

From 2020–21 to 2021–22, the national median across all size groups increased by 3% to 72 L/service connection/day.

As in previous years, Cassowary Coast Regional Council reported the highest real losses among the utilities (358.4 L/service connection/day in 2021–22). However, this was a 3.8% decrease from the previous year.

Table 7.4 Overview of results: Real losses: service connections (L/service connection/day)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	308.0	0.1	10	4	64.8	65.8	2
	TasWater	Greater Western Water					
Large	281.0	28.5	6	5	61.0	68.2	12
	P&W (Darwin)	Redland City					
Medium	224.0	0.1	15	6	61.6	65.5	6
	Fitzroy River Water	Lower Murray Water					
Small	358.4	26.0	15	10	106.5	107.0	0
	Cassowary Coast	Byron					
All size groups (national)	358.4	0.1	46	25	70.0	72.0	3
	Cassowary Coast	Multiple utilities					

Note: The median real losses (L/service connection/day) for each year are calculated using data from all utilities (dual-service and single-service providers) reporting data against A10 in that year.

Figure 7.5 shows a box-and-whisker plot of the real losses for all utilities reporting A10 for a given reporting year from 2011–12 to 2021–22. The figure highlights the consistency of the estimated loss values – this is in part an artefact of the broad use of consistent assumptions in the estimation of the losses.

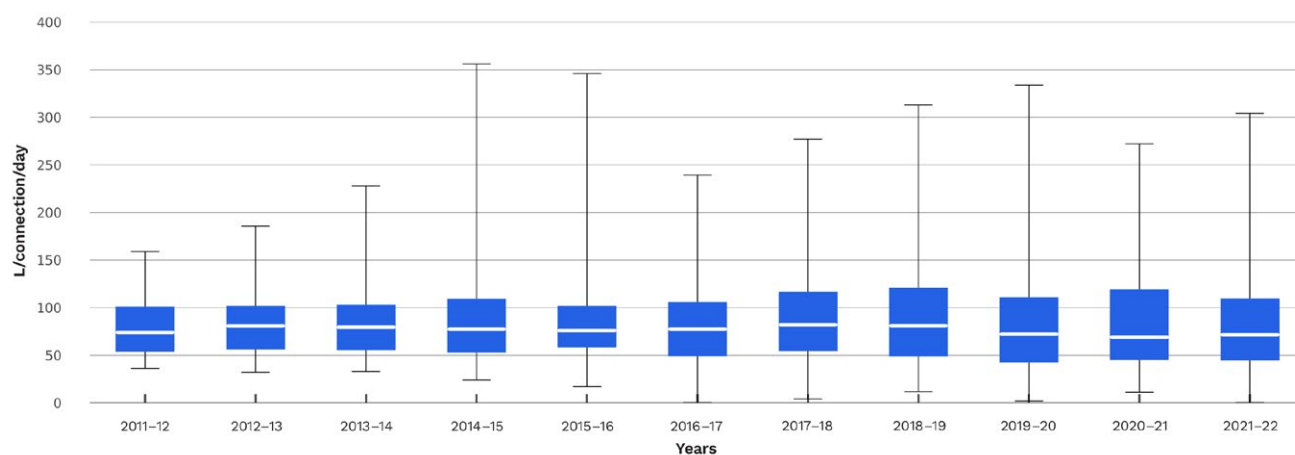


Figure 7.5 Real losses (L/service connection/day)

7.3.2 Results and analysis – Major utility group

Figure 7.6 presents a ranked breakdown of the real losses per annum for each Major utility from 2017–18 to 2021–22. Ten utilities reported an increase in real losses between 2020–21 and 2021–22. South East Water reported the highest percentage increase (38.3%), from 47 L/service connection/day in 2020–21 to 65 L/service connection/day in 2021–22.

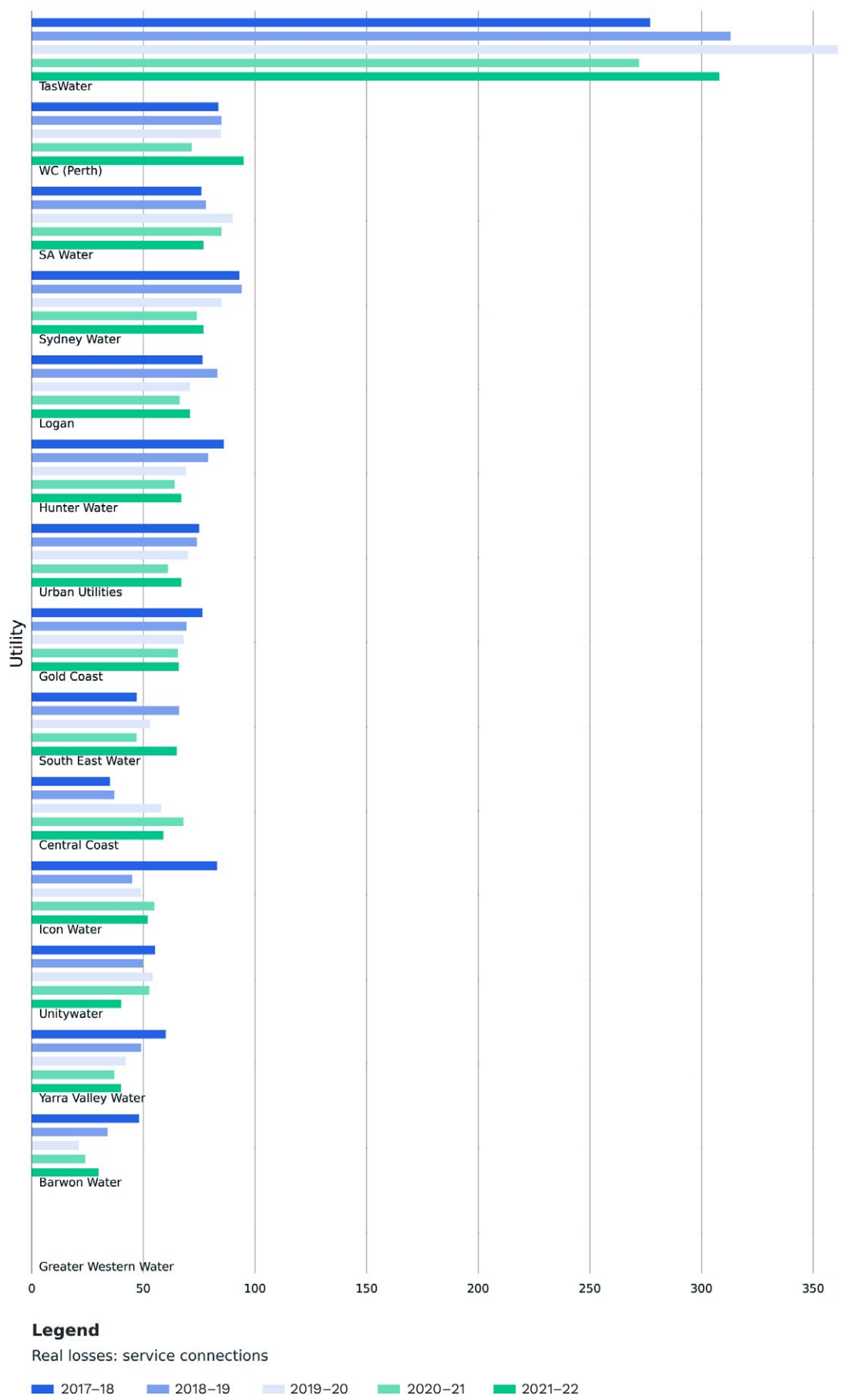


Figure 7.6 Real losses: service connections (L/service connection/day) – Major utility group

8 Environment

8.1 Total net greenhouse gas emissions per 1,000 properties – E12

The total net greenhouse gas emissions per 1,000 properties indicator (E12) reports the contribution of a utility's operations to greenhouse gas emissions (t CO₂ equivalent/1,000 properties). Utilities' calculations are required to refer to the National Greenhouse Accounts (NGA) Factors issued by the Department of Climate Change, Energy, the Environment and Water and must also be updated annually. Greenhouse gas emissions are reported in net terms – any quantity of carbon sequestered through activities such as the purchase of carbon offsets is deducted.

The NGA outline 3 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 (CO₂ 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 – coal or gas – at the power station)
- various emission factors (Scope 3), including the impact of various activities – disposal of waste, employee business travel, and the transportation of products.

Comparing different utilities' net greenhouse gas emissions is a difficult exercise and should be undertaken with caution due to the number of variables affecting emissions, including:

- sources of water
- gravity versus pumped networks
- geographical conditions (influencing the need for pumping)
- the number of large-volume customers
- the extent of industry within the customer base
- the prevailing greenhouse policy in the jurisdiction
- the method of calculation.

Total net greenhouse gas emissions data for 2021–22 is presented in Table A17, Appendix A.

8.1.1 Key findings

Table 8.1 presents a summary of the total net greenhouse gas emissions by utility size group.

Table 8.1 Overview of results: Total net greenhouse gas emissions per 1,000 properties (t CO₂ equivalent/1,000 properties)

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	567	20	3	10	196	181	-8
	WC (Perth)	Yarra Valley Water					
Large	831	180	4	8	364	405	11
	Shoalhaven	Redland City					
Medium	1,064	140	8	9	404	404	0
	Wingecarribee	Queanbeyan					
Small	1,096	124	10	11	406	426	5
	Snowy Monaro	Armidale					
All size groups (national)	1,096	20	25	38	370	343	-6
	Snowy Monaro	Yarra Valley Water					

Note: The median total net greenhouse gas emissions for each year is calculated using data from all utilities supplying both water and wastewater services reporting data for E12 for that year.

The median total net greenhouse gas emissions decreased by 6% for all size groups, which was a similar result to the previous few years.

8.1.2 Results and analysis – Major utility group

The Major utility group reported an 8% decrease in median net greenhouse gas emissions from 2020–21 to 2021–22. SA Water Corporation reported the highest percentage decrease (31.5%) and Logan City Council reported the highest percentage increase (7.2%).

As in previous years, Water Corporation – Perth is the highest net greenhouse gas emitter per property in the Major utility group with 567 t CO₂ equivalent/1,000 properties in 2021–22 (this is after reporting a decrease of 18.5%), and Yarra Valley Water is the lowest total net greenhouse gas emitter with 20 t CO₂ equivalent/1,000 properties in 2021–22.

9 Health

9.1 Percentage of population for whom microbiological compliance was achieved – H3

This indicator reports the percentage of the population serviced by the utility for whom microbiological compliance was achieved.

Compliance is assessed against the *Australian Drinking Water Guidelines 2011*⁸ or licence conditions imposed on the utility by their regulator. Typically, utilities record very high compliance. However, unforeseen events may deliver a lower compliance result, and the cause of non-compliance is not always traceable.

Microbiological compliance data for 2021–22 is presented in Table A18, Appendix A.

9.1.1 Key findings

Table 9.1 presents a summary of the percentage of population for which microbiological compliance was achieved by utility size group.

In 2021–22, nationwide and across all utility groups, all utilities achieved 100% microbiological compliance except Grampian Wimmera Mallee Water Corporation (97%).

Table 9.1 Overview of results: Percentage of population for which microbiological compliance was achieved

Utility group	Range		No. utilities with increase/decrease from 2020–21		Median		Change from previous year (%)
	High	Low	Increase	Decrease	2020–21	2021–22	
Major	100	100	2	0	100	100	0
	Multiple utilities	Multiple utilities					
Large	100	100	3	0	100	100	0
	Multiple utilities	Multiple utilities					
Medium	100	97	0	1	100	100	0
	Multiple utilities	GWMWater					
Small	100	100	0	0	100	100	0
	Multiple utilities	Multiple utilities					
All size groups (national)	100	97	5	1	100	100	0
	Multiple utilities	GWMWater					

Note: The median percentage of population for which microbiological compliance was achieved for each year was calculated using data from all utilities supplying both water services reporting data against H3 in that reporting year.

9.1.2 Results and analysis – Major utility group

All utilities in the Major utility group reported achieving microbiological compliance for 100% of the population.

⁸ www.nhmrc.gov.au/guidelines/publications/eh52, updated January 2022





Appendix A Individual utility group tables

Tables A1 to A18 present a summary of key indicators by utility group for the period 2017–18 to 2021–22.

Utilities are sorted in descending order based on their percentage changes in value from 2020–21 within each utility size group.

Table A1 W12 – Average annual residential water supplied (kL/property) by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
SA Water	190	198	190	192	193	0.9
Barwon Water	163	171	161	159	160	0.6
WC (Perth)	219	219	227	227	228	0.4
Hunter Water	181	175	156	151	151	-0.1
TasWater	193	191	193	179	178	-0.4
Yarra Valley Water	151	155	148	149	148	-0.8
Central Coast	169	158	156	159	157	-1.3
Gold Coast	161	164	175	167	163	-2.2
Logan	145	150	148	139	135	-2.6
South East Water	150	149	150	152	147	-3.1
Sydney Water	215	199	189	186	178	-4.2
Unitywater	156	157	156	155	147	-5.3
Icon Water	197	204	202	176	163	-7.6
Urban Utilities	153	156	162	158	140	-11.4
Greater Western Water					140	
Median	166	167	162	159	157	
Mean	174	175	172	168	162	
Large						
P&W (Darwin)	368	380	373	360	374	3.9
Cairns	253	254	257	250	255	2.1
WC (Mandurah)	216	212	220	220	223	1.2
Central Highlands Water (Vic)	157	161	151	147	147	0.2
Townsville	242	314	363	342	342	0.0
Coliban Water	201	210	195	194	192	-1.1
Gippsland Water	168	177	161	164	156	-4.6
Redland City	164	169	174	184	174	-5.4
Goulburn Valley Water	264	285	261	254	240	-5.6
Toowoomba	152	163	162	150	135	-9.8
North East Water	208	224	214	200	179	-10.7

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Shoalhaven	157	146	155	155	120	-22.6
Median	205	211	205	197	185	
Mean	212	225	224	218	211	
Medium						
Mackay	180	187	215	168	196	16.5
Tamworth	291	247	141	159	178	11.9
Wannon Water	144	147	141	139	144	4.1
GWMWater	316	249	241	224	230	2.6
Coffs Harbour	170	154	151	140	143	2.1
Clarence Valley	155	159	115	164	162	-1.2
Port Macquarie Hastings	172	160	144	154	152	-1.3
Dubbo	386	337	207	198	194	-2.0
Riverina Water (W)	311	343	338	264	257	-2.7
South Gippsland Water	118	119	115	118	115	-2.8
Lower Murray Water	490	519	520	477	461	-3.4
Eurobodalla	123	121	121	117	113	-3.4
Wingecarribee	216	206	218	177	168	-5.1
Tweed	176	177	177	172	157	-8.7
Albury	237	252	246	218	192	-11.7
MidCoast Council	142	155	144	149	131	-12.1
Fraser Coast	164	186	191	186	163	-12.1
East Gippsland Water	157	160	153	145	126	-12.9
Fitzroy River Water	343	375	383	365	317	-13.0
Gladstone	132	239	251	253	217	-14.4
Bundaberg	218	243	261	284	236	-16.9
Queanbeyan	167	158	171	184	151	-17.9
Median	174	186	184	174	166	
Mean	219	222	211	202	191	
Small						
Cassowary Coast	237	219	220	224	236	5.7
Goulburn Mulwaree	149	150	153	136	140	2.9
Southern Downs	157	152	100	104	106	2.5
Lismore	147	148	127	123	126	2.4
Busselton (W)	294	265	261	258	264	2.1
Bathurst	254	194	144	156	157	0.6
Whitsunday	319	268	304	276	277	0.3
Byron	199	200	200	199	199	0.0
Armidale	214	226	141	141	141	0.0
Aqwest-Bunbury (W)	242	240	245	236	236	0.0
WC (Albany)	176	169	169	164	163	-0.6

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
WC (Australind/Eaton)	288	283	289	283	281	-0.7
WC (Geraldton)	289	279	286	291	288	-0.9
Westernport Water	85	91	89	93	92	-0.9
Orange	186	166	163	160	158	-1.2
WC (Kal–Boulder) (W)	280	284	300	279	275	-1.4
P&W (Alice Springs)	448	457	451	432	420	-2.8
Ballina	179	183	173	168	161	-4.2
Livingstone	296	317	349	328	313	-4.5
Essential Energy	277	275	277	250	236	-5.6
Gympie	171	158	169	166	155	-7.0
Bega Valley	149	145	163	148	135	-8.8
Goldenfields Water (W)	287	305	288	230	209	-9.1
Western Downs	188	204	201	193	168	-13.0
Central Highlands	487	443	430	465	396	-14.9
Kempsey	159	147	146	175	125	-28.6
Snowy Monaro				125		
Median	225	212	201	193	183	
Mean	237	229	225	215	210	

Table A2 W26 – Total recycled water supplied (ML), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
SA Water	29,421	32,312	26,400	28,565	35,291	23.5
Yarra Valley Water	2,601	2,473	2,427	2,851	3,069	7.6
South East Water	7,433	8,073	6,825	6,803	7,310	7.5
Sydney Water	42,833	44,020	46,919	37,669	37,693	0.1
Hunter Water	49,23	3,862	4,651	3,206	3,132	-2.3
WC (Perth)	12,100	9,817	20,681	22,579	21,759	-3.6
Barwon Water	5,655	5,998	4,683	3,951	3,642	-7.8
Icon Water	77	60	75	27	24	-11.1
Central Coast	1,042	674	825	631	550	-12.8
Urban Utilities	4,037	4,776	4,532	3,909	3,315	-15.2
Gold Coast	7,439	7,712	7,306	7,466	6,146	-17.7
Logan	461	625	789	582	217	-62.7
Unitywater	1,030	1,160	1,292	772	200	-74.1
Greater Western Water					6,233	
TasWater	5,605					
Median	5,264	4,776	4,651	3,909	3,478	
Mean	8,904	9,351	9,800	9,155	9,184	
Large						
Goulburn Valley Water	314	390	307	270	2,334	764.4
North East Water	8,432	7,955	8,093	8,443	10,628	25.9
Coliban Water	1,509	1,510	1,411	1,093	1,292	18.2
Townsville	1,283	1,367	1,383	1,358	1,517	11.7
Cairns	2,119	1,926	533	1,731	1,847	6.7
WC (Mandurah)	226	239	220	244	253	3.7
Central Highlands Water (Vic)	1,593	1,680	1,628	1,934	1,946	0.6
Redland City	89	94	121	100	96	-3.5
Gippsland Water	2,291	2,054	1,969	2,128	2,043	-4.0
Shoalhaven	2,289	2,185	2,218	1,642	1,135	-30.9
Toowoomba	1,743	2,597	2,105	1,809	713	-60.6
P&W (Darwin)	451	488	0	0	0	0.0
Median	1,551	1,595	1,397	1,500	1,405	
Mean	1,862	1,874	1,666	1,729	1,984	
Medium						
Wannon Water	1,779	2,008	1,725	1,454	1,858	27.8
Lower Murray Water	387	483	408	477	584	22.4
Tamworth	4,060	4,563	3,622	1,818	2,188	20.4
Wingecarribee	179	186	171	86	102	18.6

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Dubbo	3,043	2,448	2,159	1,483	1,732	16.8
East Gippsland Water	2,774	1,139	1,072	1,346	1,521	13.0
Wagga Wagga (S)	5,008	4,986	4,819	5,188	5,458	5.2
Albury	3,885	2,457	3,297	5,173	5,302	2.5
Fitzroy River Water	755	717	735	748	760	1.6
Mackay	4,263	4,263	4,034	446	446	0.0
South Gippsland Water	108	111	122	194	189	-2.6
Gladstone	3,166	3,174	2,494	3,812	3,603	-5.5
Fraser Coast	4,739	5,591	6,918	4,880	4,595	-5.8
MidCoast Council	1,290	1,432	1,398	685	593	-13.4
Bundaberg	352	533	585	531	447	-15.8
GWMWater	2,147	2,569	0	2,698	2,084	-22.8
Port Macquarie Hastings	400	440	610	384	291	-24.2
Queanbeyan	70	70	70	375	268	-28.5
Tweed	852	879	874	777	532	-31.5
Clarence Valley	376	376	386	332	216	-34.9
Coffs Harbour	1,650	965	1,281	774	474	-38.8
Eurobodalla	228	239	433	190	111	-41.6
Riverina Water (W)			0		0	
Median	1,470	1,052	874	761	584	
Mean	1,887	1,801	1,618	1,539	1,450	
Small						
Lismore	6	15	17	21	332	1,481.0
Southern Downs	1,298	1,279	894	863	2,013	133.3
Western Downs	1,073	1,075	1,105	754	695	-7.9
Westernport Water	85	109	76	83	106	27.7
P&W (Alice Springs)	1,146	1,001	927	1,019	1,148	12.7
WC (Bunbury) (S)	139	124	127	115	118	2.6
Livingstone	789	1,480	1047	836	852	1.9
WC (Busselton) (S)	247	287	254	272	273	0.4
WC (Australind/Eaton)	714	733	721	740	742	0.3
Kal-Boulder (S)	955	773	1,126	1,378	1,379	0.1
WC (Albany)	2,172	2,081	2,085	2,357	2,351	-0.3
Central Highlands	1,621	1,857	1,939	1,817	1,797	-1.1
Bathurst	674	691	762	788	761	-3.4
WC (Geraldton)	214	248	210	224	216	-3.6
Whitsunday	403	358	317	386	365	-5.6
Western Downs	1,073	1,075	1,105	754	695	-7.9
Essential Energy	662	484	617	499	444	-11.0

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Goulburn Mulwaree	1,618	1,533	237	338	260	-23.1
Ballina	623	782	688	748	573	-23.4
Snowy Monaro				87	66	-24.1
Armidale	1,263	1,188	846	484	361	-25.4
Gympie	108	111	97	93	68	-26.6
Kempsey	158	145	149	75	51	-32.0
Byron	629	642	516	493	302	-38.7
Bega Valley	680	628	762	407	213	-47.7
Orange	2,020	3,074	2,723	2,677	1,027	-61.6
Aqwest-Bunbury (W)	0	0		0	0	
Busseton (W)	0	0		0	0	
Cassowary Coast	0	0			0	
Goldenfields Water (W)			0		0	
Mount Barker					275	
WC (Kal–Boulder) (W)	0	0		0		
Median	646	635	688	446	317	
Mean	689	739	730	627	560	

