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.

The structure of utilities varies, therefore, 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 from the 2021–22 reporting year onward is not comparable with pre-2021–22 reporting years due to the creation of Greater Western Water. This resulted in the service area previously managed by Western Water being included in the calculations for Melbourne from the 2021–22 reporting year onward.

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.

In 2022–23, total water sourced for major urban centres on the national scale slightly increased by 0.34% compared to 2021–22. Canberra, South East Queensland, Sydney and Melbourne reported 5%, 4%, 2% and 1% increases, respectively, in the total volume of water sourced compared to the previous year. However, the total water sourced from different resources decreased for other major cities, with Adelaide reporting the highest decrease percentage of 10% from 2021–22. Among all water source types, recycled water contributed the lowest water volume (7%), and surface water contributed the highest water volume (77%) to the total water sourced for major urban centres.

Similar to the previous year, Melbourne remained the largest supplier of surface water (452,668 ML). Sydney sourced the highest volume of recycled water (41,198 ML) to supply urban demands, followed by Melbourne (40,704 ML). Perth remained the largest supplier of groundwater (136,791 ML), similar to the previous year, and became the largest supplier of desalinated water (94,474 ML) to urban centres the current year. Similar to 2021–22, Sydney sourced the highest total volume of water (574,506 ML).

The total volume of desalinated water sourced in Melbourne significantly decreased compared to the previous year (from 125,382 ML to 4,180 ML). Above average rainfall and high surface inflows in the Melbourne Water Corporation catchments reduced the need for desalinated water to supply demand during 2022–23 compared to 2021–22.

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	
	2021–22	2022–23	2021–22	2022–23	2021–22	2022–23	2021–22	2022–23	2021–22	2022–23
Adelaide	161,965	155,506	-	-	5,323	4,804	33,122	20,706	200,410	181,016
Canberra	45,336	47,702	-	-	-	-	24	17	45,360	47,719
Darwin	38,401	38,891	3,334	2,258	-	-	-	-	41,735	41,149
Melbourne	322,381[a]	452,668	60	140	125,382	4,180	45,242	40,704	493,065	497,692
Perth[b]	57,206	64,463	130,257	136,791	116,198	94,474	21,759	23,337	325,420	319,605
South East Queensland[c]	314,032	327,886	10,090	12,928	12,714	7,240	13,554	17,949	350,390	366,003
Sydney[d]	503,707	465,312	-	-	22,480	67,996	37,639	41,198	563,880	574,506

Notes:

a Melbourne's surface water 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).

b Perth's surface water (W1) volume reflects Water Corporation transferring water into surface water storages. In 2022–23, it diverted 120,263 ML from surface water (W1) and returned 55,800 ML. In 2021–22, WC (Perth) diverted 121,325 ML from surface water (W1) and returned 64,119 ML.

c 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).

d Sydney's surface water (W1) is the total of the water received by Sydney Water from WaterNSW and the volume of water sourced 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.

Compared to 2021–22, the volume of residential water supplied decreased for all major urban centres except for South East Queensland (reporting an increase of 1.4%). The highest decrease is related to Adelaide (8.2%), reflecting the high rainfall in those urban centres that decreased the volume of residential water needed to be supplied. The lowest decrease is reported by Sydney (1.1%).

For all major urban centres except South East Queensland, the annual average volume of residential water supplied per property was the lowest since 2018–19. Canberra, Sydney, Adelaide and Melbourne followed a downward trend over the past 6 years, declining by 22.1%, 11.6%, 11.4%, and 7.3% (estimated[c]), respectively, since 2018–19, with Canberra reporting the highest decrease in its downward trend.

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

Major urban centre[a]	2018–19	2019–20	2020–21	2021–22	2022–23	Change from 2021–22 (%)
Adelaide	202	198	196	195	179	-8.2
Canberra	204	202	176	163	159	-2.5
Darwin	380	373	360	374	349	-6.7
Melbourne[bc]	151	148	147	146	140	-4.1
Perth	219	227	227	228	219	-3.9
South East Queensland[b]	155	162	159	147	149	1.4
Sydney	199	189	186	178	176	-1.1

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 (i.e. W8 – Total volume of water supplied to residential customers/C2 – Number of connected residential properties: water supply).

c Melbourne figures from the 2021–22 reporting year onward are not comparable with pre-2021–22 reporting years 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.