Table A3 P8 – Typical annual bill (\$), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
TasWater	1,266	1,295	1,281	1,244	1,232	-1.0
Central Coast	1,375	1,324	1,101	943	923	-2.1
Hunter Water	1,232	1,249	1,232	1,138	1,107	-2.7
SA Water	1,361	1,391	1,359	1,127	1,096	-2.8
WC (Perth)	1,602	1,664	1,705	1,669	1,620	-2.9
Gold Coast	1,707	1,711	1,774	1,720	1,661	-3.4
Sydney Water	1,232	1,186	1,192	1,067	1,027	-3.7
Barwon Water	1,106	1,126	1,095	1,078	1,028	-4.6
Unitywater	1,585	1,570	1,584	1,571	1,491	-5.1
Icon Water	1,278	1,227	1,242	1,149	1,089	-5.2
Logan	1,724	1,730	1,700	1,658	1,571	-5.2
Urban Utilities	1,391	1,406	1,473	1,476	1,370	-7.2
Yarra Valley Water	1,161	1,154	1,122	1,107	1,026	-7.3
South East Water	1,116	1,042	1,050	1,061	963	-9.2
Greater Western Water					929	
Median	1,320	1,310	1,262	1,144	1,096	
Mean	1,367	1,362	1,351	1,286	1,209	
Large						
Cairns	1,474	1,454	1,454	1,460	1,483	1.6
P&W (Darwin)	1,990	2,003	1,971	1,912	1,902	-0.5
WC (Mandurah)	1,782	1,833	1,866	1,827	1,795	-1.8
Townsville	1,673	1,677	1,688	1,701	1,670	-1.8
Redland City	1,593	1,618	1,621	1,755	1,708	-2.7
Gippsland Water	1,450	1,454	1,404	1,390	1,347	-3.1
Toowoomba	1,558	1,675	1,771	1,702	1,628	-4.3
Coliban Water	1,493	1,494	1,430	1,403	1,324	-5.6
Central Highlands Water (Vic)	1,359	1,355	1,307	1,271	1,193	-6.1
Shoalhaven	1,288	1,285	1,307	1,286	1,197	-6.9
Goulburn Valley Water	1,012	1,022	965	935	851	-9.0
North East Water	977	1,020	998	956	867	-9.3
Median	1,484	1,474	1,442	1,432	1,415	
Mean	1,471	1,491	1,482	1,466	1,414	
Medium						
Tamworth	1,643	1,579	1,424	1,469	1,466	-0.2
Clarence Valley	1,749	1,756	1,644	1,773	1,765	-0.5
Coffs Harbour	1,557	1,543	1,624	1,583	1,575	-0.5
Port Macquarie Hastings	1,663	1,631	1,618	1,666	1,645	-1.3

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Dubbo	1,919	1,828	1,568	1,561	1,523	-2.4
South Gippsland Water	1,075	1,077	1,062	1,109	1,076	-3.0
Eurobodalla	1,832	1,836	1,848	1,849	1,790	-3.2
Wingecarribee	1,489	1,470	1,501	1,437	1,388	-3.4
East Gippsland Water	1,333	1,273	1,261	1,246	1,199	-3.8
Mackay	1,568	1,598	1,615	1,608	1,545	-3.9
Lower Murray Water	1,058	1,082	1,072	1,026	979	-4.6
Fraser Coast	1,711	1,650	1,655	1,672	1,592	-4.8
Wannon Water	1,199	1,195	1,178	1,149	1,092	-5.0
Tweed	1,641	1,683	1,695	1,651	1,560	-5.5
Gladstone	1,605	1,779	1,825	1,876	1,763	-6.0
Fitzroy River Water	1,387	1,426	1,459	1,454	1,365	-6.1
Bundaberg	1,559	1,593	1,584	1,588	1,490	-6.2
GWMWater	1,493	1,463	1,451	1,406	1,319	-6.2
MidCoast Council	1,924	2,022	1,955	1,946	1,801	-7.5
Albury	1,322	1,326	1,294	1,212	1,119	-7.7
Queanbeyan	1,691	1,782	1,531	1,748	1,581	-9.6
Median	1,568	1,593	1,568	1,583	1,523	
Mean	1,544	1,552	1,517	1,525	1,459	
Small						
Southern Downs	1,679	1,677	1,590	1,523	1,598	4.9
Livingstone	1,795	1,745	1,829	1,831	1,861	1.6
Armidale	1,345	1,390	1,121	1,360	1,381	1.5
Bathurst	1,344	1,280	1,176	1,236	1,229	-0.6
Lismore	1,823	1,946	1,870	1,845	1,822	-1.2
Cassowary Coast	1,784	1,810	1,730	1,732	1,710	-1.3
Byron	2,032	1,938	1,968	2,093	2,064	-1.4
Westernport Water	1,262	1,265	1,211	1,232	1,210	-1.8
WC (Geraldton)	2,005	2,047	2,093	2,066	2,017	-2.4
WC (Albany)	1,816	1,869	1,891	1,842	1,797	-2.4
WC (Australind/Eaton)	1,948	2,001	2,043	1,983	1,929	-2.7
Orange	1,300	1,266	1,264	1,266	1,230	-2.8
P&W (Alice Springs)	2,158	2,166	2,134	2,061	1,994	-3.3
Goulburn Mulwaree	1,476	1,455	1,452	1,423	1,374	-3.4
Ballina	1,679	1,704	1,670	1,699	1,640	-3.5
Gympie	1,418	1,291	1,325	1,358	1,302	-4.1
Bega Valley	1,956	1,960	2,064	2,039	1,948	-4.5
Whitsunday	1,890	1,807	1,778	1,880	1,794	-4.6
Essential Energy	1,489	1,461	1,449	1,404	1,333	-5.1

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Kempsey	1,817	1,866	2,035	2,123	2,010	-5.3
Western Downs	1,524	1,548	1,514	1,507	1,412	-6.3
Central Highlands	2,039	2,065	2,092	2,221	2,080	-6.3
Mount Barker					975	
Snowy Monaro				1,634		
Median	1,790	1,776	1,754	1,732	1,710	
Mean	1,708	1,707	1,695	1,711	1,640	

Table A4 P7 – Annual bill based on 200 kL (\$), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
TasWater	1,275	1,306	1,289	1,268	1,256	-0.9
Central Coast	1,452	1,428	1,249	1,033	1,014	-1.8
Urban Utilities	1,586	1,604	1,628	1,650	1,615	-2.1
Sydney Water	1,198	1,187	1,217	1,101	1,075	-2.4
Icon Water	1,288	1,223	1,230	1,211	1,182	-2.4
South East Water	1,360	1,233	1,257	1,189	1,158	-2.6
Hunter Water	1,279	1,311	1,343	1,265	1,231	-2.7
Logan	1,960	1,929	1,924	1,922	1,865	-3.0
WC (Perth)	1,555	1,616	1,635	1,600	1,551	-3.1
SA Water	1,397	1,399	1,394	1,151	1,115	-3.1
Unitywater	1,860	1,854	1,860	1,860	1,797	-3.4
Gold Coast	1,877	1,867	1,866	1,858	1,779	-4.3
Barwon Water	1,199	1,185	1,180	1,171	1,118	-4.5
Yarra Valley Water	1,402	1,343	1,334	1,310	1,213	-7.4
Greater Western Water					1,112	
Median	1,400	1,371	1,338	1,266	1,213	
Mean	1,478	1,463	1,458	1,399	1,339	
Large						
Cairns	1,407	1,384	1,397	1,389	1,397	0.6
Redland City	1,716	1,728	1,767	1,818	1,808	-0.6
Townsville	1,673	1,677	1,688	1,701	1,670	-1.8
Gippsland Water	1,521	1,506	1,490	1,471	1,444	-1.8
Shoalhaven	1,369	1,383	1,389	1,367	1,340	-2.0
P&W (Darwin)	1,634	1,625	1,611	1,585	1,553	-2.0
Toowoomba	1,679	1,782	1,822	1,849	1,810	-2.1
WC (Mandurah)	1,743	1,803	1,815	1,776	1,738	-2.1
North East Water	958	964	961	958	919	-4.1
Coliban Water	1,493	1,469	1,443	1,419	1,343	-5.4
Central Highlands Water (Vic)	1,456	1,446	1,417	1,391	1,309	-5.9
Goulburn Valley Water	929	913	888	863	806	-6.6
Median	1,507	1,488	1,466	1,445	1,420	
Mean	1,465	1,473	1,474	1,466	1,428	
Medium						
Clarence Valley	1,868	1,866	1,870	1,869	1,863	-0.3
Port Macquarie Hastings	1,749	1,755	1,799	1,824	1,815	-0.5
Fraser Coast	1,782	1,678	1,715	1,698	1,682	-0.9
Fitzroy River Water	1,253	1,254	1,264	1,281	1,268	-1.0

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Coffs Harbour	1,648	1,688	1,782	1,783	1,760	-1.3
Gladstone	1,722	1,694	1,705	1,740	1,714	-1.5
Bundaberg	1,543	1,537	1,537	1,532	1,508	-1.6
Mackay	1,584	1,591	1,602	1,600	1,571	-1.8
Dubbo	1,517	1,532	1,552	1,566	1,536	-1.9
South Gippsland Water	1,229	1,232	1,218	1,274	1,249	-2.0
Wingecarribee	1,458	1,458	1,467	1,480	1,447	-2.2
Tamworth	1,493	1,503	1,523	1,537	1,502	-2.3
Eurobodalla	2,131	2,140	2,155	2,172	2,120	-2.4
Queanbeyan	1,830	1,956	2,467	2,069	2,017	-2.5
Tweed	1,716	2,610		3,171	3,085	-2.7
East Gippsland Water	1,435	1,398	1,384	1,372	1,321	-3.7
MidCoast Council	2,133	2,197	2,168	2,171	2,085	-4.0
Albury	1,234	1,220	1,204	1,184	1,134	-4.2
Lower Murray Water	843	842	834	826	787	-4.7
Wannon Water	1,329	1,329	1,296	1,267	1,203	-5.1
GWMWater	1,438	1,408	1,388	1,366	1,282	-6.1
Median	1,543	1,537	1,544	1,566	1,536	
Mean	1,568	1,614	1,596	1,656	1,617	
Small						
Livingstone	1,707	1,745	1,759	1,731	1,835	6.0
Kempsey	1,924	2,009	2,185	2,194	2,230	1.6
Central Highlands	1,428	1,597	1,643	1,648	1,665	1.0
Armidale	1,205	1,323	1,353	1,635	1,650	0.9
Southern Downs	1,758	1,773	1,812	1,813	1,821	0.4
Whitsunday	1,654	1,664	1,685	1,718	1,710	-0.5
Bathurst	1,226	1,296	1,309	1,343	1,334	-0.7
Lismore	2,029	2,164	2,182	2,174	2,149	-1.1
Byron	2,036	2,039	2,072	2,096	2,067	-1.4
Gympie	1,453	1,344	1,351	1,381	1,356	-1.8
P&W (Alice Springs)	1,634	1,625	1,611	1,585	1,553	-2.0
Cassowary Coast	1,751	1,799	1,712	1,709	1,674	-2.0
WC (Geraldton)	1,786	1,845	1,870	1,837	1,799	-2.1
Westernport Water	1,516	1,505	1,485	1,472	1,438	-2.3
WC (Albany)	1,874	1,948	1,971	1,934	1,889	-2.3
Orange	1,337	1,354	1,360	1,369	1,337	-2.3
Bega Valley	2,114	2,133	2,184	2,206	2,154	-2.4
Snowy Monaro				1,897	1,852	-2.4
Ballina	1,742	1,748	1,737	1,782	1,739	-2.4

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
WC (Australind/Eaton)	1,733	1,789	1,813	1,776	1,729	-2.6
Essential Energy	1,337	1,315	1,300	1,308	1,265	-3.3
Western Downs	1,495	1,454	1,485	1,499	1,438	-4.1
Goulburn Mulwaree	1,631	1,605	1,593	1,616	1,547	-4.3
Mount Barker					975	
Median	1,680	1,704	1,698	1,718	1,692	
Mean	1,653	1,685	1,703	1,727	1,675	

Table A5 F16 – Total capital expenditure: water and wastewater (\$'000s), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
Central Coast	27,308	29,050	3,971	0	36,723	
TasWater	168,552	118,131	136,122	171,919	219,707	27.8
Sydney Water	859,575	934,342	953,131	963,073	1,216,441	26.3
Logan	90,814	108,975	142,262	90,410	107,995	19.5
Unitywater	142,730	105,621	137,027	142,135	162,325	14.2
Gold Coast	65,909	82,448	118,822	145,631	161,825	11.1
SA Water	400,996	592,835	599,567	500,734	463,437	-7.4
WC (Perth)	517,241	496,054	423,209	387,882	345,529	-10.9
Hunter Water	89,099	110,689	158,412	153,692	134,422	-12.5
Urban Utilities	242,631	288,782	327,417	345,058	283,067	-18.0
Yarra Valley Water	308,590	336,409	355,851	347,661	282,000	-18.9
Barwon Water	72,271	87,148	82,192	68,773	53,175	-22.7
South East Water	164,443	223,121	276,123	249,216	183,370	-26.4
Icon Water	96,091	94,799	108,435	91,111	66,895	-26.6
Greater Western Water					155,304	
Median	153,586	114,410	150,337	162,806	162,325	
Mean	231,875	257,743	273,039	261,235	258,148	
Large						
Townsville	85,926	57,861	63,271	53,014	87,643	65.3
Coliban Water	22,303	21,834	28,870	32,483	44,000	35.5
North East Water	19,890	15,364	25,447	26,618	31,569	18.6
P&W (Darwin)	49,743	36,012	21,727	21,482	25,053	16.6
Shoalhaven	137,665	43,418	25,704	26,053	26,688	2.4
Goulburn Valley Water	30,606	34,762	40,342	39,793	38,099	-4.3
Central Highlands Water (Vic)	19,051	24,470	19,793	21,626	20,548	-5.0
Cairns	39,658	51,497	48,609	46,000	40,037	-13.0
Toowoomba	27,172	35,639	28,647	51,791	40,424	-21.9
WC (Mandurah)	20,229	17,184	17,336	17,712	12,451	-29.7
Gippsland Water	43,173	42,482	48,055	58,897	38,240	-35.1
Redland City	6,571	2,478	3,913	10,212	3,472	-66.0
Median	28,889	35,200	27,176	29,550	34,834	
Mean	41,832	31,917	30,976	33,807	34,019	
Medium						
Dubbo	1,405	259	0	73	3,199	4,282.2
Port Macquarie Hastings	21,053	33,588	4,186	19,177	42,809	123.2
Lower Murray Water	13,748	14,124	10,171	15,301	25,703	68.0
Fitzroy River Water	18,614	16,400	11,492	13,241	20,270	53.1

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Mackay	13,379	22,012	26,375	18,286	22,187	21.3
Eurobodalla	21,889	16,321	14,632	24,208	26,112	7.9
Wingecarribee	18,272	17,806	17,289	19,600	19,794	1.0
GWMWater	17,565	21,082	14,870	12,332	12,183	-1.2
Coffs Harbour	7,679	10,361	6,563	3,247	3,049	-6.1
Tweed	9,082	10,356	13,000	16,358	13,083	-20.0
Gladstone	29,156	16,442	14,469	20,027	15,274	-23.7
East Gippsland Water	9,137	11,902	18,251	12,011	8,850	-26.3
South Gippsland Water	32,299	18,029	22,818	21,556	15,526	-28.0
Wannon Water	20,534	22,651	30,183	19,060	13,010	-31.7
Fraser Coast	21,285	24,017	22,342	31,696	19,978	-37.0
Albury	5,867	10,941	8,087	7,102	4,284	-39.7
Bundaberg	29,451	10,322	18,163	23,960	13,724	-42.7
Tamworth	11,254	8,411	23,132	22,023	10,144	-53.9
Queanbeyan	13,199	10,854	13,952	4,620	458	-90.1
Clarence Valley	4,703	8,561	7,234			
MidCoast Council	16,834	11,840	5,510	17,018		
Median	16,834	14,124	14,469	17,652	13,724	
Mean	16,019	15,061	14,415	16,045	15,244	
Small						
Snowy Monaro				0	17,623	
Livingstone	7,409	15,018	5,620	3,697	7,877	113.1
Orange	0	2,001	0	673	1,269	88.6
Cassowary Coast	12,655	9,257	15,746	7,503	9,147	21.9
Central Highlands	18,071	11,370	4,460	10,205	12,307	20.6
Ballina	17,561	19,450	8,535	8,497	9,339	9.9
P&W (Alice Springs)	7,050	6,823	9,237	8,411	8,905	5.9
Gympie	3,359	4,887	5,429	4,902	4,966	1.3
Westernport Water	5,040	5,036	7,085	9,865	8,468	-14.2
Goulburn Mulwaree	24,654	8,483	7,627	11,907	10,207	-14.3
WC (Albany)	22,039	7,075	9,743	12,729	10,692	-16.0
Western Downs	4,832	4,569	27,266	5,863	4,520	-22.9
Southern Downs	9,232	8,641	8,393	10,055	7,639	-24.0
WC (Australind/Eaton)	6,397	5,937	5,175	8,874	6,504	-26.7
Bathurst	9,114	9,965	12,051	8,342	5,761	-30.9
Whitsunday	10,491	5,933	27,266	12,448	7,184	-42.3
Armidale	3,373	2,480	0	3,859	2,143	-44.5
Kempsey	8,927	6,025	4,028	8,313	4,154	-50.0
WC (Geraldton)	10,005	13,434	20,016	14,986	7,203	-51.9

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Byron	2,025	5,676	3,166	5,135	0	-100.0
Bega Valley	795	12,641	2,405	8,428		
Essential Energy			8,420	10,092		
Lismore	22,837	12,135	8,593	8,081		
Mount Barker					6,533	
Median	8,927	7,075	8,010	8,411	7,203	
Mean	9,803	8,421	9,103	7,951	7,259	

Table A6 F28 – Capital expenditure: water (\$/property), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
Central Coast	19	96	8	0	86	
Hunter Water	207	283	210	117	229	96.5
Gold Coast	66	57	84	80	130	62.0
TasWater	526	362	362	510	802	57.2
Unitywater	98	82	142	126	156	24.1
Sydney Water	105	105	150	174	206	18.2
Logan	290	250	187	167	174	4.2
South East Water	59	70	82	83	78	-6.0
WC (Perth)	344	341	286	251	213	-15.2
Yarra Valley Water	137	165	170	161	130	-19.1
SA Water	332	458	552	487	392	-19.5
Urban Utilities	169	166	188	180	143	-20.4
Barwon Water	249	262	262	212	155	-26.7
Icon Water	165	188	266	208	79	-62.1
Greater Western Water					139	
Median	167	177	188	171	155	
Mean	198	206	211	197	208	
Large						
Coliban Water	186	148	213	209	392	87.6
Townsville	427	185	318	401	701	74.9
P&W (Darwin)	294	280	261	206	310	50.5
Gippsland Water	346	229	269	175	228	30.0
WC (Mandurah)	225	235	257	148	140	-5.0
Goulburn Valley Water	328	320	340	340	320	-5.7
Cairns	359	370	300	309	257	-16.7
Redland City	18	11	10	16	14	-17.0
Shoalhaven	320	742	177	226	173	-23.3
North East Water	230	153	233	295	222	-24.6
Toowoomba	241	384	279	612	453	-26.0
Central Highlands Water (Vic)	177	198	128	103	60	-41.7
Median	268	232	259	217	242	
Mean	263	271	232	253	273	
Medium						
Dubbo	45	9	0	0	76	
Lower Murray Water	290	221	163	242	561	131.7
Port Macquarie Hastings	270	448	58	334	738	120.7
Mackay	247	232	149	176	323	83.6

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Fitzroy River Water	300	277	223	208	312	50.4
Wingecarribee	358	390	427	368	535	45.5
GWMWater	424	508	379	226	262	16.2
Wannon Water	222	152	180	192	221	15.4
Coffs Harbour	173	114	103	41	42	3.1
Gladstone	849	181	109	251	241	-4.0
Albury	138	252	183	156	124	-20.5
Eurobodalla	436	272	202	392	299	-23.6
Tweed	120	183	234	295	212	-28.0
South Gippsland Water	1,489	508	556	579	380	-34.4
Fraser Coast	323	326	370	333	187	-43.7
Bundaberg	163	127	440	625	285	-54.5
East Gippsland Water	237	292	565	403	171	-57.5
Tamworth	213	210	705	872	245	-71.9
Queanbeyan	161	82	81	193	10	-94.8
Clarence Valley	139	170	188			
MidCoast Council	353	161	48	203		
Median	247	221	188	246	245	
Mean	331	244	255	304	275	
Small						
Armidale	146	126	0	0	181	
Snowy Monaro				0	207	
Livingstone	305	145	113	97	160	65.3
Ballina	271	228	205	130	162	25.1
Cassowary Coast	716	543	800	360	426	18.3
P&W (Alice Springs)	548	435	602	511	578	13.2
Central Highlands	105	115	231	619	689	11.3
Western Downs	369	261	773	258	236	-8.5
Orange	0	74	0	37	32	-12.5
WC (Albany)	463	136	234	551	428	-22.2
Kempsey	319	297	159	249	190	-23.4
Southern Downs	630	685	497	464	328	-29.3
Whitsunday	263	344	773	684	477	-30.3
Westernport Water	157	141	212	291	196	-32.8
Bathurst	380	294	566	391	253	-35.2
Goulburn Mulwaree	309	288	327	459	275	-40.1
Gympie	158	198	199	261	149	-42.9
WC (Geraldton)	437	587	562	696	288	-58.6
WC (Australind/Eaton)	397	257	181	503	153	-69.5

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Byron	148	228	149	116	0	-100.0
Bega Valley	23		56	368		
Essential Energy	0		702	797		
Lismore	317	210	312	278		
Median	307	243	233	360	222	
Mean	294	280	348	353	270	

Table A7 F29 – Capital expenditure: wastewater (\$/property), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
Central Coast	187	123	22	0	189	
SA Water	229	372	250	156	218	39.9
Sydney Water	337	366	322	296	381	28.8
Logan	558	728	1,064	597	718	20.3
Unitywater	384	267	294	321	347	8.0
Gold Coast	197	268	381	482	488	1.2
Icon Water	389	353	319	268	262	-2.1
WC (Perth)	284	253	214	201	186	-7.4
Urban Utilities	236	309	339	364	296	-18.7
Yarra Valley Water	267	263	272	263	208	-20.7
Barwon Water	233	307	258	210	164	-21.8
TasWater	329	231	321	331	234	-29.2
South East Water	163	224	276	235	152	-35.4
Hunter Water	157	160	422	492	287	-41.6
Greater Western Water					122	
Median	251	268	306	282	234	
Mean	282	302	340	301	284	
Large						
North East Water	175	157	275	220	389	77.2
Townsville	666	563	477	237	339	43.4
Central Highlands Water (Vic)	113	170	169	218	241	10.9
Shoalhaven	2,660	162	398	343	376	9.8
Toowoomba	233	220	206	202	201	-0.6
Goulburn Valley Water	219	299	373	350	330	-5.8
Cairns	193	334	354	311	278	-10.5
Coliban Water	122	152	174	222	173	-22.0
P&W (Darwin)	548	326	101	153	107	-30.0
WC (Mandurah)	223	132	105	235	118	-49.9
Gippsland Water	304	412	445	695	315	-54.6
Redland City	100	32	58	169	47	-72.0
Median	221	195	240	228	260	
Mean	463	247	261	279	243	
Medium						
Dubbo	22		0	4	82	1,862.8
Tamworth	303	184	341	86	215	151.0
Port Macquarie Hastings	453	695	80	271	616	127.9
East Gippsland Water	177	242	219	97	217	123.6

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Fitzroy River Water	294	245	139	211	326	54.2
Bundaberg	1,070	234	139	122	167	37.5
Eurobodalla	704	597	580	883	1,102	24.8
Queanbeyan	459	419	467	9	10	3.6
Coffs Harbour	133	304	153	84	76	-9.0
Tweed	162	141	170	207	187	-9.6
Lower Murray Water	134	223	153	227	195	-14.2
Mackay	47	265	462	231	179	-22.8
South Gippsland Water	110	411	603	489	375	-23.2
GWMWater	159	192	105	190	141	-25.8
Wingecarribee	669	610	518	716	508	-29.1
Fraser Coast	286	357	237	537	353	-34.2
Gladstone	293	435	485	564	370	-34.4
Albury	97	191	149	135	47	-65.4
Wannon Water	298	433	599	281	83	-70.4
Clarence Valley	116	345	136			
MidCoast Council	67	165	107	244		
Median	177	285	170	219	195	
Mean	288	334	278	279	276	
Small						
Armidale	218	129	0	0	18	
Snowy Monaro				0	1,867	
Orange	0	41	0	0	40	
Gympie	115	190	211	93	222	138.7
Livingstone	321	1,259	388	224	526	135.3
WC (Australind/Eaton)	132	259	277	213	431	102.7
Cassowary Coast	539	348	839	376	551	46.6
Central Highlands	1,717	1,010	152	268	392	46.4
WC (Geraldton)	125	164	741	109	119	9.9
Goulburn Mulwaree	1,876	476	333	561	600	7.0
Ballina	898	1,132	376	451	462	2.4
Westernport Water	162	171	217	290	294	1.3
WC (Albany)	1,167	381	451	252	251	-0.3
Bathurst	169	309	143	95	80	-15.8
Southern Downs	234	48	268	522	419	-19.9
P&W (Alice Springs)	18	124	154	181	136	-24.8
Western Downs	67	179	1,375	331	210	-36.4
Kempsey	485	247	203	522	156	-70.1
Whitsunday	555	76	1,375	214	21	-90.0

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Byron	41	345	160	378	0	-100.0
Bega Valley	38	644	139	281		
Essential Energy			117	190		
Lismore	1,361	791	324	320		
Mount Barker					465	
Median	218	259	243	252	251	
Mean	488	396	375	255	346	

Table A8 F13 – Combined operating cost: water and wastewater (\$/property), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
WC (Perth)	656	589	659	630	675	7.2
Barwon Water	728	746	749	662	696	5.2
SA Water	716	751	681	703	721	2.5
Icon Water	1,089	1,059	1,008	912	890	-2.4
Unitywater	1,106	1,127	1,098	1,070	1,044	-2.4
Sydney Water	726	774	776	707	688	-2.7
TasWater	980	1,051	1,064	1,014	978	-3.5
Urban Utilities	1,266	1,327	1,351	1,251	1,206	-3.6
Hunter Water	697	704	726	675	650	-3.7
Gold Coast	1,286	1,284	1,304	1,312	1,253	-4.5
South East Water	923	930	935	900	854	-5.1
Yarra Valley Water	938	930	920	888	813	-8.4
Logan	1,207	1,249	1,284	1,220	1,112	-8.9
Central Coast	663	712	795	753	595	-21.0
Greater Western Water					1,030	
Median	930	930	927	894	854	
Mean	927	945	954	907	880	
Large						
North East Water	956	923	982	926	1,113	20.1
Townsville	1,096	1,169	1,463	1,338	1,522	13.8
Goulburn Valley Water	969	960	1,046	1,001	1,083	8.2
WC (Mandurah)	681	624	674	625	658	5.4
Coliban Water	892	954	960	932	944	1.3
Gippsland Water	1,332	1,344	1,338	1,263	1,216	-3.7
Redland City	1,032	1,111	1,031	1,178	1,128	-4.2
Cairns	754	756	746	744	711	-4.4
Central Highlands Water (Vic)	1,037	1,105	1,075	1,022	971	-5.0
Toowoomba	822	862	1,034	959	908	-5.4
Shoalhaven	853	964	1,042	1,040	950	-8.7
P&W (Darwin)	1,006	953	1,269	1,198	943	-21.3
Median	962	957	1,038	1,011	961	
Mean	952	977	1,055	1,019	1,012	
Medium						
Fitzroy River Water	709	724	705	711	875	23.1
Mackay	1,095	1,264	1,204	1,066	1,235	15.9
Wannon Water	1,057	1,034	1,017	1,009	1,126	11.6

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Lower Murray Water	825	791	759	806	830	2.9
Fraser Coast	1,096	970	856	819	841	2.7
Queanbeyan	1,488	1,341	1,314	1,416	1,435	1.3
GWMWater	1,085	1,037	842	764	771	1.0
Tamworth	1,106	1,101	1,114	1,291	1,285	-0.4
Port Macquarie Hastings	1,050	977	1,071	1,032	1,001	-3.0
Wingecarribee	976	978	1,021	1,013	980	-3.2
Eurobodalla	1,158	1,163	1,228	1,284	1,218	-5.1
Bundaberg	898	888	881	891	842	-5.5
Coffs Harbour	1,097	1,075	946	1,001	944	-5.6
Tweed	1,086	1,112	1,156	1,132	1,057	-6.6
Dubbo	991	1,069	1,034	1,090	998	-8.5
South Gippsland Water	963	1,186	1,076	1,150	1,035	-10.0
East Gippsland Water	1,008	972	899	1,087	879	-19.2
Gladstone	1,684	1,370	1,380	2,086	1,445	-30.7
Albury	756	821	900		786	
Clarence Valley	895	857	761			
MidCoast Council	1,072	1,300	1,097	1,074		
Median	1,057	1,037	1,021	1,066	998	
Mean	1,052	1,049	1,012	1,091	1,031	
Small						
Snowy Monaro				0	1,443	
WC (Australind/Eaton)	747	721	739		691	22.0
Goulburn Mulwaree	824	813	1,129	877	1,031	17.5
WC (Albany)	790	719	740	745	832	11.6
Central Highlands	988	820	776	1,068	1,190	11.4
Westernport Water	1,093	1,072	1,089	1,025	1,118	9.0
Kempsey	1,095	1,337	1,269	1,184	1,276	7.8
Bathurst	1,330	1,243	1,407	1,345	1,446	7.5
WC (Geraldton)	676	677	688	724	724	0.0
Gympie	369	289	588	758	750	-1.1
Byron	1,640	1,857	1,898	1,936	1,915	-1.1
Ballina	1,342	1,419	1,482	1,442	1,417	-1.7
Livingstone	907	1,287	1,352	1,206	1,175	-2.6
Orange	874	938	892	875	834	-4.7
Western Downs	842	1,023	1,033	1,056	977	-7.4
Cassowary Coast	1,123	1,095	716	771	682	-11.5
Whitsunday	1,468	1,803	1,778	1,671	1,451	-13.2
P&W (Alice Springs)	1,289	1,274	1,651	1,431	1,097	-23.3

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Essential Energy			4,249	1,902	1,440	-24.3
Southern Downs	1,155	1,263	1,525	1,742	1,101	-36.8
Armidale	1,215	1,281	1,532	1,163		
Bega Valley	1,464	1,508	1,611	1,610		
Lismore	1,190	1,269	1,285	1,337		
Median	1,095	1,243	1,277	1,163	1,109	
Mean	1,068	1,129	1,338	1,155	1,137	

Table A9 F8 – Revenue from community service obligations (%), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
Gold Coast	0.0000	0.0000	0.0000	0.0040	0.0043	7.5
WC (Perth)	0.0622	0.0663	0.0590	0.0630	0.0677	7.5
Sydney Water	0.0505	0.0498	0.0511	0.0481	0.0487	1.2
SA Water	0.1063	0.0929	0.1190	0.1103	0.1104	0.1
Yarra Valley Water	0.0500	0.0464	0.0487	0.0539	0.0536	-0.6
South East Water	0.0430	0.0410	0.0439	0.0488	0.0479	-1.8
Unitywater	0.0082	0.0080	0.0080	0.0080	0.0077	-3.7
Hunter Water	0.0421	0.0440	0.0522	0.0499	0.0473	-5.2
TasWater	0.0247	0.0231	0.0578	0.0245	0.0229	-6.5
Barwon Water	0.0000	0.0448	0.0435	0.0455	0.0425	-6.6
Icon Water	0.0199	0.0157	0.0176	0.0251	0.0205	-18.3
Central Coast	0.0130	0.0130	0.0132		0.0150	
Greater Western Water					0.0346	
Logan	0.0000	0.0000	0.0000	0.0000	0.0000	
Urban Utilities	0.0000	0.0000	0.0000	0.0000	0.0000	
Median	0.0223	0.0321	0.0437	0.0455	0.0346	
Mean	0.0300	0.0318	0.0367	0.0370	0.0349	
Large						
Redland City	0.0033	0.0036	0.0040	0.0030	0.0036	20.0
Toowoomba	0.0000	0.0000	0.0120	0.0080	0.0086	7.5
Gippsland Water	0.0445	0.0415	0.0475	0.0427	0.0446	4.4
North East Water	0.0624	0.0610	0.0630	0.0626	0.0639	2.1
Shoalhaven	0.0122	0.0126	0.0120	0.0110	0.0110	0.0
Goulburn Valley Water	0.0547	0.0533	0.0540	0.0601	0.0597	-0.7
Coliban Water	0.0403	0.0407	0.0413	0.0456	0.0449	-1.5
WC (Mandurah)	-0.4077	-0.1263	-0.2344	-0.1405	-0.1341	-4.6
Townsville	0.0104	0.0145	0.0150	0.0160	0.0151	-5.6
Central Highlands Water (Vic)	0.0553	0.0500	0.0513	0.0536	0.0473	-11.8
Cairns	0.0286	0.0258	0.0250	0.0220	0.0174	-20.9
P&W (Darwin)	0.0265	0.0230	0.0206	0.0346	0.0206	-40.5
Median	0.0275	0.0244	0.0228	0.0283	0.0190	
Mean	-0.0058	0.0166	0.0093	0.0182	0.0169	
Medium						
Eurobodalla	0.0091	0.0089	0.0090	0.0090	0.0094	4.4
East Gippsland Water	0.0625	0.0647	0.0630	0.0639	0.0666	4.2
South Gippsland Water	0.0602	0.0567	0.0575	0.0514	0.0534	3.9
Lower Murray Water	0.0554	0.0534	0.0591	0.0481	0.0490	1.9

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Fraser Coast	0.0090	0.0094	0.0070	0.0070	0.0071	1.4
Mackay	0.0021	0.0021	0.0020	0.0020	0.0020	0.0
Coffs Harbour	0.0086	0.0081	0.0040	0.0040	0.0040	0.0
Tweed	0.0103	0.0110	0.0110	0.0100	0.0100	0.0
Wingecarribee	0.0065	0.0075	0.0080	0.0080	0.0080	0.0
Wannon Water	0.0477	0.0516	0.0474	0.0522	0.0508	-2.7
GWMWater	0.0652	0.0650	0.0678	0.0721	0.0673	-6.7
Gladstone	0.0000	0.0000	0.0090	0.0100	0.0088	-12.0
Tamworth	0.0086	0.0082	0.0090	0.0080	0.0070	-12.5
Port Macquarie Hastings	0.0080	0.0097	0.0110	0.0100	0.0084	-16.0
Fitzroy River Water	0.0112	0.0101	0.0110	0.0110	0.008	-27.3
Queanbeyan	0.0039	0.0041	0.0040	0.0040	0.0026	-35.0
Bundaberg	0.0359	0.0256	0.0310	0.0370	0.0177	-52.2
Albury	0.0074	0.0071	0.0080		0.0088	
Clarence Valley	0.0116	0.0117	0.0100			
Dubbo	0.0048	0.0110	0.0050	0.0050		
MidCoast Council	0.0105	0.0100	0.0110	0.0110		
Median	0.0091	0.0100	0.0100	0.0100	0.0088	
Mean	0.0209	0.0208	0.0212	0.0223	0.0216	
Small						
WC (Australind/Eaton)	0.1433	0.0199	-0.0315	-0.0059	-0.0388	557.6
Western Downs	0.5918	0.0000	0.0930	0.0530	0.0684	29.1
Goulburn Mulwaree	0.0055	0.0066	0.0070	0.0060	0.0070	18.3
Ballina	0.0075	0.0081	0.0090	0.0070	0.0080	14.3
Westernport Water	0.0327	0.0366	0.0337	0.0357	0.0388	8.7
Byron	0.0054	0.0055	0.0060	0.0050	0.0053	6.0
Bathurst	0.0059	0.0064	0.0070	0.0070	0.0070	0.0
Essential Energy			0.0090	0.0170	0.0170	0.0
Orange	0.0081	0.0086	0.0090	0.0080	0.0080	0.0
P&W (Alice Springs)	0.1403	0.1388	0.1309	0.1581	0.1413	-10.6
Kempsey	0.0114	0.0104	0.0090	0.0090	0.0077	-14.4
Gympie	0.0220	0.0220	0.0070	0.0240	0.0153	-36.3
Whitsunday	0.0450	0.1096	0.0930	0.0890	0.0498	-44.0
WC (Geraldton)	-1.3171	-1.3687	-0.9320	-1.0678	-0.4408	-58.7
WC (Albany)	0.0385	-0.1791	-0.0842	-0.0533	0.0718	-234.7
Armidale	0.0084	0.0080	0.0098	0.0070		
Bega Valley	0.8000	0.0090	0.0080	0.0080		
Cassowary Coast	0.0000	0.0000	0.0180	0.0000	0.0000	
Central Highlands	0.0000	0.0000	0.0000	0.0000	0.0000	

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Lismore	0.0094	0.0102	0.0070	0.0080		
Livingstone	0.0000	0.0000	0.0000	0.0000	0.0000	
Mount Barker					0.0000	
Snowy Monaro					0.0000	
Southern Downs	0.0000	0.0000	0.0000	0.0000	0.0000	
Median	0.0084	0.0080	0.0075	0.0070	0.0071	
Mean	0.0266	-0.0547	-0.0269	-0.0311	-0.0016	

Table A10 C15 – Average duration of an unplanned interruption: water (minutes), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
Urban Utilities	125.0	135.0	119.0	94.0	130.0	38.3
Yarra Valley Water	102.9	95.0	105.9	97.5	105.4	8.1
Gold Coast	116.0	126.0	140.7	151.7	158.5	4.5
WC (Perth)	112.0	102.9	111.0	140.0	141.0	0.7
South East Water	87.4	83.8	88.2	89.5	87.7	-2.0
Central Coast	198.0	265.0	197.0	208.0	203.0	-2.4
Unitywater	129.5	119.7	109.7	120.3	116.5	-3.2
Sydney Water	155.0	143.0	187.0	200.0	192.0	-4.0
SA Water	226.3	240.4	203.0	194.0	181.0	-6.7
Icon Water	125.1	135.0	136.0	147.0	136.0	-7.5
Hunter Water	149.0	161.0	150.5	155.0	138.0	-11.0
Barwon Water	89.0	126.7	127.8	112.7	98.8	-12.3
Logan	117.2	90.7		183.6	143.3	-21.9
Greater Western Water					116.6	
Median	125.0	126.7	131.9	147.0	137.0	
Mean	133.3	140.3	139.7	145.6	139.1	
Large						
Townsville	70.0	84.2	103.1	98.8	800.1	709.8
Gippsland Water	85.2	93.4	90.8	69.3	108.9	57.1
Shoalhaven	147.0	94.0	153.0	74.0	113.0	52.7
Goulburn Valley Water	102.7	98.6	106.3	93.7	117.5	25.4
Central Highlands Water (Vic)	137.7	155.1	121.4	114.0	137.0	20.2
Redland City	148.0	113.8	110.0	135.1	160.0	18.4
WC (Mandurah)	65.0	71.0	64.0	62.0	64.0	3.2
North East Water	99.4	96.0	91.2	81.0	71.0	-12.3
Cairns	49.3	44.5	76.9	45.0	36.7	-18.4
Coliban Water	102.5	142.1	112.5	141.5	105.0	-25.8
P&W (Darwin)				139.0	102.1	-26.5
Median	101.0	95.0	104.7	93.7	108.9	
Mean	100.7	99.3	102.9	95.8	165.0	
Medium						
Tamworth	0.0	420.0	86.0	210.0	2,289.0	990.0
Albury	266.0	254.0	95.0	87.0	213.0	144.8
Tweed	141.0	159.0	139.0	161.0	275.0	70.8
Eurobodalla	237.0	178.0	135.0	170.0	214.0	25.9
Bundaberg	77.0	58.0	84.0	70.0	88.0	25.7

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
East Gippsland Water	76.0	72.0	169.0	74.0	88.8	20.0
Wingecarribee	270.0	341.0	245.0	185.0	204.0	10.3
Wannon Water	79.3	90.3	158.0	138.5	150.0	8.3
Fraser Coast	230.3	104.8	56.6	125.0	128.4	2.7
Fitzroy River Water	34.4	32.6	55.3	33.8	33.9	0.3
Dubbo	129.0	142.0	123.0	125.0	125.0	0.0
Port Macquarie Hastings	30.0	90.0	90.0	90.0	90.0	0.0
South Gippsland Water	101.0	121.0	90.0	80.0	78.7	-1.6
GWMWater	103.4	115.1	102.9	83.9	80.0	-4.6
Gladstone	23.2	69.8	50.0	39.0	35.0	-10.3
Lower Murray Water	59.0	62.0	66.6	59.0	52.4	-11.2
Coffs Harbour	120.0	207.0	177.0	189.0	167.0	-11.6
Riverina Water (W)	242.0	233.0	125.0	164.0	142.0	-13.4
Clarence Valley			180.0	180.0	95.0	-47.2
Mackay	63.6	19.1	19.6	23.3	11.9	-48.9
Queanbeyan	2.0		38.0	220.0	76.0	-65.5
Median	90.2	115.1	95.0	125.0	95.0	
Mean	114.2	145.7	108.8	119.4	220.8	
Small						
Bega Valley	234.0	165.0	163.0	251.0	510.0	103.2
WC (Kal–Boulder) (W)	46.0	74.2	36.0	31.0	56.0	80.6
Lismore	180.0	90.0	90.0	120.0	162.0	35.0
Cassowary Coast	185.0	254.0	184.0	156.0	191.0	22.4
Westernport Water	108.6	85.9	58.4	71.8	83.9	16.9
WC (Australind/Eaton)	87.0	58.2	85.0	100.0	115.0	15.0
WC (Geraldton)	135.0	162.8	89.0	102.0	109.0	6.9
Western Downs	53.0	90.0	23.0	37.0	39.0	5.4
Southern Downs	102.0		90.0	246.5	247.5	0.4
Snowy Monaro				120.0	120.0	0.0
Central Highlands	30.0	30.0	30.0	30.0	30.0	0.0
Whitsunday	120.0	120.0	278.3	235.0	231.0	-1.7
Aqwest-Bunbury (W)	34.0	45.0	39.0	38.0	35.0	-7.9
WC (Albany)	147.0	123.6	173.0	145.0	120.0	-17.2
Livingstone	19.0	16.3	18.3	28.6	19.9	-30.4
Armidale	135.0	127.0	98.0	131.0	89.0	-32.1
Gympie	197.3	129.0	201.0	157.6	105.8	-32.9
Kempsey	198.0	96.0	238.0	195.0	104.0	-46.7
Orange	135.0	141.0	240.0	240.0	123.0	-48.8
Goldenfields Water (W)	258.0	235.0		152.0	55.0	-63.8

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Busselton (W)	93.7	66.3	147.5	130.0	37.9	-70.8
Bathurst	120.0					
Byron	120.0	120.0				
Goulburn Mulwaree	180.0					
Median	120.0	108.0	90.0	130.0	105.8	
Mean	126.9	111.5	120.1	129.4	123.0	

Table A11 C13 – Total complaints: water and sewerage (per 1,000 properties), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
Icon Water	3.72	2.84	3.39	2.18	20.29	830.7
Central Coast	10.00	9.30	16.00	11.00	15.00	36.4
Sydney Water	2.20	2.45	2.08	1.96	2.38	21.4
SA Water	2.23	1.98	1.99	1.88	2.16	14.9
Barwon Water	3.33	4.54	4.14	6.71	7.54	12.4
Gold Coast	3.61	3.48	4.90	3.90	4.33	11.0
TasWater	15.63	12.64	8.75	10.56	11.62	10.0
Unitywater	1.46	1.40	1.40	2.20	2.38	8.2
South East Water	2.67	3.20	4.24	5.83	5.68	-2.6
Hunter Water	3.48	3.80	3.47	2.08	1.79	-13.9
Logan	12.32	14.28	17.9	23.10	19.49	-15.6
Yarra Valley Water	11.11	12.36	11.00	11.47	9.37	-18.3
Urban Utilities	6.61	6.69	6.40	5.00	3.70	-26.0
WC (Perth)	1.19	0.83	0.78	0.59	0.35	-40.7
Greater Western Water					2.40	
Median	3.54	3.64	4.19	4.45	4.33	
Mean	5.68	5.70	6.17	6.32	7.23	
Large						
Shoalhaven	2.00	0.90	1.00	0.06	1.00	1,566.7
Toowoomba	3.20	3.24	2.00	2.00	5.40	170.0
Redland City	3.17	3.04	2.40	4.00	4.45	11.3
Central Highlands Water (Vic)	8.44	8.59	5.12	4.06	4.26	4.9
North East Water	3.44	3.77	5.81	5.37	5.32	-0.9
Cairns	2.44	2.13	3.00	2.60	2.49	-4.2
Gippsland Water	8.73	14.22	9.17	6.91	6.07	-12.2
Townsville	0.49	0.51	0.60	0.80	0.68	-15.0
P&W (Darwin)	68.45	60.40	50.89	59.16	49.00	-17.2
Goulburn Valley Water	3.90	4.52	5.86	5.92	4.43	-25.2
WC (Mandurah)	0.59	0.48	0.58	0.45	0.21	-53.3
Coliban Water	5.32	6.45	6.36	15.47	7.08	-54.2
Median	3.32	3.50	4.06	4.03	4.44	
Mean	9.18	9.02	7.73	8.90	7.53	
Medium						
Eurobodalla	4.00	11.90	22.00	26.00	63.00	142.3
Tweed	1.00	1.00	1.00	1.00	2.00	100.0
Gladstone	0.34	0.00	0.00	0.50	0.84	68.0