Nationally, the total recycled water supplied across the major urban centres decreased by 4.9% from 2021–22. This was the lowest total volume over the past 6 years, also reflecting a decrease of 1.4% from 2018–19 levels. Among all major urban centres, Perth, South East Queensland and Sydney reported an increase in their total supplied recycled water, with South East Queensland reporting the highest increase (32.4%) from the previous year. Adelaide, Canberra and Melbourne reported a decrease in the total volume of recycled water supplied, with Adelaide representing the highest decrease (37.5%) from the previous year. The increases and decreases reflect the variability of rainfall in the major urban centres during 2022–23. Darwin did not supply any recycled water to customers during 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	2018–19	2019–20	2020–21	2021–22	2022–23	Change from 2021–22 (%)
Adelaide	30,533	23,803	26,627	33,122	20,706	-37.5
Canberra	60	75	27	24	17	-29.2
Darwin	488	0	0	0	0	0.0
Melbourne[ab]	45,535	42,877	41,716	45,242	40,704	-10.0
Perth	9,817	20,681	22,579	21,759	23,337	7.3
South East Queensland[a]	15,445	14,874	15,468	13,554	17,949	32.4
Sydney	44,020	46,919	37,669	37,693	41,198	9.3

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 figures from the 2021–22 reporting year onward are not comparable with pre-2021–22 reporting years 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.

Nationally, the total typical residential bill decreased in all major urban centres from the previous year, with Canberra reporting the highest decrease of 8.7% and Sydney reporting the lowest decrease of 2.6% from 2021–22. Similar to the previous year, Melbourne reported the lowest total typical residential bill of $982 compared to other major urban centres.

Total typical residential bill has followed a downward trend in Adelaide, Darwin and Melbourne since 2018–19, with Adelaide reporting the highest decline of 28.1% (from $1,515 in 2018–19 to $1,089 in 2022–23) over the past 6 years.

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

Table 2.5 Total typical residential bill ($)

Major urban centre[a]	2018–19	2019–20	2020–21	2021–22	2022–23	Change from 2021–22 (%)
Adelaide	1,515	1,494	1,227	1,187	1,089	-8.3
Canberra	1,313	1,329	1,230	1,166	1,065	-8.7
Darwin	2,143	2,109	2,047	2,035	1,902	-6.5
Melbourne[bc]	1,157	1,148	1,143	1,044	982	-5.9
Perth	1,781	1,825	1,786	1,734	1,640	-5.4
South East Queensland[b]	1,646	1,690	1,680	1,587	1,522	-4.1
Sydney	1,269	1,276	1,142	1,099	1,070	-2.6

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 (i.e. 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 from the 2021–22 reporting year onward are not comparable with pre-2021–22 reporting years 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 managed by Western Water pre-2021–22 makes up approximately 3.5% of total connections in the Melbourne urban centre from the 2021–22 reporting year onward.

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.

Compared to the previous year, emissions decreased for all major cities, except for Darwin. Perth reported the highest decrease in emissions by 33.2% (change from 567 t CO_2 equivalent/1,000 properties in 2021–22 to 379 t CO_2 equivalent/1,000 properties this year) while reporting the highest total emissions among all major urban centres in 2022–23. High emissions in Perth correlate with the high percentage of water sourced from desalination in this city. South East Queensland reported the second-highest decrease in emissions, of 18.8% compared to the previous year.

Darwin reported an increase of 4.5% in its total emissions per 1,000 properties during 2022–23. Similar to the previous year, Adelaide reported the lowest emissions among all major urban centres in 2022–23, as well as the highest decrease of 69.1% in emissions since 2018–19.

Canberra and Sydney followed a downward trend in the total emissions over the past 6 years and represented a decline of 51.8% and 12.2%, respectively, compared to 2018–19 levels.

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	2018–19	2019–20	2020–21	2021–22	2022–23	Change from 2021–22 (%)
Adelaide	434	332	342	143	134	-6.3
Canberra	363	331	196	177	175	-1.1
Darwin	215	213	199	223	233	4.5
Melbourne[ac]	249	278	249	245	229	-6.5
Perth	510	701	695	567	379	-33.2
South East Queensland[b]	200	204	205	202	164	-18.8
Sydney	180	175	169	168	158	-6.0

Notes:

a Melbourne figures are the weighted average of the three retailers (i.e. 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 (i.e. E12/C4 – Total connected properties).

c Melbourne figures from the 2021–22 reporting year onward are not comparable with pre-2021–22 reporting years 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 Perth and South East Queensland, which reported increases of 0.3% and 1.4%, respectively, from the previous year. Darwin, which experienced a large increase from 2018–19 to 2019–20 due to changes in corporate overheads and COVID-19, reported the highest decrease, of 7.9% in 2022–23. The lowest decrease was reported by Sydney, with only 0.8% less in costs than the previous year.

Canberra and Melbourne followed a downward trend in their combined operating costs per property while Perth followed an overall upward trend over the past 6 years (changing from 630 to 725 $/property since 2018–19).