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
GWMWater	8.30	0.38	8.74	5.05	7.83	55.0
MidCoast Council	3.00	3.40	2.00	2.00	3.00	50.0
Fraser Coast	15.14	10.08	14.40	17.20	23.21	34.9
Clarence Valley	19.00	42.70	115.00	88.00	118.00	34.1
Dubbo	17.00	15.20	21.00	17.00	19.00	11.8
Albury	2.00	1.20	2.00	1.00	1.00	0.0
East Gippsland Water	3.66	3.61	3.56	2.82	2.81	-0.4
Wingecarribee	81.00	119.00	110.00	88.00	83.00	-5.7
Mackay	93.44	60.86	70.80	68.90	64.81	-5.9
Fitzroy River Water	39.95	45.95	48.40	46.00	41.61	-9.5
South Gippsland Water	8.93	5.65	4.10	7.46	6.74	-9.7
Port Macquarie Hastings	6.00	28.50	12.00	21.00	18.00	-14.3
Queanbeyan	55.00	88.40	76.00	103.00	87.00	-15.5
Wannon Water	6.04	4.04	3.42	6.49	4.95	-23.7
Bundaberg	59.70	52.56	28.20	15.90	12.00	-24.5
Lower Murray Water	1.74	3.17	0.06	1.78	1.25	-29.8
Tamworth	48.00	68.8	51.00	71.00	45.00	-36.6
Coffs Harbour	0.10	0.20	0.10	0.40	0.00	-100.0
Median	8.30	10.08	12.00	15.90	12.00	
Mean	22.54	26.98	28.28	28.12	28.81	
Small						
Westernport Water	2.54	3.72	1.27	1.02	2.94	188.2
Bega Valley	11.00	6.90	8.00	4.00	11.00	175.0
Lismore	2.00	5.40	3.00	3.00	8.00	166.7
Armidale	10.00	22.10	20.00	36.00	55.00	52.8
Ballina	2.00	5.70	12.00	13.00	18.00	38.5
Livingstone	3.26	3.33	4.00	2.90	3.49	20.3
Goulburn Mulwaree	69.00	80.20	76.00	72.00	84.00	16.7
Cassowary Coast	10.32	14.40	13.10	12.80	14.63	14.3
Southern Downs	5.38	6.95	4.90	1.80	1.98	10.0
Byron	8.00	14.80	16.00	34.00	34.00	0.0
Essential Energy	2.00	12.50	2.00	2.00	2.00	0.0
Kempsey	1.00	6.30	9.00	5.00	5.00	0.0
Orange	102.00	112.40	97.00	76.00	70.00	-7.9
Bathurst	51.00	52.90	47.00	47.00	41.00	-12.8
P&W (Alice Springs)	110.74	121.90	103.10	97.83	76.13	-22.2
Central Highlands	24.12	25.54	28.60	31.40	23.21	-26.1
Western Downs	2.79	0.18	0.30	1.90	1.22	-35.8
Whitsunday	9.32	7.82	4.30	24.70	10.40	-57.9

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
WC (Australind/Eaton)	1.24	0.92	0.91	0.67	0.22	-67.2
Gympie	5.23	0.53	1.10	1.20	0.34	-71.7
WC (Geraldton)	2.28	2.01	0.78	1.33	0.25	-81.2
WC (Albany)	1.08	0.48	0.64	0.40	0.06	-85.0
Snowy Monaro					171.00	
Median	5.30	6.93	6.45	4.50	10.40	
Mean	19.83	23.04	20.59	21.36	27.56	

Table A12 C14 – Percentage of calls answered by an operator within 30 seconds, by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
Central Coast		46.0	71.0	64.0	78.0	21.9
Icon Water	73.1	73.5	77.9	66.6	72.8	9.3
Hunter Water	69.0	58.0	56.0	60.0	64.0	6.7
Unitywater	72.0	83.0	80.0	78.0	75.0	-3.8
SA Water	85.4	85.9	86.2	91.3	85.2	-6.6
TasWater	86.5	87.1	83.0	92.1	84.5	-8.3
Barwon Water	79.0	67.0	76.5	83.4	74.5	-10.6
WC (Perth)	62.6	56.1	52.7	41.0	34.6	-15.6
Yarra Valley Water	54.4	90.2	88.5	87.9	65.3	-25.7
South East Water	52.6	58.2	72.4	60.7	41.5	-31.6
Gold Coast	45.0	54.1	62.1	39.5	23.7	-40.0
Sydney Water	76.0	69.0	72.0	88.0	41.0	-53.4
Greater Western Water					56.0	
Logan	71.3					
Median	71.7	68.0	74.4	72.3	65.3	
Mean	68.9	69.0	73.2	71.0	61.2	
Large						
Central Highlands Water (Vic)	79.7	70.7	62.0	46.2	77.1	66.7
Coliban Water	86.5	83.0	81.2	54.1	69.0	27.5
Redland City		81.0	82.0	80.0	83.4	4.2
Gippsland Water	83.5	67.8	62.2	75.8	77.6	2.3
Goulburn Valley Water	98.6	96.7	95.3	94.3	94.0	-0.3
Toowoomba	80.0	81.0	83.0	79.0	78.0	-1.3
North East Water	96.0	98.4	98.6	98.8	96.5	-2.3
Townsville		47.7	47.7	49.1	43.3	-11.8
Shoalhaven	98.0	98.0	98.0	98.0	58	-40.8
Median	86.5	81.0	82.0	79.0	77.6	
Mean	88.9	80.5	78.9	75.0	75.2	
Medium						
Bundaberg	95.0	96.0	82.0	42.9	54.9	28.0
Tweed	50.0	69.0	72.0	68.0	75.0	10.3
Albury	50.0	60.0	60.0	72.0	78.0	8.3
Mackay	97.0	97.0	97.0	98.0	98.5	0.5
East Gippsland Water	99.0	99.0	99.0	99.0	99.4	0.4
Eurobodalla	65.0	66.0	65.0	62.0	62.0	0.0
Wannon Water	98.8	98.6	98.2	98.4	98.4	0.0

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
South Gippsland Water	98.8	98.6	98.4	96.8	96.0	-0.8
Coffs Harbour	99.0	76.0	73.0	75.0	73.0	-2.7
Lower Murray Water	95.0	94.0	89.0	93.6	91.0	-2.7
GWMWater	91.4	90.9	92.9	92.8	89.0	-4.1
Dubbo		69.0	93.0	95.0	89.0	-6.3
Port Macquarie Hastings	96.0	75.0	78.0	89.0	75.0	-15.7
Wingecarribee	97.0	99.0		71.0	43.0	-39.4
Gladstone	100.0	79.7	78.3	78.0	0.0	-100.0
Fitzroy River Water	80.0	75.9				
Tamworth				0.0		
Wagga Wagga (S)	94.0	92.0				
Median	95.5	90.9	85.5	83.5	78.0	
Mean	87.9	84.5	84.0	77.0	74.8	
Small						
Lismore	80.0	70.0	70.0	72.0	78.0	8.3
Orange	76.0	72.0	73.0	70.0	72.0	2.9
Bega Valley	50.0	70.0	90.0	90.0	90.0	0.0
Cassowary Coast		50.0	65.0	65.0	65.0	0.0
Westernport Water	98.2	98.7	97.0	97.0	97.0	0.0
Whitsunday	84.4	86.6	85.1	81.2	79.0	-2.7
Gympie	72.0	78.0	71.0	73.5	69.8	-5.0
Kempsey	45.0		93.0	93.0	80.0	-14.0
Ballina	100.0	90.0				
Bathurst	100.0	100.0				
Busselton (W)					94.4	
Essential Energy	78.0	60.0	63.0			
Goldenfields Water (W)	100.0	100.0				
Goulburn Mulwaree					69.0	
Western Downs	91.0	94.0	76.0	48.4		
Median	82.2	82.3	74.5	73.5	78.5	
Mean	81.2	80.8	78.3	76.7	79.4	

Table A13 A8 – Water main breaks, bursts and leaks (mains breaks per 100 km), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
Central Coast	14.4	12.1	11.6	9.9	14.1	42.4
Unitywater	4.1	4.2	4.9	3.5	4.7	34.3
South East Water	37.1	36.9	31.8	25.2	27.6	9.5
Yarra Valley Water	46.3	43.9	43.8	28.6	31.3	9.4
Barwon Water	29.4	32.3	25.1	23.2	25.1	8.2
Hunter Water	30.0	27.0	28.3	20.2	21.0	4.0
SA Water	13.6	15.0	13.5	13.3	13.3	0.0
WC (Perth)	11.1	11.6	11.5	10.9	10.2	-6.4
Gold Coast	6.4	9.1	10.2	9.5	8.7	-8.4
Logan	5.1	5.8	6.7	6.0	5.2	-13.3
Icon Water	16.3	14.7	13.6	12.0	10.0	-16.7
TasWater		40.7	32.6	51.9	43.1	-17.0
Sydney Water	32.8	24.7	29.2	20.8	17.2	-17.3
Urban Utilities	22.5	30.0	31.1	25.4	18.6	-26.8
Greater Western Water					18.5	
Median	16.3	19.9	19.4	16.8	17.2	
Mean	20.7	22.0	21.0	18.6	17.9	
Large						
Redland City	3.1	4.0	3.0	3.9	5.9	51.3
Toowoomba	29.0	12.4	9.1	9.1	12.3	35.2
Coliban Water	28.5	25.8	26.4	21.5	23.7	10.2
North East Water	10.3	11.9	13.7	11.2	12.0	7.1
Central Highlands Water (Vic)	25.4	20.9	19.7	16.8	17.7	5.4
P&W (Darwin)	10.7	9.8	12.7	14.0	14.1	0.7
Goulburn Valley Water	16.2	17.0	13.2	13.9	13.7	-1.4
Cairns	23.0	20.0	20.1	20.6	19.8	-3.9
Gippsland Water	25.1	26.9	20.5	19.7	18.6	-5.6
Shoalhaven	6.5	6.1	11.2	6.5	5.8	-10.8
Townsville	18.3	21.7	27.6	21.8	19.1	-12.4
WC (Mandurah)	2.8	4.8	2.3	2.7	2.0	-25.9
Median	17.2	14.7	13.4	13.9	13.9	
Mean	16.6	15.1	15.0	13.5	13.7	
Medium						
Gladstone	10.8	98.5	63.7	10.8	87.1	706.5
South Gippsland Water	34.3	32.7	24.0	22.2	36.6	64.9
Fraser Coast	3.6	7.0	7.9	5.3	6.6	24.5

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Dubbo	9.7	7.8	5.4	12.9	15.1	17.1
Wannon Water	8.3	5.2	5.1	7.3	8.0	9.6
Lower Murray Water	26.2	33.4	26.4	19.6	20.5	4.6
Mackay	6.6	7.3	7.2	6.2	6.4	3.2
Queanbeyan	6.5	15.8	21.4	23.2	23.5	1.3
MidCoast Council	8.9	8.3	13.7	15.1	15.2	0.7
GWMWater	58.5	57.1	45.2	41.7	39.9	-4.3
Tweed	7.5	9.5	9.3	11.8	11.1	-5.9
Coffs Harbour	9.7	8.2	11.0	9.1	8.2	-9.9
East Gippsland Water	17.1	15.9	15.4	13.4	10.6	-20.9
Wingecarribee	8.1	14.6	8.3	6.3	4.9	-22.2
Eurobodalla	9.1	28.1	17.2	42.0	30.9	-26.4
Fitzroy River Water	12.3	11.2	10.8	10.3	7.3	-29.1
Albury	3.9	4.5	3.5	4.3	2.8	-34.9
Tamworth	6.8	10.1	3.7	4.7	2.9	-38.3
Riverina Water (W)	8.1	6.0	16.7	18.2	10.6	-41.8
Clarence Valley	5.9	9.4	86.1	7.3	3.9	-46.6
Bundaberg	3.9	4.6	22.0	32.7	17.3	-47.1
Port Macquarie Hastings	4.2	5.7	7.9	8.5	1.1	-87.1
Median	8.2	9.4	12.3	11.3	10.6	
Mean	12.3	18.2	19.6	15.1	16.8	
Small						
Kempsey	5.1	10.6	5.5	5.9	19.5	230.5
Westernport Water	20.0	21.2	11.0	10.5	19.8	88.6
Gympie	9.8	9.8	9.8	10.6	16.0	50.9
Southern Downs	1.1	7.2	7.2	8.1	11.4	40.7
WC (Kal–Boulder) (W)	19.7	19.3	21.2	9.8	12.9	31.6
Byron	17.1	27.4	13.1	48.2	61.9	28.4
Cassowary Coast	12.7	18.2	20.8	21.9	27.3	24.7
Western Downs	18.2	15.1	7.2	25.1	30.4	21.1
Whitsunday	19.4	20.4	16.2	19.5	23.2	19.0
WC (Australind/Eaton)	6.9	6.5	6.5	4.4	5.2	18.2
Bathurst	15.0	7.2	4.2	3.5	3.9	11.4
Central Highlands	42.1	37.7	33.9	24.9	26.8	7.6
P&W (Alice Springs)	44.3	36.2	43.1	31.0	31.4	1.3
Livingstone	1.0	3.5	3.2	3.9	3.8	-2.6
WC (Albany)	15.1	9.0	11.5	13.5	11.9	-11.9
Armidale	13.2	17.3	20.1	14.3	12.4	-13.3
WC (Geraldton)	32.5	28.6	22.6	14.9	12.0	-19.5

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Busselton (W)	9.7	9.0	7.4	7.9	5.2	-34.2
Aqwest-Bunbury (W)	9.9	5.9	6.1	7.6	4.6	-39.5
Goulburn Mulwaree	19.7	8.2	14.4	4.7	2.8	-40.4
Lismore	39.9	43.2	52.7	20.9	12.3	-41.1
Goldenfields Water (W)	15.0	16.7	18.5	15.1	8.6	-43.0
Essential Energy	24.6	15.2	22.3	9.9	4.5	-54.5
Orange	8.7	6.3	7.4	10.9	3.1	-71.6
Bega Valley	13.1	5.7	4.7	11.6	3.0	-74.1
Mount Barker					50	
Snowy Monaro				8.9		
Median	15.0	15.1	11.5	10.8	12.2	
Mean	17.4	16.2	15.6	14.1	16.3	

Table A14 A14 – Number of sewer mains breaks and chokes per 100 km of sewer main (breaks and chokes/ 100 km), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
Gold Coast	5.1	4.9	6.2	3.8	5.7	50.0
SA Water	43.0	46.0	48.0	49.3	51.0	3.4
Central Coast	37.0	38.0	33.0	30.0	30.0	0.0
South East Water	16.2	19.0	20.7	16.2	16.1	-0.6
Barwon Water	36.1	51.2	53.8	55.8	53.9	-3.4
Unitywater	16.4	17.1	19.8	9.8	8.9	-9.2
Sydney Water	70.0	74.0	66.0	49.0	42.0	-14.3
Yarra Valley Water	30.7	38.4	42.4	32.3	27.6	-14.6
Logan	10.7	9.0	9.8	8.1	6.6	-18.5
Hunter Water	50.6	44.9	42.8	33.6	27.3	-18.8
WC (Perth)	17.0	17.0	18.4	17.5	14.1	-19.4
Urban Utilities	20.9	18.4	21.1	24.0	19.0	-20.8
TasWater	45.0	36.6	41.2	56.6	42.8	-24.4
Icon Water	55.6	72.1	83.8	52.3	34.7	-33.7
Greater Western Water					16.9	
Median	33.4	37.3	37.1	31.1	27.3	
Mean	32.5	34.8	36.2	31.3	26.4	
Large						
Shoalhaven	11.0	3.0	3.0	3.0	17.0	466.7
Gippsland Water	9.1	7.8	6.9	1.5	3.4	126.7
Cairns	14.5	15.1	12.9	12.4	16.7	34.7
Coliban Water	29.8	20.5	22.3	17.8	20.7	16.3
WC (Mandurah)	7.0	11.0	8.5	6.8	7.6	11.8
Redland City	3.6	2.3	2.7	13.9	15.2	9.4
Townsville	2.8	7.3	54.8	54.4	57.4	5.5
Toowoomba	64.6	44.2	13.5	20.1	18.7	-7.0
North East Water	10.3	10.3	13.9	10.6	9.1	-14.2
Central Highlands Water (Vic)	19.1	20.5	19.2	19.7	16.7	-15.2
P&W (Darwin)	14.3	9.9	12.7	8.6	6.9	-19.8
Goulburn Valley Water	6.1	10.3	13.8	14.9	10.7	-28.2
Median	10.7	10.3	13.2	13.2	15.9	
Mean	16.0	13.5	15.3	15.3	16.7	
Medium						
Tweed	0.0	0.0	0.0	1.0	6.0	500.0
Gladstone	5.6	7.9	8.4	2.0	9.4	370.0
Eurobodalla	33.0	37.0	29.0	13.0	27.0	107.7

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Port Macquarie Hastings	14.0	9.0	6.0	15.0	30.0	100.0
Tamworth	8.0	7.0	12.0	11.0	20.0	81.8
Lower Murray Water	16.0	19.0	16.0	10.4	17.0	63.5
Dubbo	38.0	40.0	63.0	50.0	62.0	24.0
Albury	9.0	44.0	52.0	81.0	83.0	2.5
Bundaberg	11.5	13.1	20.3	30.1	29.9	-0.7
Fitzroy River Water	17.0	21.7	18.3	16.5	16.3	-1.2
Wagga Wagga (S)	73.0			57.0	55.0	-3.5
Wingecarribee	26.0	45.0	8.0	15.0	14.0	-6.7
GWMWater	42.1	43.0	43.2	50.5	43.8	-13.3
MidCoast Council	22.0	24.0	27.0	21.0	18.0	-14.3
East Gippsland Water	7.6	6.9	8.1	7.1	5.4	-23.9
Queanbeyan	59.0	101.0	55.0	116.0	84.0	-27.6
South Gippsland Water	13.4	36.6	13.3	12.5	8.9	-28.8
Wannon Water	12.5	12.1	9.2	8.1	5.2	-35.8
Fraser Coast	7.1	7.9	9.4	6.5	3.6	-44.6
Clarence Valley	36.0	64.0	66.0	11.0	5.0	-54.5
Coffs Harbour	84.0	82.0	88.0	82.0	31.0	-62.2
Mackay	2.2	3.5	3.1	4.6	1.3	-71.7
Median	15.0	21.7	16.0	14.0	17.5	
Mean	24.4	29.7	26.4	28.2	26.2	
Small						
Snowy Monaro				6.0	13.0	116.7
P&W (Alice Springs)	6.3	3.2	6.6	5.9	11.3	91.5
Orange	83.0	90.0	40.0	45.0	64.0	42.2
Westernport Water	6.0	6.0	3.6	5.4	7.6	40.7
Gympie	8.7	5.9	14.2	15.6	19.0	21.8
Byron	7.0	8.0	13.0	42.0	49.0	16.7
Livingstone	4.2	5.1	3.9	4.2	4.8	14.3
WC (Geraldton)	12.0	9.0	5.0	3.4	3.7	8.8
Southern Downs	0.3	34.2	64.4	30.8	32.7	6.2
WC (Bunbury) (S)	14.0	11.0	6.4	7.7	8.1	5.2
Central Highlands	7.6	6.5	25.6	9.6	9.6	0.0
Essential Energy	122.0	115.0	143.0	167.0	151.0	-9.6
Western Downs	2.8	4.4	4.7	4.0	3.6	-10.0
Kempsey	22.0	5.0	12.0	33.0	29.0	-12.1
Armidale	49.0	51.0	58	47.0	41.0	-12.8
Lismore	26.0	17.0	24.0	28.0	24.0	-14.3
WC (Australind/Eaton)	9.0	7.0	6.3	7.1	5.9	-16.9

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
WC (Albany)	17.0	21.0	21.1	22.9	16.5	-27.9
Kal-Boulder (S)	39.0	33.0	34.0	24.3	13.7	-43.6
Bathurst	55.0	49.0	36.0	44.0	23.0	-47.7
Cassowary Coast	4.4	3.9	3.0	6.9	3.5	-49.3
Bega Valley	27.0	18.0	18.0	14.0	7.0	-50.0
WC (Busselton) (S)	2.0	3.0	13.2	5.6	2.5	-55.4
Whitsunday	15.5	17.6	7.6	32.2	11.7	-63.7
Goulburn Mulwaree	69.0	44.0	44.0	277.0	33.0	-88.1
Ballina	0.0					
Mount Barker					1.0	
Median	12.0	10.0	13.7	15.6	12.3	
Mean	24.4	23.7	25.3	35.5	22.7	

Table A15 A15 – Number of property connection sewer breaks and chokes (breaks and chokes/1,000 properties), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
Central Coast	3.20	3.60	3.10	3.00	3.90	30.00
SA Water	28.00	28.00	29.00	28.0	35.00	25.00
South East Water	4.80	5.20	4.90	3.90	4.04	3.60
Sydney Water	0.30	0.30	0.30	0.20	0.20	0.00
TasWater		10.70	12.60	6.90	6.70	-2.90
Barwon Water	6.00	9.40	9.30	10.00	9.60	-4.00
Yarra Valley Water	6.72	8.12	8.00	5.60	5.30	-5.40
Gold Coast	2.30	1.80	2.20	1.70	1.50	-11.80
Unitywater	1.10	1.20	1.40	1.30	1.10	-15.40
Hunter Water	10.00	10.30	9.80	8.20	6.60	-19.50
Urban Utilities	3.10	2.90	2.90	3.10	2.30	-25.80
Icon Water	10.40	13.80	15.70	10.50	7.30	-30.50
Logan	1.30	1.00	1.20	0.90	0.60	-33.30
Greater Western Water					2.84	
Median	4.00	5.20	4.90	3.90	3.970	
Mean	6.44	7.41	7.72	6.41	6.21	
Large						
Coliban Water	4.30	3.60	3.30	0.50	1.07	114.00
Redland City	1.10	1.00	1.10	1.0	1.40	40.00
Cairns	2.70	2.70	2.30	2.20	2.90	31.80
North East Water	3.00	3.00	2.70	3.20	3.50	9.40
Goulburn Valley Water	5.00	4.60	7.50	5.80	5.70	-1.70
Shoalhaven	0.00	3.50	3.10	2.20	2.10	-4.50
Central Highlands Water (Vic)	3.80	4.90	4.60	5.60	5.15	-8.00
P&W (Darwin)	2.00	1.40	1.00	1.20	0.99	-17.50
Gippsland Water	2.20	1.30	1.40	1.40	1.10	-21.40
Toowoomba	2.50	1.00	2.30	1.60	1.10	-31.20
Townsville	3.20	5.50	5.40	7.20	4.60	-36.10
Median	2.70	3.00	2.70	2.20	2.10	
Mean	2.71	2.95	3.15	2.90	2.69	
Medium						
Port Macquarie Hastings	1.00	0.20	0.20	0.03	0.40	1,233.30
Gladstone	0.60	10.00	1.50	0.10	0.70	600.00
Coffs Harbour	0.50	20.00	3.00	3.10	11.20	261.30
Clarence Valley	20.40	5.70	4.20	3.40	6.90	102.90

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Wannon Water	3.00	3.00	2.00	1.90	2.60	36.80
Lower Murray Water	7.00	8.00	9.00	7.00	9.55	36.40
South Gippsland Water	3.70	10.10	5.10	4.00	4.71	17.80
Fraser Coast	2.80	2.30	1.50	3.40	3.80	11.80
Dubbo	6.90	7.00	8.60	8.90	9.80	10.10
Wagga Wagga (S)	5.00	7.80	8.50	6.90	7.00	1.40
Fitzroy River Water	9.70	11.60	12.80	12.30	11.60	-5.70
Albury	4.50	4.10	2.70	2.30	2.10	-8.70
Queanbeyan	0.00	0.00		2.20	1.90	-13.60
Mackay	2.20	0.60	1.20	1.70	1.40	-17.60
Tweed	0.80	0.30	0.40	0.50	0.40	-20.00
Eurobodalla	5.80	4.30	4.20	6.00	4.60	-23.30
Bundaberg	8.70	13.20	7.60	11.00	7.80	-29.10
GWMWater	35.10	34.90	33.10	35.50	23.73	-33.20
Wingecarribee	16.90	8.40	16.70	15.00	7.90	-47.30
East Gippsland Water	1.80	1.60	1.30	1.70	0.67	-60.60
Tamworth	10.20	5.40	2.90	6.30	2.40	-61.90
MidCoast Council		0.00				
Median	4.50	4.20	3.60	3.40	4.60	
Mean	6.98	5.98	6.33	6.34	5.77	
Small						
Orange	3.20	10.90	10.00	13.40	28.30	111.20
Byron	9.60	14.90	16.80	10.90	20.00	83.50
Westernport Water	3.30	4.40	1.80	1.50	1.97	31.30
P&W (Alice Springs)	1.30	0.90	4.10	1.30	1.70	30.80
Central Highlands	10.20	10.30	8.60	10.90	13.20	21.10
Cassowary Coast	0.80	1.00	0.30	0.70	0.80	14.30
Essential Energy	51.30	51.70	60.00	61.40	68.60	11.70
Kempsey	6.20	21.00	23.50	12.40	12.20	-1.60
Southern Downs	7.60	11.30	7.10	5.70	5.40	-5.30
Lismore	21.30	9.50	8.90	9.70	8.90	-8.20
Whitsunday	1.40	0.10	0.70	3.00	2.70	-10.00
Goulburn Mulwaree	18.0	14.70	12.60	10.40	9.10	-12.50
Western Downs	2.00	0.80	4.60	8.10	6.90	-14.80
Armidale	27.30	32.90	34.10	23.90	14.50	-39.30
Livingstone	1.40	2.20	2.20	3.40	2.00	-41.20
Bathurst	4.90	4.90	3.00	4.90	2.60	-46.90
Gympie	4.00	0.60	1.90	2.30	1.10	-52.20

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Bega Valley	4.40	2.20	0.80	1.90	0.50	-73.70
Kal-Boulder (S)	1.80	0.00	0.00	0.00		
Mount Barker					1.20	
Median	4.40	4.90	4.60	5.70	5.40	
Mean	9.47	10.23	10.58	9.78	10.61	

Table A16 A10 – Real losses: service connections (L/service connection/day), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
South East Water	47.0	66.0	53.0	47.0	65.0	38.3
WC (Perth)	83.6	85.0	84.7	71.7	95.0	32.5
Barwon Water	48.0	34.0	21.0	24.0	30.0	25.0
TasWater	277.0	313.0	361.0	272.0	308	13.2
Urban Utilities	75.0	74.0	70.0	61.0	67.0	9.8
Yarra Valley Water	60.0	49.0	42.0	37.0	40.0	8.1
Logan	76.5	83.1	70.8	66.3	70.9	6.9
Hunter Water	86.0	79.0	69.0	64.0	67.0	4.7
Sydney Water	93.0	94.0	85.0	74.0	77.0	4.1
Gold Coast	76.4	69.3	68.0	65.5	65.8	0.5
Icon Water	83.0	45.0	49.0	55.0	52.0	-5.5
SA Water	76.0	78.0	90.0	85.0	77.0	-9.4
Central Coast	35.0	37.0	58.0	68.0	59.0	-13.2
Unitywater	55.2	49.8	54.1	52.7	40.1	-23.9
Greater Western Water					0.1	
Median	76.2	71.7	68.5	64.8	65.8	
Mean	83.7	82.6	84.0	74.5	74.3	
Large						
Cairns	21.4	46.3	31.3	34.8	64.5	85.3
Shoalhaven	64.0	71.0	74.0	52.0	90.0	73.1
Redland City	16.5	11.6	25.6	18.4	28.5	54.9
WC (Mandurah)	93.8	41.9	47.8	45.3	58.3	28.5
Gippsland Water	80.0	90.0	71.0	70.0	72.0	2.9
Toowoomba	81.0	66.9	73.4	96.3	98.6	2.4
Central Highlands Water (Vic)	40.0	50.0	42.0	50.0	50.0	0.0
P&W (Darwin)	222.0	142.0	276	297.0	281.0	-5.4
North East Water	59.0	70.0	54.0	51.0	44.0	-13.7
Goulburn Valley Water	118.0	100.0	80.0	107.0	78.0	-27.1
Coliban Water	60.0	72.0	86.0	70.0	40.0	-42.9
Townsville	306.4	342.9	333.7	152.9	86.8	-43.2
Median	72.0	70.5	72.2	61.0	68.2	
Mean	96.8	92.0	99.6	87.1	82.6	
Medium						
MidCoast Council	57.0	37.0	40.0	22.0	61.0	177.3
Clarence Valley	43.0	126.0	30.0	47.0	110.0	134.0
Riverina Water (W)	57.0	85.0	2.0	63.0	101.0	60.3

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Queanbeyan	101.0	92.0	142.0	27.0	42.0	55.6
Lower Murray Water	0.0	0.0	0.0	0.0	0.1	50.0
Gladstone	47.8	50.8	96.0	60.3	90.3	49.8
Tweed	104.0	137.0	96.0	109.0	146.0	33.9
Fitzroy River Water	186.0	176.0	194.1	170.0	224.0	31.8
GWMWater	72.0	119.0	0.0	0.1	0.1	28.6
Coffs Harbour	62.0	42.0	44.0	38.0	45.0	18.4
Wingecarribee	117.0	95.0	77.0	76.0	88.0	15.8
Fraser Coast	80.7	54.0	62.1	53.1	59.0	11.1
Port Macquarie Hastings	45.0	77.0	87.0	64.0	70.0	9.4
Eurobodalla	52.0	51.0	50.0	50.0	54.0	8.0
South Gippsland Water	105.0	122.8	102.6	118.9	119.5	0.5
Wannon Water	70.0	70.0	70.0	70.0	70.0	0.0
East Gippsland Water	55.8	27.8	43.1	56.0	47.0	-16.1
Tamworth	55.0	55.0	87.0	82.0	61.0	-25.6
Albury	63.0	44.0	19.0	23.0	17.0	-26.1
Dubbo	4.0	86.0	121.0	106.0	77.0	-27.4
Mackay	189.9	186.0	111.0	228.1	116.4	-49.0
Bundaberg	215.5	133.7	163.6	135.4	59.2	-56.3
Median	62.5	81.0	73.5	61.6	65.5	
Mean	81.0	84.9	74.4	72.7	75.3	
Small						
Goulburn Mulwaree	95.0	119.0	40.0	12.0	38.0	216.7
Westernport Water	42.0	11.0	11.0	11.0	31.0	181.8
Lismore	103.0	96.0	78.0	75.0	108.0	44.0
Essential Energy	101.0	111.0	76.0	67.0	94.0	40.3
Busselton (W)	115.0	119.0	162.0	127.0	177.0	39.4
WC (Kal–Boulder) (W)	102.4	78.0	120.6	79.6	100.2	26.0
Orange	112.0	113	39.0	29.0	35.0	20.7
Southern Downs	27.8	29.0	35.4	106.5	125.3	17.7
Western Downs	170.5	52.1	6.7	118.7	134.5	13.3
Whitsunday	144.7	251.4	323.1	220.1	247.0	12.2
Bega Valley	51.0	50.0	54.0	41.0	46.0	12.2
WC (Albany)	111.0	163.9	176.5	76.5	84.5	10.4
Livingstone	0.0	116.8	245.0	166.2	181.1	9.0
Aqwest-Bunbury (W)	108.0	98.0	95.0	103.0	107.0	3.9
WC (Geraldton)	209.7	161.6	162.6	234.4	226.8	-3.2
Cassowary Coast	458.8	461.8	472.4	372.5	358.4	-3.8
Ballina	57.0	100.0	116.0	117.0	112.0	-4.3

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Gympie	133.2	185.4	113.7	131.9	117.6	-10.8
Goldenfields Water (W)	151.0	54.0	89.0	167.0	146	-12.6
Kempsey	114.0	90.0	45.0	45.0	35.0	-22.2
WC (Australind/Eaton)	124.4	142.3	87.4	168.4	104.9	-37.7
Byron	84.0	49.0	49.0	44.0	26.0	-40.9
P&W (Alice Springs)	118.0	92.0	246.0	208.0	100.0	-51.9
Armidale	129.0	127.0	28.0	186.0	46.0	-75.3
Bathurst	84.0	58.0	47.0			
Central Highlands	253.7	200.0	261.9		304.0	
Median	111.5	105.5	88.2	111.8	107.0	
Mean	123.1	120.4	122.3	121.1	123.4	

Table A17 E12 – Total net greenhouse gas emissions per 1,000 properties (t CO₂ equivalents/1,000 properties), by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
Logan	187	163	185	173	186	7.2
Unitywater	199	212	228	245	252	3.1
Gold Coast		246	250	236	239	1.2
Sydney Water	173	180	175	169	168	-0.9
Hunter Water	163	357	344	309	294	-4.9
Urban Utilities	183	182	178	180	166	-7.8
Barwon Water	257	267	267	176	161	-8.4
Icon Water	268	363	331	196	177	-9.3
WC (Perth)	754	510	701	695	567	-18.5
South East Water	63	49	42	45	35	-21.5
Central Coast	436	449	472	533	415	-22.1
Yarra Valley Water	43	40	35	26	20	-22.7
SA Water	302	426	340	345	236	-31.5
Greater Western Water					78	
TasWater	179	196				
Median	187	229	250	196	181	
Mean	247	260	273	256	214	
Large						
Townsville	294	368	433	165	482	192.4
P&W (Darwin)	229	215	213	199	223	12.1
Central Highlands Water (Vic)	208	236	200	175	196	11.8
Shoalhaven	479	754	739	763	831	8.9
Coliban Water	384	443	385	341	338	-0.8
Gippsland Water	543	617	483	480	472	-1.8
North East Water	697	653	619	599	578	-3.4
Redland City	34	190	184	190	180	-5.0
Toowoomba	501	633	617	635	585	-8.0
Cairns	256	254	228	247	224	-9.5
WC (Mandurah)	350	257	377	387	323	-16.4
Goulburn Valley Water	1,004	1,080	1,290	1,170	555	-52.6
Median	367	405	409	364	405	
Mean	415	475	481	446	416	
Medium						
MidCoast Council	426	453	416	454	844	85.9
Dubbo	505	563	468	427	740	73.3

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Albury	418	383	367	271	339	25.2
Wingecarribee	442	416	733	913	1,064	16.5
GWMWater	477	566	473	436	492	12.8
Wannon Water	696	704	611	528	578	9.5
Coffs Harbour	459	386	428	419	427	1.9
East Gippsland Water	351	368	341	307	310	0.8
Port Macquarie Hastings	304	482	527	489	489	0.0
Tweed	730	420	413	391	380	-2.8
Lower Murray Water	643	624	578	540	523	-3.1
Fitzroy River Water	475	445	562	559	535	-4.2
Clarence Valley	252	181	169	233	208	-10.7
South Gippsland Water	454	446	424	391	348	-11.2
Bundaberg		251	677	338	200	-41.0
Queanbeyan	200	169	184	243	140	-42.4
Tamworth	469	376	391	370	212	-42.7
Eurobodalla	530	500	495	404	177	-56.2
Fraser Coast	0					
Mackay		0	0	0		
Median	456	420	428	404	404	
Mean	435	407	435	406	445	
Small						
Lismore	64	223	185	255	375	47.1
Livingstone			391	370	439	18.7
Western Downs	334	472	475	509	600	18.0
Goulburn Mulwaree	670	744	687	855	948	10.9
Ballina	378	456	459	772	849	10.0
Bathurst	278	434	388	395	426	7.8
Southern Downs			168	599	646	7.8
WC (Albany)	368	356	364	362	372	2.7
WC (Geraldton)	331	332	343	322	325	1.1
Kempsey	321	460	682	821	822	0.1
Orange	596	482	668	672	672	0.0
Byron	385	383	386	417	416	-0.2
Whitsunday	355	408	475	497	492	-0.9
Essential Energy	1,220	835	368	354	338	-4.5
WC (Australind/Eaton)	323	316	321	310	287	-7.5
Bega Valley	417	413	284	476	435	-8.6
Westernport Water	399	394	384	367	329	-10.4

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
P&W (Alice Springs)	822	859	878	882	757	-14.1
Cassowary Coast		412	290	319	257	-19.7
Gympie		434	405	362	267	-26.4
Central Highlands			291	296	199	-32.8
Armidale	436	423	326	719	124	-82.8
Snowy Monaro					1,096	
Median	378	423	385	406	426	
Mean	453	465	419	497	499	

Table A18 H3 – Percentage of population where microbiological compliance was achieved, by utility size group, 2017–18 to 2021–22

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Major						
South East Water	100.0	100.0	100.0	99.9	100.0	0.1
Barwon Water	100.0	100.0	100.0	100.0	100.0	0.0
Central Coast	100.0	100.0	100.0	100.0	100.0	0.0
Gold Coast	100.0	100.0	100.0	100.0	100.0	0.0
Hunter Water	100.0	100.0	100.0	100.0	100.0	0.0
Icon Water	100.0	100.0	100.0	100.0	100.0	0.0
Logan	100.0	100.0	100.0	100.0	100.0	0.0
SA Water	100.0	100.0	100.0	100.0	100.0	0.0
Sydney Water	100.0	100.0	100.0	100.0	100.0	0.0
Unitywater	100.0	100.0	100.0	100.0	100.0	0.0
Urban Utilities	100.0	100.0	100.0	100.0	100.0	0.0
WC (Perth)	100.0	100.0	100.0	100.0	100.0	0.0
Yarra Valley Water	100.0	100.0	100.0	100.0	100.0	0.0
Greater Western Water					100.0	
TasWater	99.8					
Median	100.0	100.0	100.0	100.0	100.0	
Mean	100.0	100.0	100.0	100.0	100.0	
Large						
Gippsland Water	100.0	100.0	100.0	99.0	100.0	1.0
Goulburn Valley Water	100.0	100.0	100.0	99.5	100.0	0.5
Central Highlands Water (Vic)	99.7	100.0	100.0	99.8	100.0	0.2
Cairns	100.0	100.0	100.0	100.0	100.0	0.0
Coliban Water	99.5	100.0	94.3	100.0	100.0	0.0
North East Water	100.0	100.0	100.0	100.0	100.0	0.0
P&W (Darwin)	100.0	100.0	100.0	100.0	100.0	0.0
Redland City	100.0	100.0	100.0	100.0	100.0	0.0
Shoalhaven	100.0	100.0	100.0	100.0	100.0	0.0
Toowoomba	100.0	100.0	100.0	100.0	100.0	0.0
Townsville	100.0	100.0	100.0	100.0	100.0	0.0
WC (Mandurah)	100.0	100.0	100.0	100.0	100.0	0.0
Median	100.0	100.0	100.0	100.0	100.0	
Mean	99.9	100.0	99.5	99.9	100.0	
Medium						
Albury	100.0	100.0	100.0	100.0	100.0	0.0
Bundaberg	100.0	100.0	100.0	100.0	100.0	0.0
Wannon Water	100.0	100.0	100.0	100.0	100.0	0.0

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Tweed	100.0	100.0	100.0	100.0	100.0	0.0
Tamworth	100.0	100.0	100.0	100.0	100.0	0.0
South Gippsland Water	100.0	99.0	100.0	100.0	100.0	0.0
Fitzroy River Water	100.0	100.0	100.0	100.0	100.0	0.0
Riverina Water (W)	100.0	100.0	100.0	100.0	100.0	0.0
Queanbeyan	100.0	100.0	100.0	100.0	100.0	0.0
Port Macquarie Hastings	100.0	100.0	100.0	100.0	100.0	0.0
MidCoast Council	100.0	100.0	100.0	100.0	100.0	0.0
Mackay	100.0	100.0	100.0	100.0	100.0	0.0
Lower Murray Water	100.0	100.0	100.0	100.0	100.0	0.0
Gladstone	100.0	100.0	100.0	100.0	100.0	0.0
Fraser Coast	100.0	100.0	100.0	100.0	100.0	0.0
Eurobodalla	100.0	100.0	100.0	100.0	100.0	0.0
East Gippsland Water	100.0	100.0	100.0	100.0	100.0	0.0
Dubbo	100.0	100.0	100.0	100.0	100.0	0.0
Coffs Harbour	100.0	100.0	100.0	100.0	100.0	0.0
Clarence Valley	100.0	100.0	100.0	100.0	100.0	0.0
Wingecarribee	100.0	100.0	100.0	100.0	100.0	0.0
GWMWater	99.4	100.0	100.0	100.0	97.0	-3.0
Median	100.0	100.0	100.0	100.0	100.0	
Mean	100.0	100.0	100.0	100.0	99.9	
Small						
Aqwest-Bunbury (W)	100.0	100.0	100.0	100.0	100.0	0.0
Lismore	100.0	100.0	100.0	100.0	100.0	0.0
Westernport Water	100.0	100.0	100.0	100.0	100.0	0.0
Western Downs	72.5	100.0	100.0	100.0	100.0	0.0
WC (Kal–Boulder) (W)	100.0	100.0	100.0	100.0	100.0	0.0
WC (Geraldton)	100.0	100.0	100.0	100.0	100.0	0.0
WC (Australind/Eaton)	100.0	100.0	100.0	100.0	100.0	0.0
WC (Albany)	100.0	100.0	100.0	100.0	100.0	0.0
Southern Downs	100.0	100.0	99.5	100.0	100.0	0.0
Snowy Monaro				100.0	100.0	0.0
P&W (Alice Springs)	100.0	100.0	100.0	100.0	100.0	0.0
Orange	100.0	100.0	100.0	100.0	100.0	0.0
Livingstone	100.0	100.0	100.0	100.0	100.0	0.0
Kempsey	100.0	100.0	100.0	100.0	100.0	0.0
Armidale	100.0	100.0	100.0	100.0	100.0	0.0
Gympie	100.0	100.0	98.6	100.0	100.0	0.0
Goulburn Mulwaree	100.0	100.0	100.0	100.0	100.0	0.0

Utility	2017–18	2018–19	2019–20	2020–21	2021–22	Change from previous year (%)
Goldenfields Water (W)	100.0	100.0	100.0	100.0	100.0	0.0
Essential Energy	100.0	100.0	100.0	100.0	100.0	0.0
Central Highlands	100.0	100.0	100.0	100.0	100.0	0.0
Cassowary Coast	99.3	98.9	97.5	100.0	100.0	0.0
Byron	100.0	100.0	100.0	100.0	100.0	0.0
Busselton (W)	100.0	100.0	100.0	100.0	100.0	0.0
Bega Valley	100.0	100.0	100.0	100.0	100.0	0.0
Bathurst	100.0	100.0	100.0	100.0	100.0	0.0
Ballina	100.0	100.0	100.0	100.0	100.0	0.0
Whitsunday	100.0	100.0	100.0	100.0	100.0	0.0
Median	100.0	100.0	100.0	100.0	100.0	
Mean	98.9	100.0	99.8	100.0	100.0	

Appendix B 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 National Water Initiative (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 3 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 2021 Urban NPR.

- 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.
- Auditable indicators are those with the indicator codes W7, W8, W11, W11.3, W12, W14, W18, W18.5, W19, W26, W27, A2, A3, A5, A6, A8 to A11, A14, A15, E1 to E3, E8, E12, E12.1, C2, C4, C8, C13, C14, C15, C17 to C19, H3, H4, F1 to F8, F11 to F16, F20 to F30, P7, and P8.

B1 2021–22 Indicator audit status summary

Table B1 Status of indicator audits undertaken within each jurisdiction

Jurisdiction	Audit activities
Australian Capital Territory	The most recent audit conducted on the NPR data was for 2020–21, as it was an auditing year. Auditing is usually conducted every 3 years and Icon Water will conduct an audit in accordance with this timeframe.
New South Wales	<p>In the New South Wales metropolitan area, the most recent audit conducted on the NPR data was in late 2022. The next audit will be conducted in late 2023.</p> <p>In the New South Wales country area, all the reported utilities have had their 2021–22 report year’s data audited as per the requirements. All the water utilities in regional NSW reporting to NPR will be requested to conduct their next audit in the 2024–25 reporting year.</p>
Northern Territory	The Department of Treasury and Finance has not required the utilities providers, Power and Water – Alice Springs and Power and Water – Darwin, to audit their National Performance Reporting data. Some NPR indicators are audited at an aggregate level.
Queensland	The Department of Regional Development, Manufacturing and Water has not required service providers to audit their National Performance Reporting data.

Jurisdiction	Audit activities
South Australia	The most recent audit conducted on the NPR data was in October 2021 for 2020–21 data as it was an auditing year. Auditing is usually conducted every 3 years on the full set of indicators. The next audit will depend on auditing requirements following the NPR review.
Tasmania	TasWater’s performance indicators are audited in 3 tranches over a 3-year period. In 2021–22, selected TasWater performance indicators were audited. This audit concluded in September 2022. The next round of audits will be conducted in 2023–24 (commencing in July 2023) and will be in relation to 2022–23 financial year data.
Victoria	Victoria has an annual audit program. The Essential Service Commission conducted their last regular annual audit in 2022.
Western Australia	Urban NPR data audits were undertaken in 2021–22 in Western Australia. Auditing is conducted every 3 years. The next round of audits is scheduled for 2024–25.