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	2018–19	2019–20	2020–21	2021–22	2022-23	Change from 2021–22 (%)
Adelaide	672	610	627	641	609	-5.0
Canberra	1,134	1,079	976	953	906	-4.9
Darwin	1,020	1,358	1,282	1,010	930	-7.9
Melbourne[a]	1,051	1,045	1,004	939	888	-5.4
Perth	630	706	675	723	725	0.3
South East Queensland	1,343	1,379	1,323	1,271	1,289	1.4
Sydney	828	830	757	736	730	-0.8

Note:

a Melbourne figures from the 2021–22 reporting year onward are not comparable with pre-2021–22 reporting years 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.

Overall, the sum of total capital expenditure for water supply and wastewater service increased by 17% from the previous year. All major urban centres experienced an increase compared to the previous year. Darwin reported the highest increase of 36.2% from 2021–22 to 2022–23, yet it was the major urban centre with the lowest total capital expenditure for the current year (36,527 thousand dollars). This was followed by Sydney (an increase of 31.7%) which reported the highest total capital expenditure among all major urban centres in 2022–23 (1,739,736 thousand dollars).

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	2018–19	2019–20	2020–21	2021–22	2022–23	Change from 2021–22 (%)
Adelaide	324,441	386,327	319,148	270,048	283,211	4.9
Canberra	101,460	116,054	97,513	71,595	72,405	1.1
Darwin	38,543	23,253	22,992	26,813	36,527	36.2
Melbourne[ab]	1,117,101	1,174,363	1,218,103	1,187,164	1,348,509	13.6
Perth	530,909	452,946	415,136	369,808	400,776	8.4
South East Queensland[a]	791,794	935,756	925,321	934,934	1,020,686	9.2
Sydney[a]	1,335,682	1,152,495	1,105,094	1,320,527	1,739,736	31.7

Notes:

a Melbourne, South East Queensland and Sydney figures are the aggregate for the bulk utility and the respective retailers.

b Melbourne figures from the 2021–22 reporting year onward are not comparable with pre-2021–22 reporting years 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.

Except for Perth, all 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 2022–23 compared to 2021–22. While similar to the previous year, Perth had the lowest levels of total water and sewerage complaints per 1,000 properties (0.6). Canberra reported the highest number of complaints per 1,000 properties (16.1) while showing a 20.7% decrease from the previous year. Darwin had the largest decrease in complaints (from 49.0 in 2021–22 to 2.0 in 2022–23).

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	2018–19	2019–20	2020–21	2021–22	2022–23	Change from 2021–22 (%)
Adelaide[a]	2.1	2.2		2.9	1.2	-58.6
Canberra	2.8	3.4	2.2	20.3[c]	16.1	-20.7
Darwin	60.4	50.9	59.2	49.0	2.0	-95.9
Melbourne[b]	6.9	7.0	7.7	6.2	5.5	-11.3
Perth	0.8	0.8	0.6	0.4	0.6	50.0
South East Queensland	5.3	5.7	5.7	4.9	4.5	-8.2
Sydney	2.5	2.1	2.0	2.4	1.8	-25.0

Notes:

a No data was available for Adelaide in 2020–21.

b Melbourne figures from the 2021–22 reporting year onward are not comparable with pre-2021–22 reporting years 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.

c From the 2021–22 reporting year, data collection systems and processes for Canberra started to capture complaints via all channels including those where the complaint is resolved at the first point of contact.

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.

Four out of 7 major urban centres reported a decline in their average duration of unplanned water supply interruptions, with Darwin and South East Queensland representing the highest and lowest decreases, respectively, from the previous year. Adelaide continued to decrease its average duration of unplanned interruption to water supply from 243 minutes in 2018–19 to 165 minutes in 2022–23, a decrease of 32.1%. Perth followed an upward trend in its average duration of unplanned water supply interruption from 103 minutes in in 2018–19 to 162 minutes in 2022–23, an increase of 14.9%.

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

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

Major urban centre	2018–19	2019–20	2020–21	2021–22	2022–23	Change from 2021–22 (%)
Adelaide	243	204	188	181	165	-8.8
Canberra	135	136	147	136	132	-2.9
Darwin[a]			139	102	77	-24.5
Melbourne[b]	95	101	98	103	110	6.8
Perth	103	111	140	141	162	14.9
South East Queensland	124	119	121	134	132	-1.5
Sydney	143	187	200	192	231	20.3

Notes:

a No data is available for Darwin before 2020–21.

b Melbourne figures from the 2021–22 reporting year onward are not comparable with pre-2021–22 reporting years 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.