Appendix C Utilities reporting

Utility name	Display name in tables and graphs	Jurisdiction	Utility size group
Albury City Council	Albury	New South Wales	Medium
Aqwest–Bunbury Water Corporation (W)	Aqwest–Bunbury (W)	Western Australia	Small
Armidale Regional Council	Armidale	New South Wales	Small
Ballina Shire Council	Ballina	New South Wales	Small
Barwon Water	Barwon Water	Victoria	Major
Bathurst Regional Council	Bathurst	New South Wales	Small
Bega Valley Shire Council	Bega Valley	New South Wales	Small
Bundaberg Regional Council	Bundaberg	Queensland	Medium
Busselton Water (W)	Busselton (W)	Western Australia	Small
Byron Shire Council	Byron	New South Wales	Small
Cairns Regional Council	Cairns	Queensland	Large
Cassowary Coast Regional Council	Cassowary Coast	Queensland	Small
Central Coast Council	Central Coast	New South Wales	Major
Central Gippsland Water	Gippsland Water	Victoria	Large
Central Highlands Regional Council	Central Highlands	Queensland	Small
Central Highlands Water	Central Highlands Water (Vic)	Victoria	Large
City of Gold Coast	Gold Coast	Queensland	Major
City of Kalgoorlie–Boulder (S)	Kal–Boulder (S)	Western Australia	Small
Clarence Valley Council	Clarence Valley	New South Wales	Medium
Coffs Harbour City Council	Coffs Harbour	New South Wales	Medium
Coliban Water	Coliban Water	Victoria	Large
Dubbo Regional Council	Dubbo	New South Wales	Medium
East Gippsland Water	East Gippsland Water	Victoria	Medium
Essential Energy	Essential Energy	New South Wales	Small
Eurobodalla Shire Council	Eurobodalla	New South Wales	Medium
Fraser Coast Regional Council	Fraser Coast	Queensland	Medium
Greater Western Water	Greater Western Water	Victoria	Major
Gladstone Area Water Board	GAWB	Queensland	Bulk water
Gladstone Regional Council	Gladstone	Queensland	Medium
Goldenfields Water County Council	Goldenfields Water (W)	New South Wales	Small
Goulburn Mulwaree Council	Goulburn Mulwaree	New South Wales	Small
Goulburn Valley Water	Goulburn Valley Water	Victoria	Large
GWMWater	GWMWater	Victoria	Medium
Gympie Regional Council	Gympie	Queensland	Small
Hunter Water Corporation	Hunter Water	New South Wales	Major

Utility name	Display name in tables and graphs	Jurisdiction	Utility size group
Icon Water Limited	Icon Water	Australian Capital Territory	Major
Kempsey Shire Council	Kempsey	New South Wales	Small
Lismore City Council	Lismore	New South Wales	Small
Livingstone Shire Council	Livingstone	Queensland	Small
Logan City Council	Logan	Queensland	Major
Lower Murray Water	Lower Murray Water	Victoria	Medium
Mackay Regional Council	Mackay	Queensland	Medium
Melbourne Water	Melbourne Water	Victoria	Bulk water
MidCoast Council	MidCoast Council	New South Wales	Medium
Mount Barker District Council	Mount Barker	South Australia	Small
North East Water	North East Water	Victoria	Large
Orange City Council	Orange	New South Wales	Small
Port Macquarie Hastings Council	Port Macquarie Hastings	New South Wales	Medium
Power and Water – Darwin	P&W (Darwin)	Northern Territory	Large
Power and Water – Alice Springs	P&W (Alice Springs)	Northern Territory	Small
Queanbeyan–Palerang Regional Council	Queanbeyan	New South Wales	Medium
Queensland Bulk Water Supply Authority	Seqwater	Queensland	Bulk water
Redland City Council	Redland City	Queensland	Large
Riverina Water County Council	Riverina Water (W)	New South Wales	Medium
Snowy Monaro Regional Council	Snowy Monaro	New South Wales	Small
Rockhampton Regional Council	Fitzroy River Water	Queensland	Medium
Rous Water	Rous Water	New South Wales	Bulk water
Shoalhaven City Council	Shoalhaven	New South Wales	Large
SA Water Corporation	SA Water	South Australia	Major
South East Water Ltd	South East Water	Victoria	Major
South Gippsland Water	South Gippsland Water	Victoria	Medium
Southern Downs Regional Council	Southern Downs	Queensland	Small
Sydney Water Corporation	Sydney Water	New South Wales	Major
Tamworth Regional Council	Tamworth	New South Wales	Medium
TasWater	TasWater	Tasmania	Major
Toowoomba Regional Council	Toowoomba	Queensland	Large
Townsville City Council	Townsville	Queensland	Large
Tweed Shire Council	Tweed	New South Wales	Medium
Unitywater	Unitywater	Queensland	Major
Urban Utilities	Urban Utilities	Queensland	Major
Wagga Wagga Council	Wagga Wagga (S)	New South Wales	Medium
Wannon Water	Wannon Water	Victoria	Medium
Water Corporation – Perth	WC (Perth)	Western Australia	Major
Water Corporation – Albany	WC (Albany)	Western Australia	Small

Utility name	Display name in tables and graphs	Jurisdiction	Utility size group
Water Corporation – Australind/Eaton	WC (Australind/Eaton)	Western Australia	Small
Water Corporation – Bunbury (S)	WC (Bunbury) (S)	Western Australia	Small
Water Corporation – Busselton (S)	WC (Busselton) (S)	Western Australia	Small
Water Corporation – Geraldton	WC (Geraldton)	Western Australia	Small
Water Corporation – Kalgoorlie–Boulder (W)	WC (Kal–Boulder) (W)	Western Australia	Small
Water Corporation – Mandurah	WC (Mandurah)	Western Australia	Large
WaterNSW	WaterNSW	New South Wales	Bulk water
Western Downs Regional Council	Western Downs	Queensland	Small
Westernport Water	Westernport Water	Victoria	Small
Whitsunday Regional Council	Whitsunday	Queensland	Small
Wingecarribee Shire Council	Wingecarribee	New South Wales	Medium
Yarra Valley Water Corporation	Yarra Valley Water	Victoria	Major

Appendix D Urban performance indicators

Indicator category	Indicator subcategory	Indicator code	Indicator name
Assets	Water treatment plants	A1	Number of water treatment plants providing full treatment (plants)
Assets	Other water assets	A2	Length of water mains (km)
Assets	Other water assets	A3	Number of properties served per km of water main (properties/km)
Assets	Wastewater assets	A4	Number of wastewater treatment plants (plants)
Assets	Wastewater assets	A5	Length of sewer mains and channels (km)
Assets	Wastewater assets	A6	Number of properties served per km of sewer main (properties/km)
Assets	Water main breaks	A8	Number of water main breaks, bursts, and leaks, per 100 km of water mains (mains breaks/100 km)
Assets	Water losses	A9	Infrastructure leakage index (ILI)
Assets	Water losses	A10	Real losses: service connections (L/service connection/day)
Assets	Water losses	A11	Real losses: water mains (kL/km water main/day)
Assets	Wastewater breaks and chokes	A14	Number of sewer mains breaks and chokes per 100 km (breaks and chokes/100 km)
Assets	Wastewater breaks and chokes	A15	Number of property connection sewer breaks and chokes per 1,000 properties (breaks and chokes/1,000 properties)
Assets	Water main breaks	IA8	Number of water main breaks, bursts, and leaks (mains breaks)
Customers	Connected properties and population	C1	Population receiving services: water supply (population 000s)
Customers	Connected properties and population	C2	Number of connected residential properties: water supply (properties 000s)
Customers	Connected properties and population	C3	Number of connected non-residential properties: water supply (properties 000s)
Customers	Connected properties and population	C4	Total number of connected properties: water supply (properties 000s)
Customers	Connected properties and population	C6	Number of connected residential properties: wastewater (properties 000s)
Customers	Connected properties and population	C7	Number of connected non-residential properties: wastewater (properties 000s)
Customers	Connected properties and population	C8	Total number of connected properties: wastewater (properties 000s)
Customers	Water quality complaints	C9	Number of water quality complaints per 1,000 properties: water supply (complaints/1,000 properties)
Customers	Water service complaints	C10	Number of water service complaints per 1,000 properties (complaints/1,000 properties)

Indicator category	Indicator subcategory	Indicator code	Indicator name
Customers	Wastewater service complaints	C11	Number of sewerage service complaints per 1,000 properties (complaints /1,000 properties)
Customers	Billing and account complaints	C12	Number of billing and account complaints per 1,000 properties: water supply and sewerage (complaints/1,000 properties)
Customers	Total water and wastewater complaints	C13	Number of water and sewerage complaints per 1,000 properties (complaints/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 supply (minutes)
Customers	Water interruption frequency	C17	Number of unplanned interruptions per 1,000 properties: water supply (interruptions/1,000 properties)
Customers	Restrictions or legal action for non-payment of water bill	C18	Number of restrictions for non-payment of water bills per 1,000 properties (restrictions/1,000 properties)
Customers	Restrictions or legal action for non-payment of water bill	C19	Number of legal actions taken for non-payment of water bills per 1,000 properties (legal actions/1,000 properties)
Customers	Water quality complaints	IC9	Number of water quality complaints: water supply (complaints)
Customers	Water service complaints	IC10	Number of water service complaints (complaints)
Customers	Wastewater service complaints	IC11	Number of sewerage service complaints (complaints)
Customers	Billing and account complaints	IC12	Number of billing and account complaints: water supply and sewerage (complaints)
Customers	Total water and wastewater complaints	IC13	Number of water and sewerage complaints (complaints)
Customers	Water interruption frequency	IC17	Number of unplanned interruptions: water supply (interruptions)
Customers	Restrictions or legal action for non-payment of water bill	IC18	Number of restrictions for non-payment of water bills (restrictions)
Customers	Restrictions or legal action for non-payment of water bill	IC19	Number of legal actions taken for non-payment of water bills (legal actions)
Environment	Comparative wastewater treatment levels	E1	Percentage of wastewater only treated to a primary level (%)
Environment	Comparative wastewater treatment levels	E2	Percentage of wastewater only treated to a secondary level (%)
Environment	Comparative wastewater treatment levels	E3	Percentage of wastewater treated to a tertiary level (%)
Environment	Net greenhouse gas emissions	E8	Percentage of biosolids reused (%)
Environment	Net greenhouse gas emissions	E9	Net greenhouse gas emissions per 1,000 properties: water supply (t CO ₂ equivalents/1,000 properties)

Indicator category	Indicator subcategory	Indicator code	Indicator name
Environment	Net greenhouse gas emissions	E9.1	Net greenhouse gas emissions per ML: water supply – bulk utility (t CO ₂ equivalents/ML)
Environment	Net greenhouse gas emissions	E10	Net greenhouse gas emissions per 1,000 properties: wastewater (t CO ₂ equivalents/1,000 properties)
Environment	Comparative wastewater treatment levels	E10.1	Net greenhouse gas emissions per ML: wastewater – bulk utility (t CO ₂ equivalents/ML)
Environment	Net greenhouse gas emissions	E11	Net greenhouse gas emissions per 1,000 properties: other (t CO ₂ equivalents/1,000 properties)
Environment	Net greenhouse gas emissions	E11.1	Net greenhouse gas emissions per ML: other – bulk utility (t CO ₂ equivalents/ML)
Environment	Net greenhouse gas emissions	E12	Total net greenhouse gas emissions per 1,000 properties (t CO ₂ equivalents/1,000 properties)
Environment	Net greenhouse gas emissions	E12.1	Total net greenhouse gas emissions per ML: bulk utility (t CO ₂ equivalents/ML)
Environment	Comparative wastewater treatment levels	IE1	Volume of wastewater only treated to a primary level (ML)
Environment	Comparative wastewater treatment levels	IE2	Volume of wastewater only treated to a secondary level (ML)
Environment	Comparative wastewater treatment levels	IE3	Volume of wastewater treated to a tertiary level (ML)
Environment	Net greenhouse gas emissions	IE9	Net greenhouse gas emissions: water supply (t CO ₂ equivalents)
Environment	Net greenhouse gas emissions	IE10	Net greenhouse gas emissions: wastewater (t CO ₂ equivalents)
Environment	Net greenhouse gas emissions	IE11	Net greenhouse gas emissions: other (t CO ₂ equivalents)
Environment	Net greenhouse gas emissions	IE12	Total net greenhouse gas emissions (t CO ₂ equivalents)
Finance	Revenue	F1	Total revenue: water supply (\$000s)
Finance	Revenue	F2	Total revenue: wastewater (\$000s)
Finance	Revenue	F3	Total income for the utility (\$000s)
Finance	Revenue	F4	Percentage of residential revenue from usage charges: water supply (%)
Finance	Revenue	F5	Revenue per property: water supply (\$/property)
Finance	Revenue	F5.1	Revenue per ML: water supply – bulk utility (\$/ML)
Finance	Revenue	F6	Revenue per property: wastewater (\$/property)
Finance	Revenue	F6.1	Revenue per ML: wastewater – bulk utility (\$/ML)
Finance	Revenue	F7	Total income per property (\$/property)
Finance	Revenue	F7.1	Total income per ML: bulk utility (\$/ML)
Finance	Revenue from community service obligations (CSOs)	F8	Community service obligations ratio
Finance	Costs	F9	Written-down replacement cost of fixed water supply assets (\$000s)
Finance	Costs	F10	Written-down replacement cost of fixed wastewater assets (\$000s)

Indicator category	Indicator subcategory	Indicator code	Indicator name
Finance	Costs	F11	Operating cost per property: water supply (\$/property)
Finance	Costs	F11.1	Operating cost per ML: water supply – bulk utility (\$/ML)
Finance	Costs	F12	Operating cost per property: wastewater (\$/property)
Finance	Costs	F12.1	Operating cost per ML: wastewater – bulk utility (\$/ML)
Finance	Costs	F13	Combined operating cost per property: water supply and wastewater (\$/property)
Finance	Costs	F13.1	Combined operating cost per ML: water supply and wastewater – bulk utility (\$/ML)
Finance	Capital expenditure	F14	Capital expenditure: water supply (\$000s)
Finance	Capital expenditure	F15	Capital expenditure: wastewater (\$000s)
Finance	Capital expenditure	F16	Total capital expenditure: water supply and wastewater (\$000s)
Finance	Economic real rate of return	F17	Economic real rate of return: water supply
Finance	Economic real rate of return	F18	Economic real rate of return: wastewater
Finance	Economic real rate of return	F19	Economic real rate of return: water supply and wastewater
Finance	Dividends	F20	Dividend (\$000s)
Finance	Dividends	F21	Dividend payout ratio
Finance	Net debt to equity	F22	Net debt to equity ratio
Finance	Interest cover	F23	Interest cover ratio
Finance	Dividends	F24	Net profit after tax (NPAT) (\$000s)
Finance	Community service obligations (CSOs)	F25	Community service obligation (\$000s)
Finance	Capital works grants	F26	Capital works grants: water supply (\$000s)
Finance	Capital works grants	F27	Capital works grants: wastewater (\$000s)
Finance	Capital Expenditure	F28	Capital expenditure per property: water supply (\$/property)
Finance	Capital Expenditure	F28.1	Capital expenditure per ML: water supply – bulk utility (\$/ML)
Finance	Capital Expenditure	F29	Capital expenditure per property: wastewater (\$/property)
Finance	Capital Expenditure	F29.1	Capital expenditure per ML: wastewater – bulk utility (\$/ML)
Finance	Capital works grants	F30	Net profit after tax (NPAT) ratio
Finance	Costs	IF11	Operating cost: water supply (\$000s)
Finance	Costs	IF12	Operating cost: wastewater (\$000s)
Public Health	Water quality compliance	H1	Water quality guidelines (provided as text)
Public Health	Water quality compliance	H3	Percentage of population where microbiological compliance was achieved (%)
Public Health	Water quality compliance	H4	Number of zones where chemical compliance was achieved (zones)
Public Health	Water quality compliance	H4a	Total number of zones (zones)

Indicator category	Indicator subcategory	Indicator code	Indicator name
Public Health	Water quality compliance	H5	Risk-based drinking water management plan externally assessed (yes/no)
Pricing	Residential tariff structure	P1	Tariff structure: water supply (provided as text)
Pricing	Residential tariff structure	P1.2	Fixed charge: water supply (\$)
Pricing	Residential tariff structure	P1.3	Usage charge: step 1 (\$/kL)
Pricing	Residential tariff structure	P1.4	Usage charge: step 2 (\$/kL)
Pricing	Residential tariff structure	P1.5	Usage charge: step 3 (\$/kL)
Pricing	Residential tariff structure	P1.6	Usage charge: step 4 (\$/kL)
Pricing	Residential tariff structure	P1.7	Usage charge: step 5 (\$/kL)
Pricing	Residential tariff structure	P1.12	Special levies: water supply (\$)
Pricing	Residential tariff structure	P1.13	Income from special levies retained by the utility: water supply (yes/no)
Pricing	Residential tariff structure	P1.3a	Upper bound of usage: step 1 (kL)
Pricing	Residential tariff structure	P1.4a	Upper bound of usage: step 2 (kL)
Pricing	Residential tariff structure	P1.5a	Upper bound of usage: step 3 (kL)
Pricing	Residential tariff structure	P1.6a	Upper bound of usage: step 4 (kL)
Pricing	Residential tariff structure	P1.7a	Upper bound of usage: step 5 (kL)
Pricing	Annual bill	P2	Annual residential bill based on 200 kL per annum: water supply (\$)
Pricing	Annual bill	P3	Typical residential bill: water supply (\$)
Pricing	Residential tariff structure	P4	Tariff structure: wastewater (provided as text)
Pricing	Residential tariff structure	P4.1	Fixed charge: wastewater (\$)
Pricing	Residential tariff structure	P4.2	Usage charge: wastewater (\$/kL)
Pricing	Residential tariff structure	P4.3	Special levies: wastewater (\$)
Pricing	Residential tariff structure	P4.4	Income from special levies retained by the utility: wastewater (yes/no)
Pricing	Annual bill	P5	Annual residential bill based on 200 kL per annum: wastewater (\$)
Pricing	Annual bill	P6	Typical residential bill: wastewater (\$)
Pricing	Annual bill	P7	Total annual residential bill based on 200 kL per annum: water supply and wastewater (\$)
Pricing	Annual bill	P8	Total typical residential bill: water supply and wastewater (\$)
Water Resources	Sources	W1	Volume of water sourced from surface water (ML)
Water Resources	Sources	W2	Volume of water sourced from groundwater (ML)
Water Resources	Sources	W3.1	Volume of water sourced from desalinated marine water (ML)
Water Resources	Transfers	W5	Total volume of water received from other service providers or operational areas within the urban water system (ML)

Indicator category	Indicator subcategory	Indicator code	Indicator name
Water Resources	Transfers	W5.3	Volume of water, excluding recycled water, received from other service providers or operational areas within the urban water supply system (ML)
Water Resources	Transfers	W6	Volume of recycled water received from other service providers or operational areas within the urban water supply system (ML)
Water Resources	Sources	W7	Total volume of water sourced (ML)
Water Resources	Use	W8	Total volume of water supplied to residential customers (ML)
Water Resources	Use	W8.3	Volume of water supplied to residential customers (ML)
Water Resources	Use	W9	Total volume of water supplied to non-residential customers (ML)
Water Resources	Use	W9.3	Volume of water supplied to non-residential customers (ML)
Water Resources	Use	W10.1	Volume of non-revenue water (ML)
Water Resources	Production	W11	Total volume of urban water supplied (ML)
Water Resources	Production	W11.3	Volume of potable water produced for supply into the urban water supply system (ML)
Water Resources	Use	W12	Average volume of residential water supplied per property (kL/property)
Water Resources	Use	W13	Volume of water returned as environmental flows from outside of the urban water supply system (ML)
Water Resources	Transfers	W14	Total volume of water exported to other service providers or operational areas within the urban water supply system (ML)
Water Resources	Transfers	W14.3	Volume of water, excluding recycled water, exported to other service providers or operational areas within the urban water supply system (ML)
Water Resources	Transfers	W15	Volume of recycled water exported to other service providers or operational areas within the urban water supply system (ML)
Water Resources	Wastewater collected	W16	Volume of wastewater, excluding trade waste, collected (ML)
Water Resources	Wastewater collected	W17	Volume of trade waste collected (ML)
Water Resources	Wastewater collected	W18	Total volume of wastewater collected (ML)
Water Resources	Transfers	W18.1	Volume of wastewater exported to other service providers or operational areas within the urban wastewater system (ML)
Water Resources	Transfers	W18.2	Volume of wastewater received from other service providers or operational areas within the urban wastewater system (ML)

Indicator category	Indicator subcategory	Indicator code	Indicator name
Water Resources	Extraction for sewer mining	W18.3	Volume of wastewater taken through sewer mining (ML)
Water Resources	Inflow to plant	W18.4	Volume of wastewater inflow to wastewater treatment plants (ML)
Water Resources	Outflow from plant	W18.5	Volume of treated effluent outflow from wastewater treatment plants (ML)
Water Resources	Wastewater collected	W19	Average volume of wastewater collected per property (kL/property)
Water Resources	Use	W21	Volume of recycled water supplied to non-residential customers (ML)
Water Resources	Use	W23	Volume of recycled water supplied as environmental flows (ML)
Water Resources	Use	W25.1	Volume of recycled water supplied to managed aquifer recharge (ML)
Water Resources	Use	W26	Total volume of recycled water supplied (ML)
Water Resources	Use	W27	Recycled water as a percentage of total wastewater collected
Water Resources	Use	W28.4	Volume of urban stormwater supplied to residential customers (ML)
Water Resources	Use	W28.5	Volume of urban stormwater supplied to non-residential customers (ML)
Water Resources	Use	W29	Volume of treated wastewater disposals (ML)
Water Resources	Outflow from plant	W30	Volume of wastewater losses and discharges (ML)
Water Resources	Use	W31	Volume of water returned to surface water or groundwater from the urban water supply system (ML)
Water Resources	Use	W20	Volume of recycled water supplied to residential customers (ML)

Appendix E CPI indexation

Period	CPI-weighted average	Change from previous period	Change applied to values
2021–22	122.8	4.4	No change
2020–21	117.5	1.6	1.045
2019–20	115.7	1.3	1.016
2018–19	114.1	1.6	1.030
2017–18	112.3	1.9	1.046
2016–17	110.2	1.8	1.066
2015–16	108.3	1.4	1.085
2014–15	106.8	1.7	1.100
2013–14	105.0	2.6	1.119
2012–13	102.3	2.3	1.149
2011–12	100.0	2.4	1.175
2010–11	97.7	3.1	1.203
2009–10	94.8	2.4	1.239
2008–09	92.6	3.1	1.269
2007–08	89.8	3.3	1.308
2006–07	86.9	3.0	1.352
2005–06	84.4	3.2	1.392
2004–05	81.8	2.4	1.436
2003–04	79.9	2.4	1.471



Appendix F Jurisdictional summaries

Jurisdictional summaries are provided to document the institutional arrangements within each state and territory for the planning and management of water supply and wastewater services. These summaries are written by the states and territories and updated annually.

F1 Australian Capital Territory

F1.1 Introduction

The ACT Government's Environment, Planning and Sustainable Development Directorate has several roles in water management within the ACT. It manages strategic water policy, including ACT implementation of national water reform and Murray–Darling Basin matters including Basin Plan implementation, 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. ACT water policy is expressed through the *Water Resources Act 2007*.

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

The Utilities Act provides for the Independent Competition and Regulatory Commission (ICRC) to issue licences and determine industry codes. Among other functions, the Utilities Act provides for the Essential Services Consumer Council.

The ICRC determines price directions for water utilities and regulates access agreements. A new price direction was issued in May 2018 for the next price path period up to 30 June 2023.⁹ An annual adjustment is made for water and sewerage services. Prices for water and sewerage services are increased in line with the consumer price index (CPI). The second factor is to incorporate the effect of any approved pass-through events on Icon Water's (formerly ACTEW Water) costs in prices in the following year. An industry panel adjustment mechanism is in place in order to share demand volatility risk between Icon Water and consumers.

F1.2 Water utilities in the ACT

ACTEW Corporation Limited (ACTEW), which was established as a corporation in 1995, is owned by the ACT Government and is subject to the Territory-Owned Corporations Act.

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. ActewAGL had previously undertaken this on behalf of ACTEW. The services were provided under the business name ACTEW Water. The change was carried out 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 expanded from 38 personnel to almost 400.

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

⁹ ICRC 2018, Regulated water and sewerage services prices 2018–23, Final Report, Canberra.

Icon Water has 2 subsidiary companies, Icon Retail Investments Limited and Icon Distribution Investments Limited. Icon Water owns and manages the water and sewerage business assets and owns 50% of ActewAGL through 2 subsidiary companies.

Icon Water provides water services to over 172,000 connected properties, with over 3,300 km of water mains, and sewerage services to 171,500 connections.

The ACT Auditor-General is Icon Water's auditor. Private firms provided internal audit services. Icon Water reports regularly to the ACT Government. Strategic planning for the sewage treatment plants culminated in the release of the *Lower Molonglo Water Quality Control Centre Strategic Plan*.

F1.3 Operation of water utilities

ACT Health regulates water quality under the territory's Public Health Act, in accordance with the *Australian Drinking Water Guidelines 2011*. Water quality testing was undertaken in accordance with these guidelines. Icon Water achieved 100% compliance the Public Health (Drinking Water) Code of Practice (2007) in 2019–20.¹⁰ Icon Water also published its *Annual drinking water quality report 2019–20* in accordance with the code in 2020.

Icon Water also provides water services to Queanbeyan City Council under the updated Queanbeyan Water Supply Agreement 2008.

The enlargement of the Cotter Dam was completed in August 2013. The Murrumbidgee–Googong pipeline (M2G) was completed in August 2012. Icon Water has incorporated the pipeline's operations and maintenance into its standard operating practices and it will be used when required.

F1.4 Performance reporting

Icon Water's commercial and business objectives, activities, and priorities, as agreed by voting shareholders, are detailed in its annual statement of corporate intent. Icon Water released its statement for 2017–18 to 2020–21 in May 2017.

The *Icon Water annual report to the ACT Government 2019–20* was provided to the ACT Government in September 2020.

Quarterly reports of progress on the priorities outlined in the statement of corporate intents, and for financial and operational matters as well as reports and briefings on key and emerging issues, were provided to the voting shareholders during the year.

F2 New South Wales

F2.1 Introduction

In New South Wales, urban water supply and sewerage services are provided by 3 state-owned water utilities, 93 local water utilities (LWUs)¹¹ and a number of privately owned utilities.

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 and price regulator for the 3 major state-owned water utilities in New South Wales: Hunter Water Corporation, Sydney Water Corporation, and WaterNSW (bulk water services in metropolitan and regional New South Wales). IPART is also the licence-compliance regulator for private water utilities in NSW and the price regulator that determines the maximum prices that 2 regional LWUs – Central Coast Council and Essential Energy (Broken Hill) – and one private water utility (the Sydney Desalination Plant) can charge their customers for the provision of water and sewerage services.

¹⁰ Icon Water Limited 2020, 2019–20 Annual report to the ACT Government, Canberra.

¹¹ In addition to 92 LWUs in regional New South Wales, Hawkesbury City Council provides sewerage services only within Sydney Water's area of operation.

The Department of Planning and Environment (DPE) oversees and monitors water utility performance and is the primary policy maker for all water utilities and regulator for the 93¹² regional LWUs, which serve a total urban population of 2.04 million (with coverage of 98% for water supply and 96% for sewerage). The infrastructure current replacement cost for regional LWUs is \$28.7 billion and annual revenue is \$1.41 billion as reported last financial year.

A number of other agencies, including NSW Health, the NSW Environment Protection Authority (EPA), the Office of Local Government, SafeWork NSW, the Natural Resource Access Regulator and Dam Safety NSW, are each responsible for aspects of the regulation of New South Wales water utilities.

The state's water utilities have obligations under Australian and New South Wales legislation, including the Australian Government's *Corporations Act 2001*, *Privacy Act 1988*, and *Water Act 2007*, and the following New South Wales legislation: *Water Management Act 2000*, *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 2015*, *Local Government Act 1993*, *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*, *Water Industry Competition Act 2006*, *Hunter Water Act 1991*, *Sydney Water Act 1994*, and the *Water NSW Act 2014*.

F2.2 Establishment of water utilities

The 3 New South Wales state-owned utilities, (Sydney Water Corporation, WaterNSW, and Hunter Water Corporation), are created by and derive their responsibilities and areas of operations from their respective Acts (the Sydney Water Act, the Water NSW Act, and the Hunter Water Act) and operate as major utilities under the Water Management Act.

The 90 LWUs derive their responsibilities from and operate mainly under the Local Government Act. Four LWUs (Central Coast Council, Essential Energy, WaterNSW [but only in relation to the Fish River water supply scheme] and Cobar Water Board) operate as water supply authorities under the Water Management Act.

F2.3 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 Corporation (under Part 5 of the Sydney Water Act), Hunter Water Corporation (under Part 5 of the Hunter Water Act), and WaterNSW (under Part 2 of the Water NSW Act). The operating licences include obligations relating to water quality, water conservation, system performance standards, environmental/catchment management, asset management, customer relations, compliance, and performance reporting. IPART also determines the maximum prices these utilities can charge their customers for water services.

IPART conducts major operational audits each year. These 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 Department of Planning and Environment is the primary regulator of LWUs, under sections 56ff and 409(6) of the Local Government Act, and administers the New South Wales Government's comprehensive [Water Supply and Sewerage Regulation and Assurance Framework](#) for LWUs. The Framework is the key policy and regulatory framework for strategic service planning, management, pricing, performance reporting and continuing performance improvement of the LWUs. A LWU may pay a dividend to council's general fund subject to demonstrating that it has reasonable strategic planning and pricing in place as per the Framework.

Under the *Regulation and assurance framework for LWUs* the department establishes what outcomes effective, evidence-based strategic planning must achieve and then assesses whether a local water utility's strategic planning and decision-making achieves these outcomes to a reasonable standard.

¹² The NSW Local Government Act 1993 has been amended as a consequential amendment to the NSW Water Industry Competition Amendment Act 2021, enabling DPE Water to be the primary regulator for Hawkesbury City Council's sewerage business. The amended provisions are expected to take effect once the Regulations are amended.

For effective, evidence-based strategic planning to occur, the department expects strategic planning to achieve the following outcomes to a reasonable standard:

- understanding service needs
- understanding water security
- understanding water quality
- understanding environmental impacts
- understanding system capacity and efficiency
- understanding other key risks and challenges:
- understanding solutions to deliver services
- understanding resourcing needs
- understanding revenue sources
- make and implement sound strategic decisions
- implement sound pricing and prudent financial management
- promote integrated water cycle management.

A reasonable standard is met if the utility considers and addresses an outcome in a way that is:

- **sufficient:** underpinned by evidence-based analysis that supports the conclusions reached
- **appropriate:** underpinned by relevant departmental guidance and industry standard approaches to conduct planning and reach conclusions
- **robust:** underpinned by evidence that draws on appropriate sources and recognises and rebuts potential alternative interpretations.

The assessment considerations that the department apply and how these may be addressed are set out in more detail in the Framework.

Proposed construction or modification of water or sewage treatment works or for the development of a water-recycling system by LWUs in New South Wales requires [approval under section 60 of the Local Government Act](#). This ensures that an independent and objective review of the proposed works is undertaken by the Department of Planning and Environment, where insights and expertise obtained from the department's involvement in overseeing the design and operation of these works can be effectively utilised. The review provides assurance that the proposed infrastructure will be fit for purpose and will provide a robust, safe, cost-effective, and sound solution, without wasteful 'gold-plating'. Similarly, the acceptance of a high-risk or medium-risk trade waste discharge to the sewerage system requires a departmental concurrence under section 90(1) of the Local Government Act.

Under section 61 of the Local Government Act, the department conducts 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 New South Wales is required to have appropriate qualifications and experience.

The department conducts operator-training courses for LWU water and sewage treatment works operators.

The annual performance of each of the LWUs activities and outcomes is publicly reported via the interactive [performance monitoring data dashboard](#) and the NSW Water supply and sewerage benchmarking reports.

NSW Health regulates water quality in New South Wales and administers functions relating to water suppliers (Sydney Water Corporation, Hunter Water Corporation, and the regional LWUs) under the Public Health Act. NSW Health also enters into memorandums of understanding with the metropolitan water utilities (including WaterNSW) 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 programs. NSW Health also conducts the NSW Drinking Water Quality Program, which tests and monitors the water quality of samples collected by the LWUs in accordance with the Australian Drinking Water Guidelines 2011.

Under the Public Health Act, each water supplier needs to prepare and implement a risk-based drinking water management system in accordance with the Australian Drinking Water Guidelines 2011. The water quality management system is regulated by NSW Health.

F2.4 Water utilities in New South Wales

Sydney Water Corporation, a statutory corporation wholly owned by the New South Wales Government, is Australia's largest water utility, with an area of operations covering almost 13,000 km². It provides drinking water, recycled water, wastewater services, and some stormwater services to more than 5 million people in Sydney, the Illawarra, and the Blue Mountains. Drinking water is sourced from a network of dams managed by WaterNSW, from the Hawkesbury River, and from the desalination plant at Kurnell before it is treated and delivered to customers.

WaterNSW is a state-owned corporation established in 2015 by the Water NSW Act through the merging of the Sydney Catchment Authority and State Water Corporation. WaterNSW supplies raw water in bulk. The urban component of WaterNSW reporting is based on the former Sydney Catchment Authority area of operations as defined in its operating licence and includes catchments in the Blue Mountains, Shoalhaven, Warragamba, upper Nepean, and Woronora areas. WaterNSW also provides bulk water services in regional New South Wales and operates the Fish River water supply scheme.

Hunter Water Corporation is a wholly state-owned corporation providing drinking water, recycled water, wastewater, and some stormwater services to almost 600,000 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.

Regional New South Wales currently has 93 LWUs. Ninety of these LWUs are either general purpose local government councils or county councils, which operate as financially separate to general council operations. Other LWUs operate as water supply authorities under the Water Management Act, including the Cobar Water Board, Essential Energy and WaterNSW for the Fish River Water Supply.¹³ The 93 regional LWUs in New South Wales range in area from 285 km² (Orange City Council) to over 50,000 km² (Central Darling Shire Council), while the population served ranges from 1,000 (Central Darling Shire Council) to over 340,000 (Central Coast Council). There are 28 LWUs that serve 10,000 or more connected properties.

Performance monitoring and reporting are considered important for public accountability and have been strongly endorsed by the New South Wales Government, IPART and the Productivity Commission.¹⁴

The state-owned water utilities are required to report on the performance indicators in their operating licences and this reporting is audited through the operating licence audit. The audit results are presented to the responsible minister. These utilities also report the National Water Initiative performance indicators required for the Urban NPR.

With the exception of the pricing and financial indicators, IPART audits one-third of the auditable NWI indicators each year. The audit is conducted concurrently with the annual operating licence audits. The Audit Office of NSW, or other qualified auditors, audits the pricing and financial NWI indicators once every 3 years.

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.

¹³ Councils exercising water supply and/or sewerage functions do so under the Local Government Act, including under a division generally administered by the minister responsible for water. Central Coast Council exercises its functions under both the Local Government Act and as a water supply authority under the Water Management Act. The Cobar Water Board, Essential Energy and WaterNSW (for the Fish River Water Supply) carry out their functions under the Water Management Act.

¹⁴ Productivity Commission 2011, Australia's urban water sector, Report No. 55, Final Inquiry Report, Canberra.

Department of Planning and Environment annually reports the performance of all the New South Wales utilities by way of its NSW Performance Monitoring and Reporting System.

- The audit of the 30 NWI financial performance indicators is affected by the annual independent audit of the financial statements of each of the 93 regional LWUs.
- All the auditable non-financial performance indicators are independently audited every 3 years for each of the 28 regional NSW utilities that are required to report nationally.

The remainder of the information reported in NSW Performance Monitoring and Reporting System is not independently audited. However, to assure data accuracy and reliability, the data are subject to a comprehensive quality assurance process.

The NSW Performance Monitoring and Reporting System functions as a 'one stop shop' to minimise red tape and to avoid duplication in reporting. The NSW Performance Monitoring and Reporting System provides LWU performance data to the Bureau of Meteorology annually (for the Urban NPR) and the Australian Bureau of Statistics, as well as for the NSW State of the Environment Report.

Private water utilities

In New South Wales, private utilities can also provide water and sewerage services if licensed under the Water Industry Competition Act (WIC Act). The WIC Act is designed to encourage competition in the supply of water and wastewater services and facilitate private sector delivery of recycled water infrastructure. The Act sets out a licensing and compliance framework and establishes strict rules to ensure drinking water meets Australian standards, recycled water is 'fit for purpose', and all services are delivered safely, reliably and with minimal environmental impacts.

The Minister for Lands and Water administers the WIC Act and is advised by the Department of Planning and Environment. IPART administers the licensing system, which includes assessing licence applications and making recommendations to the Minister on whether to grant a licence, as well as auditing and enforcing licences. All licensees are required to report annually against a limited suite of NPR indicators. At this stage, no current licences have the 10,000 connections that would trigger reporting requirements for this report.

The WIC Act commenced operation on 8 August 2008. There are 20 private water schemes licensed to operate in NSW. As of June 2022, these schemes were providing services to 8,248 drinking water customers, 11,424 recycled water customers and 10,302 sewerage customers. Comprehensive reforms of the licensing framework were enacted in 2021, including:

- narrowing the focus of regulation on higher-risk utility-like schemes such as large-scale drinking water production, recycling and sewerage schemes or those servicing 30 or more residential or small business customers
- separating the licensing of operators and retailers from the approval of individual schemes so operators don't need to apply for a new licence for each scheme they operate
- requiring more rigorous assessment of the financial viability of proposed schemes to check their longevity and affordability and minimise the risk of last-resort events
- strengthening customer protection by introducing a deemed standard customer contract and new operator of last-resort arrangements to protect customers if an operator should fail financially.

The reforms will come into effect in mid-2023 once the supporting regulations have been revised in line with the amendments to the Act.

F3 Northern Territory

F3.1 Introduction

The Northern Territory's *Water Supply and Sewerage Services Act 2000* provides the regulatory framework for the territory's water and sewerage industry. The NT Department of Treasury and Finance and the Northern Territory Treasurer are responsible for administering this Act insofar as it relates to economic regulation; the Northern Territory Minister for Essential Services in terms of its relationship to licensed supply and service; and the Department of Health (NT) in terms of its relationship to water quality standards.

The objects of the Water Supply and Sewerage Services Act 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
- to protect the interests of customers.

Among other things, this Act provides for the following:

- that the supply of water and sewerage services be licensed, and that licences issued by the Utilities Commission are for defined, gazetted, geographical areas
- that the Minister be responsible for the declaration of water supply and sewerage service licence areas (by notice in a government gazette).

Power and Water Corporation (the licensed utility) is subject to water quality monitoring programs 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 Water Supply and Sewerage Services Act.

Statutory conditions of water and sewerage licences issued under this Act include:

- that the licensee monitors and reports to the Utilities Commission on compliance with the licence
- that the licensee procures an audit, if required by the Utilities Commission, of its compliance with the terms of the licence.

The NT *Water Act 1992* is another major piece of legislation pertaining to the regulation of water in the territory. This Act provides for the investigation, allocation, use, control, protection, management and administration of water resources, and for related purposes. The Water Act also allows for the issue of waste discharge licences and water extraction licences by the Controller of Water Resources (Department of Environment, Parks and Water Security [NT]).

F3.2 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 program is based on the *Australian Drinking Water Guidelines 2011*.

While Power and Water Corporation has primary responsibility for providing safe drinking water, several 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 Environment, Parks and Water Security and the Northern Territory Environment Protection Authority (NT EPA) also have roles in protecting water quality, including the regulation and management of water resources and the regulation of pollution control.

The NT Department of Infrastructure, Planning and Logistics has a major role in protecting water quality through land-use planning in the territory. In addition, NT legislation such as the Water Act and the *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 NT 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 NT EPA on pollution incidents under the *NT Waste Management and Pollution Control Act 1998*.

Water and sewerage tariffs and charges for the Power and Water Corporation are regulated by the NT 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 *NT Utilities Commission Act 2000*. The Commission is also required to investigate any complaints made by customers about non-compliance with the prices outlined in the order.

F3.3 Water utilities in the Northern Territory

In the Northern Territory, Power and Water Corporation's water and sewerage business is licensed and is responsible for the supply of water and sewerage services to the territory's 5 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. Geographical coordinates (latitude and longitude) define the declared water supply and sewerage service licence.

F3.4 Performance reporting

Urban NPR data is gathered within Power and Water Corporation by a central coordinator, who collates the report, while 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 are reviewed and/or signed off at the senior management level. NPR data are signed off at the senior management level. Some NPR indicators are audited at an aggregate level.

F4 South Australia

F4.1 Introduction

The SA [Water Industry Act 2012](#) and [Water Industry Regulations 2012](#) establish the regulatory framework for the water and sewerage industry, covering licencing of retail services, economic regulation, technical regulation, water planning, and customer complaint handling. The Act commenced on 1 July 2012 and governs all water industry entities providing 'retail services' to SA customers.

[The Essential Services Commission](#) (the Commission) is the independent economic regulator of water and sewerage retail services in the state. The Commission's primary objective is to protect the long-term interests of SA consumers with respect to the price, quality and reliability of those services. The Commission's role includes industry licensing, consumer protection, retail pricing regulation and performance monitoring.

The [Department for Environment and Water \(DEW\)](#) is responsible for the management of the state's water resources through administering the *Landscape South Australia Act 2019*. It also has a role in policy development relevant to the Water Industry Act. Regional landscape boards are responsible for developing water allocation plans for prescribed water resource areas as required by the Landscape South Australia Act.

The [Office of the Technical Regulator \(OTR\)](#) and DEW share the role of jurisdictional coordinator for National Performance Reporting with DEW taking the lead on policy and OTR responsible for all other operational matters.

The OTR, which sits within the Department for Energy and Mining, has the following main functions under the Water Industry Act:

- development of technical standards in connection with the water industry
- monitoring and regulating technical standards with respect to water and sewerage infrastructure and associated equipment, products and materials (including on the customer's side of any connection point) and plumbing
- providing advice in relation to safety or technical standards in the water industry to the Commission at its request, and in the plumbing industry
- fulfilling any further function assigned to the Technical Regulator under the Act.

[SA Health ensures that drinking water](#) is delivered to consumers according to the requirements of the [Safe Drinking Water Act 2011](#) and the [Safe Drinking Water Regulations 2012](#). Under the Safe Drinking Water Act, all drinking water providers must:

- register as a drinking water provider
- implement a risk management plan
- report water quality incidents to SA Health
- provide water quality results to consumers
- commission audits and inspections.

Under the [SA Public Health Act 2011](#) and [SA Public Health \(Wastewater\) Regulations 2013](#), SA Health protects public health through the development and administration of prescribed codes, protocols, guidelines and public health policy for wastewater management, treatment, disposal, and recycled water use. The [Australian Guidelines for Water Recycling](#) are also applied to South Australian recycled water schemes.

SA Health assess and approve the design, installation and ongoing operation of:

- community wastewater management systems (CWMS)
- CWMS wastewater treatment plants
- recycled water supply and use from CWMS and SA Water networks
- on-site wastewater systems >40 equivalent persons.

Under the [Environment Protection Act 1993](#), the [SA Environment Protection Authority](#) licences the following activity:

Schedule 1(3)(4): Resource recovery, waste disposal and related activities - Wastewater treatment.

The conduct of wastewater treatment works, being sewage treatment works, a CWMS, winery wastewater treatment works or any other wastewater treatment works with the capacity to treat, during a 12 month period—

- a. in the case of works located wholly or partly within a water protection area—more than 5 megalitres of wastewater; or
- b. in the case of works located wholly outside of a water protection area—more than 50 megalitres of wastewater.

F4.2 Water utilities in South Australia

Any person or entity providing 'water retail services' to SA customers is required to be licensed by the Commission. The Commission has determined separate regulatory obligations for major retailers (those providing retail services to 50,000 or more connections) and small scale networks (also known as minor and intermediate water retailers, with less than 50,000 connections).

SA Water Corporation is the only major retailer in SA, and there are currently 68 other retailers (mainly council-run operations and some private businesses). SA Water Corporation is a government entity and, as the state's main supplier of urban water, is required to deliver, monitor, and report on its primary functions concerning:

- supply of water by reticulated systems
- storage, treatment and supply of bulk water
- removal and treatment of wastewater.

SA Water Corporation provides drinking water to approximately 823,600 connections, servicing around 99% of the state's drinking water customers. SA Water Corporation also provides sewerage services to approximately 642,700 connections, servicing around 87% of the state's sewerage customers.

Mount Barker District Council operate the largest Council wastewater treatment plant and recycled water scheme in SA. As an intermediate retailer Mount Barker District Council provides a retail service to over 13,700 connections across seven townships in the Adelaide Hills Region. Mount Barker District Council now meet the National performance report threshold and has begun reporting from the 2021-22 reporting year.

F4.3 Operation of water utilities

Section 35 of the Water Industry Act empowers the Commission to make a determination under the SA *Essential Services Commission Act 2002*, regulating prices, conditions relating to prices and price-fixing factors for water retail services.

The Commission made its final revenue determination for the *South Australian Water Corporation Act 1994* in June 2020, setting maximum allowed revenues for drinking water and sewerage retail services for the 4-year period from 1 July 2020 to 30 June 2024. SA Water Corporation and the South Australian Government are responsible for setting specific prices (such as supply and usage charges for residential and non-residential customers); however, those prices must comply with the Commission's allowed revenues.

A different, proportional approach to price regulation has been applied to other water retailers through a combination of pricing principles and a price-monitoring framework.

Pursuant to Part 4 of the Essential Services Commission Act 2002, the Commission is empowered to make industry codes and rules regulating the conduct or operations of a regulated industry or regulated entities. The Commission has devised a Water Retail Code for major retailers that sets out the minimum requirements to be complied with by SA Water Corporation when dealing with its customers, and it includes obligations relating to customer connections and the quality, safety, and reliability of water and sewerage supply. SA Water Corporation is required to meet several operational service standards relating to customer service, service interruptions, and new connections.

A water retail code for minor and intermediate retailers has been devised which sets out the behavioural standards and minimum requirements to be complied with by small scale networks when engaging with their customers.

F4.4 Performance reporting

The Commission produces an [annual performance report on the water and sewerage industry](#). The report covers customer service, financial assistance offered by retailers to customers infrastructure reliability performance and compliance issues. The Commission also publishes specific event reports, where material or major issues arise.

SA Water Corporation [reports against customer service and water service indicators quarterly](#) and in its annual report. The indicators include:

- compliance with the Australian Drinking Water Guidelines 2011
- the Water Quality Management Index
- compliance with water and sewerage services targets
- the Incident Response Index.

F5 Tasmania

F5.1 Introduction

The key piece of legislation governing the water and sewerage industry is the Tasmanian *Water and Sewerage Industry Act 2008* (the Industry Act). 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 Tasmanian Water and Sewerage Corporation Pty Ltd (TasWater) is the only licensed water utility in the state.

Industry regulators for the sector are the: Tasmanian Economic Regulator (TER), responsible for licensing, price regulation and service standards; Director, Environment Protection Authority (EPA) Tasmania, responsible for regulating wastewater treatment plants; Director of Public Health, responsible for regulating water quality and fluoridation; and the Secretary of the Department of Natural Resources and Environment Tasmania¹⁵, responsible for water licence allocations and regulating dam safety.

In addition to the Industry Act, regulatory requirements are imposed by Tasmanian legislation including the *Environmental Management and Pollution Control Act 1994*, the *Public Health Act 1997* and the *Water Management (Safety of Dams) Regulations 2015*.

F5.2 Water utilities in Tasmania

Since 1 July 2013, TasWater has owned, controlled and operated water supply and sewerage systems in Tasmania. As the only licensed water utility in the state, TasWater manages all aspects of the water supply chain, from dams and reservoirs to customer property connections and from customer sewer connections to wastewater treatment and disposal.

The licensing requirements place several regulatory obligations on TasWater 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 asset and emergency management and compliance.

TasWater's objectives, as prescribed by the Water and Sewerage Corporation Act 2012, are to:

- efficiently provide water and sewerage functions in Tasmania
- encourage water conservation, the demand management of water and the reuse of water on an economic and commercial basis
- be a successful business and, to this end:
 - operate its activities in accordance with good commercial practice
 - deliver sustainable returns to its members
 - deliver water and sewerage services to customers in the most cost-efficient manner.

TasWater is owned by Tasmania's 29 councils, with the Tasmanian Government also becoming a shareholder in early 2019.

F5.3 Operation of water utilities

TasWater is subject to various economic, environmental, public health and customer service regulatory requirements.

¹⁵ On 1 December 2021, the then Tasmanian Department of Primary Industries, Parks, Water and Environment changed its name to the Department of Natural Resources and Environment Tasmania.

The economic regulatory framework, established under the Industry Act, 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 industry, and providing sufficient funding for capital expenditure to improve compliance with regulatory obligations and ensure operational efficiencies.

EPA Tasmania administers and enforces the provisions of the Environmental Management and Pollution Control Act, which is principally concerned with the prevention, reduction and remediation of environmental harm. The Director of Public Health is responsible for drinking water quality and safety through the application of drinking water quality guidelines and for the fluoridation of drinking water through the application of a code of practice. The Dam Safety Regulator monitors TasWater's performance against its dam safety regulatory obligations and guideline requirements to ensure that the dams TasWater is responsible for do not pose an unacceptable level of risk to the public.

Independent regulation of water and sewerage prices in Tasmania commenced on 1 July 2012.

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 (that is, customers are required to be paying the same price for the same service by this date). However, at the end of 2021/22, a small number of customers are still to be transitioned to consistent pricing. 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 based on the assessed equivalent tenements (that is, the estimated demand placed on the system) of each property.

F5.4 Performance reporting

One of the TER's functions is to monitor and report on the state of the Tasmanian water and sewerage industry.¹⁶ The performance indicators reported upon are based on the National Performance Reporting (NPR) Framework with some additional Tasmanian based measures, as set out in the TER's *Tasmanian Water and Sewerage Industry Performance and Information Reporting Guideline, Version 1.6*.

TasWater is required to carry out regular independent audits (performance appraisals) to assess:

- its compliance with, and the adequacy of, its management and compliance plans
- the quality, reliability, and conformity of its regulatory information, including performance information.

Independent audits of TasWater's performance indicators are conducted at least once every three years as required by the NPR Audit Handbook. As a result, TasWater's performance indicators are audited in three tranches over a three-year period. The tranche one audit, of TasWater's performance indicator results for 2021/22, was completed in September 2022.

The TER's approach to regulatory reporting is set out in its *Regulatory Reporting Guideline, Version 5*. Its approach to managing non compliance is outlined in its *Compliance Enforcement Policy, Version 3*.

F6 Queensland

F6.1 Introduction

Regulation of the urban water sector is undertaken by a number of Queensland Government departments with the aim of providing 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.

F6.2 Water utilities in Queensland

There are 204 registered service providers in Queensland. Most are private entities and water boards that supply non-potable water for irrigation, commercial or stock and domestic purposes.

¹⁶ The TER's annual water and sewerage state of the industry reports are available from www.economicregulator.tas.gov.au.

Drinking water services are provided to communities by:

- 4 bulk water entities (Seqwater, SunWater, Gladstone and Mount Isa Water Board)
- 2 distributor-retailers in South East Queensland (SEQ) (Urban Utilities and Unitywater)
- 3 local governments in SEQ (Gold Coast, Logan and Redland City Council)
- 67 local governments outside SEQ private providers.

Despite the large number of drinking water service providers, 95% of connected properties receive water and sewerage services from the 22 service providers that report for the National Performance Reporting Framework. The remaining 5% of connected properties receive services from 52 small and very small service providers. In general, the communities these providers supply services to are very small and often geographically isolated.

This variation in scale means that there are significant differences in capacity and capability across the urban water sector in Queensland.

In addition to drinking water and sewerage service provision, there are 172 registered recycled water schemes in Queensland. Most of these schemes are managed by a local government (although a small number of recycled water schemes are run by a private entity).

F6.3 Operation of water utilities

Water and sewerage service provision is regulated by the *Water Supply (Safety and Reliability) Act 2008* (Water Supply Act). The purpose of the Water Supply Act is to provide for the safety and reliability of water supply across Queensland. The Department of Regional Development, Manufacturing and Water (RDMW) is the water supply regulator under Water Supply Act.

The powers and obligations for service provision, performance reporting, drinking water management, and recycled water management apply to registered service providers according to the services provided.

To protect public health, RDMW closely monitors and regulates drinking water in Queensland.

Drinking water service providers are required to have an approved drinking water quality management plan and must comply with the plan and any conditions placed upon the plan. Water quality monitoring and reporting are integral components of the plan. Drinking water service providers are responsible for ensuring the safe supply of drinking water to the community and managing incidents that compromise drinking water quality.

The *Public Health Act 2005* and the *Public Health Regulation 2018* include provisions relating to drinking water quality. As the administrator of the Public Health Act and the Public Health Regulation, Queensland Health has:

- set specific standards for drinking water quality in the Public Health Regulation
- the power to respond when drinking water supplied by a provider may present a risk to public health or be considered unsafe.

In addition to these provisions, Queensland Bulk Water Supply Authority (Seqwater) also has specific powers and obligations under the *Water Act 2000*, and SEQ services providers (Urban Utilities, Unitywater, City of Gold Coast, Logan City Council and Redland City Council) have powers and obligations under the *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009*.

Other Acts that regulate one or more aspects of service provision include the:

- *Water Act 2000* (managed by RDMW)
- *Public Health Act 2005* (managed by Queensland Health)
- *Water Fluoridation Act 2008* (managed by Queensland Health)
- *Environmental Protection Act 1994* (managed by the Department of Environment and Science).
- *Local Government Act 2009* (managed by the Department of State Development, Infrastructure, Local Government and Planning)
- *Planning Act 2016* (managed by the Department of State Development, Infrastructure, Local Government and Planning).
- *Plumbing and Drainage Act 2018* (managed by the Department of Energy and Public Works)
- *Queensland Competition Authority Act 1997* (managed by Queensland Treasury).

F6.4 Performance reporting

Urban water service providers are required to report on their performance under the Queensland Government Key Performance Indicator (KPI) Framework in the Water Supply Act. The KPI Framework captures almost all drinking water and sewerage service providers in Queensland and requires them to monitor and report on key performance indicators and publish an annual performance report. Larger providers (those with over 10,000 connections) are also required to report for the National Performance Reporting framework.

F7 Victoria

F7.1 Introduction

The Victorian Department of Environment, Land, Water and Planning (DELWP) has overall governance oversight, on behalf of the Victorian Minister for Water, for the establishment of water utilities and their performance in this state. This responsibility pertains to certain aspects of water utility performance and is also shared with the Victorian departments of Treasury and Finance (DTF, regarding business financial risks), Health and Human Services (DHHS, regarding water quality), the Victorian Environment Protection Authority (EPA, regarding environmental performance), and the Essential Services Commission (ESC, regarding 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*, and the *Environment Protection Act 1970*. In addition, regulatory instruments such as the Statement of Obligations (2015), the Water Industry Regulatory Order 2014, and the State Environment Protection Policy (SEPP) (Waters of Victoria) also impose some compliance and reporting obligations.

F7.2 Establishment of water utilities

The Victorian water sector is made up of 18 water utilities¹⁷ constituted under the Victorian Water Act. The key aspects of the frameworks governing drinking water quality, environmental protection, price regulation, and consumer protection are the same across all 18 water utilities.

Under section 41 of the Water Industry Act, water utilities are subject to statements of obligations, issued by the Minister for Water 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.

¹⁷ In 2021-22 the number of water utilities in Victoria went from 19 to 18 due to the formation of Greater Western Water from City West Water and Western Water.

F7.3 Operation of water utilities

Apart from DELWP, 4 other agencies jointly oversee the regulation of water utility operation in Victoria.

The DTF oversees governance of the water utilities' proposed strategic directions and business management activities in terms of their potential for financial risk to the utility and its implications for the Victorian Government, focusing on the state's budget, net debt position, and credit rating.

The DHHS oversees governance of water quality under the Safe Drinking Water Act 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 utilities. The Regulations establish an auditing framework.¹⁸ Under the legislation, the DHHS is required to publish an annual water quality report that is tabled in parliament by the Victorian Minister for Health.

The EPA regulates the environmental performance of the water utilities, particularly as it relates to treated wastewater quality, through a corporate licence (previously, each wastewater treatment plant was licensed). The level of wastewater treatment required usually depends on the type of waterway into which the treated wastewater is discharged. Under the licence provisions, water utilities must regularly sample and monitor wastewater quality and advise the EPA if there are specific incidents of non-compliance. A corporate licence also includes a requirement to submit an annual performance statement to the EPA.

Most wastewater treatment plants operated by the water utilities are subject to the SEPP (Waters of Victoria) schedules, which are developed and administered by the EPA. The schedules require wastewater treatment plant operators to ensure that the sustainable reuse of treated effluent and biosolids is maximised wherever possible.

Water utilities are also subject to EPA works approval permits before construction of new treatment plants or major alterations can begin.

The ESC is responsible for price regulation and setting service standards for water services in Victoria under Part 1A of the Water Industry Act, 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
- require regulated businesses to provide information.

F7.4 Water utilities in Victoria

The Victorian Government owns all 18 water utilities in the state. There are 4 water utilities in metropolitan Melbourne: Melbourne Water, Greater Western Water, South East Water Ltd, and Yarra Valley Water Corporation. The 3 retailers (Greater Western Water, South East Water Ltd, and Yarra Valley Water Corporation) deliver retail water supply and sewerage services to customers in the Melbourne metropolitan area. The 3 retailers also provide some localised sewerage services to their customers not connected to the Melbourne sewerage network.

Melbourne Water provides bulk water and bulk sewerage services in the Melbourne metropolitan area and manages rivers, creeks, and major drainage systems in the Port Phillip and Westernport regions. Melbourne Water also controls the catchment for most of its supply.

Outside Melbourne, 13 regional urban water utilities provide water and sewerage services (Barwon Water¹⁹, Central Gippsland Water, Central Highlands Water, Coliban Water, East Gippsland Water, Goulburn Valley Water, GWMWater (Grampians Wimmera Mallee Water), Lower Murray Water, North East Water, South Gippsland Water, Wannon Water, and Westernport Water).

¹⁸ Details of the drinking water regulatory framework, the audit arrangements and the annual drinking water quality report are available at <https://www.health.vic.gov.au/water/drinking-water-quality-annual-reports>.

¹⁹ Barwon Water, Central Gippsland Water, South Gippsland Water and Westernport Water also draw on Melbourne Water's bulk water services.

Lower Murray Water also provides rural water services such as irrigation and stock and domestic supplies. GWMWater and Coliban Water also provide a rural water service largely for stock and domestic use.

Additionally, 2 rural water utilities (Goulburn–Murray Water and Southern Rural Water) provide irrigation and rural water services.

Most water utilities in regional Victoria have their own bulk water supplies. Goulburn–Murray Water, Southern Rural Water, and GWMWater also provide both bulk and retail services.

Although owned by the Victorian Government, all 18 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 for Water. The board has a range of responsibilities, including:

- setting the entity's strategic direction and steering the entity
- setting objectives and performance targets
- 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.

Each water utility's 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's management and staff. The managing directors are responsible for communicating board priorities and policies to management and staff and for presenting reports, submissions and budgets to the board. The board of each water utility reports to the Minister for Water via DELWP. In turn, the Minister for Water is responsible for reporting to parliament on the performance of each water utility. To assist with the management of the water industry, the Minister for Water is supported by the Water and Catchments Group within DELWP.

The Financial Management Act is the principal legislation governing financial reporting by water utilities. The Victorian Minister for Finance (through DTF) issues financial reporting directions under the Financial Management Act for the preparation of annual reports. The Minister for Water issues ministerial reporting directions to water utilities for performance reporting and other specific reporting requirements as part of their annual reports. DELWP is responsible for reviewing the annual reports of the water utilities and advising the Minister for Water on tabling the reports in parliament.

The Victorian Auditor-General's Office is responsible for auditing the annual financial statements and performance reports of water utilities. Some data reported in the NPR for Victorian water utilities are either taken directly from the published annual reports or derived from the annual reports.

In accordance with the Water Act, 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 5 years. The Minister for Water (through DELWP) issues guidelines to the water utilities for the preparation of the corporate plans. DELWP and DTF are responsible for reviewing the corporate plans (and business cases for major capital projects above a threshold value) and for advising the Minister for Water and the Treasurer, respectively.

Price submissions (previously called water plans) are generally required every 5 years.²⁰ They include details about proposed revenue requirements and tariffs and pricing structures and are assessed by the Essential Services Commission (ESC). The process requires extensive customer engagement by the water utilities and the ESC.

²⁰ This is the case for 14 water utilities, whose next price determination will come into effect from 1 July 2023. Goulburn–Murray Water, Greater Western Water, Melbourne Water and North East Water are currently operating on slightly different timelines with the next price determination period commencing 1 July 2024 for GMW and GWW and 1 July 2026 for MW and NEW.

F7.5 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.

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
- 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 are 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](#).

F8 Western Australia

F8.1 Introduction

The WA Department of Water and Environmental Regulation has prime responsibility for water resource policy, planning, management and regulation, as well as the administration of water entitlements and water rights within the state. The reporting of water utility performance is the responsibility of the Economic Regulation Authority (ERA). However, the WA Department of Health 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*, the *Metropolitan Water Supply, Sewerage and Drainage Act 1909*, the *Health (Miscellaneous Provisions) Act 1911* (which is being replaced by the new *Public Health Act 2016* over the next 3 to 5 years), the *Environmental Protection Act 1986*, and the *Planning and Development Act 2005*.

F8.2 Establishment of utilities

In Western Australia's legislative framework, water utilities are referred to as 'water service providers'.

Under the Water Services Act, the ERA is the independent regulator responsible for administering the licensing scheme for water services and for reporting on industry performance. To obtain a licence, a water service provider has to demonstrate that it has the financial and technical capacity to provide the service or services that are to be covered by a licence and that the grant of the licence is not contrary to the public interest.

F8.3 Operation of water utilities

The ERA and other agencies jointly oversee the operation of water service providers in Western Australia.

The Department of Health sets standards for drinking water quality and regulates the public health aspects of water supply (both potable and non-potable), pursuant to the *Health (Miscellaneous Provisions) Act 1911*. The department also supports the Advisory Committee for the Purity of Water, which advises the WA ministers for Health and Water on issues associated with protecting public drinking water. The department has recently introduced new standards that regulate the public health aspects of sewerage services pursuant to the *Health (Miscellaneous Provisions) Act*.

The licence terms and conditions for service providers that supply drinking water require them to enter into a memorandum of understanding with the Department of Health for compliance with the health-related criteria in the Australian Drinking Water Guidelines.

The licence terms and conditions for service providers that provide sewerage services to more than 400 connections require them to enter into a memorandum of understanding with the Department of Health for compliance with the required public health standards.

Each memorandum of understanding is reviewed every 3 years, unless agreed otherwise.

The Department of Water and Environmental Regulation'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 also regulates the environmental impacts of water service providers through the Environmental Protection Act. The 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, the water service providers 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. The water service providers must notify the department if there is an unauthorised discharge of waste from registered premises.

The Environmental Protection Authority is an independent adviser to the WA 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 WA Minister for Environment.

The Western Australian Planning Commission, a statutory authority that operates with the support of the Department of Planning, Lands and Heritage, oversees the land-use planning implications of the operations of the water service providers, according to requirements of the Planning and Development Act.

Prices for drinking water and sewerage services provided by the Water Corporation, Bunbury Water Corporation (trading as Aqwest), and Busselton Water Corporation (trading as Busselton Water) are set by the Minister for Water. The WA Government may request the ERA to undertake an independent review of pricing for the water corporations to provide advice to the government (the ERA has carried out 14 inquiries related to water pricing to date). Charges for sewerage services provided by local government authorities are set for each local government area and applied using a formula that depends on the type of property. Prices charged by private water and sewerage service providers are unregulated.

The Water Services Act requires licensees to arrange for an operational audit and a review of asset management system effectiveness at least once every 2 years (or longer, at the ERA's discretion). Independent auditors appointed by the ERA conduct the audit and review. The ERA approves the final audit and review reports, arranges for their publication on its website, and provides a copy of each report to the WA Minister for Water.

The Water Services Code of Conduct (Customer Service Standards) 2018 prescribes the customer service standards applicable to water and sewerage licensees. The Code is administered by the ERA in consultation with the Water Code Consultative Committee comprising representatives from industry, consumer representative organisations and government.

F8.4 Water utilities in Western Australia

Several water service providers are involved in delivering water supply and sewerage services in Western Australia. This report covers the larger service providers (the Water Corporation, Aqwest, Busselton Water and the City of Kalgoorlie–Boulder). There are other water supply and sewerage services that are delivered by privately owned operators and local government authorities.

The Water Corporation is a government trading enterprise operating under the WA *Water Corporations Act 1995* that provides potable and non-potable water, bulk 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 and Environmental Regulation according to an operational agreement for catchment management between the 2 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 km². It has regional offices in Perth, Bunbury, Albany, Karratha, Geraldton, Northam, and Kalgoorlie.

Aqwest and Busselton Water are government trading enterprises operating under the WA Water Corporations Act.

The Aqwest licence permits the supply of potable water to the regional centre of Bunbury, 160 km south of Perth.

The Busselton Water licence permits the supply of potable water to the regional centre of Busselton, approximately 200 km south of Perth, and the Busselton–Capel and Blackwater groundwater areas. Busselton Water also supplies bulk water to the Water Corporation in Dunsborough.

The state-owned corporations (Aqwest, Busselton Water and the Water Corporation) are subject to performance reporting requirements under the WA 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 WA Office of the Auditor General.

The City of Kalgoorlie–Boulder provides sewerage and non-potable water services to Kalgoorlie–Boulder, located 550 km east of Perth in the Goldfields district. The non-potable water supplied to customers is sourced from recycled effluent.

There are also several small licensed or exempted water service providers in the state. The licensed service providers include Aquasol, Aqua Ferre (Muchea) (trading as Muchea Water), Athena Water Solutions, BHP Nickel West, BHP Iron Ore, Hamersley Iron, Lancelin South, Moore River Water Services, the Rottnest Island Authority, Robe River Mining Company, Peel Water, TMC Witchcliffe, WA Sewage, Water West North Dandalup, and one small regional local government.²¹

F8.5 Performance reporting

Licensees are required to provide the Economic Regulation Authority with data for performance monitoring purposes, as set out in the licence and the ERA's *Water, sewerage and irrigation licence performance reporting handbook*. Licensees are required to submit completed performance reports to the ERA for each year ending 30 June. Where possible, the performance indicators for licensees who are not required to report under the National Water Initiative Agreement have been aligned with the NPR indicator set for consistency.

The ERA's *Water compliance reporting manual* requires licensees to 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 ERA publishes performance data provided by licensed urban service providers that do not report under the Urban NPR and 3 of WA's largest rural water service providers.²² Most of the urban performance indicators are consistent with those of the NPR. Except for the licensees that report under the Urban NPR, licensees are not subject to the data audit requirements of the NPRs. For those licensees not reporting under the NPR, confirmation of the accuracy of the performance data they report to the ERA is assessed in the operational audits.

²¹ Since 2022, the WA Minister for Water has exempted 20 small regional local government sewerage and/or non-potable water suppliers from being licensed. The exemption is for a period of 5 years.

²² The data are available from the ERA, [Water, sewerage and irrigation performance data \(2019 – onwards\) – Economic Regulation Authority Western Australia \(erawa.com.au\)](https://erawa.com.au)

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