

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, so 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, Logan City Council
Sydney	WaterNSW (B), Sydney Water Corporation
Melbourne	Melbourne Water (B), Greater Western Water, South East Water Corporation, 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 2023–24, the total water sourced for major urban centres increased by 6.2% compared to 2022–23 on the national scale. All major urban centres reported an increase in the total volume of water sourced, with Sydney reporting the smallest increase at 4.0% and Adelaide the largest at 12.2%. Among all water source types, recycled water contributed the lowest volume (7.3%), and surface water contributed the highest volume (77.2%) of the total water sourced for major urban centres. The use of surface water, groundwater and recycled water for major urban centres increased by 7.0%, 8.8% and 10.0%, respectively, as a result of above average rainfall across the country as

well as hot weather conditions leading to higher water demands. Conversely, the use of desalinated water decreased by 5.3% compared to the previous year.

Sydney was the largest supplier of surface water (528,804 ML). Similar to the previous year, Perth remained the largest supplier of groundwater (148,164 ML) and desalinated water (119,548 ML). Melbourne became the largest supplier of recycled water (53,804 ML) to the urban centre in the current year. This increase was driven by Greater Western Water's larger supply to both residential and non-residential customers, as well as increased supply to non-residential customers by Melbourne Water Corporation and South East Water Corporation. For the third consecutive year since 2021–22, Sydney sourced the highest total volume of water (604,381 ML).

In contrast to the previous year, Melbourne did not source any desalinated water to meet urban demands (a change from 4,180 ML to 0 ML). The total volume of desalinated water sourced in Sydney also returned to its regular levels (from 67,996 ML to 35,216 ML) with the recovery of surface water quality after major flooding impacts in 2022–23. An unusually low usage of desalinated water in Queensland during 2022–23 followed by a return to almost regular levels in 2023–24 resulted in a 33.0% increase in desalinated water use (from 7,240 ML to 9,627 ML) compared to the previous year.

In 2023–24, Canberra reported the largest increase (82.4%) in the use of recycled water (from 17 ML to 31 ML) mainly for non-residential customers. Conversely, South East Queensland reported the largest decrease (19.6%) in recycled water use (from 17,949 ML to 14,439 ML), primarily due to the decrease in supply of recycled water to non-residential customers by Seqwater.

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	
	2022–23	2023–24	2022–23	2023–24	2022–23	2023–24	2022–23	2023–24	2022–23	2023–24
Adelaide	155,507	171,334	-	-	4,804	4,827	20,706	27,021	181,017	203,182
Canberra	47,702	51,346	-	-	-	-	17	31	47,719	51,377
Darwin	38,891	40,905	2,258	4,316	-	-	-	-	41,149	45,221
Melbourne ^a	452,668	471,997	140	101	4,180	-	40,704	53,804	497,692	525,902
Perth ^b	64,463	58,838	136,791	148,164	94,474	119,548	23,337	22,660	319,065	349,210
South East Queensland ^c	327,886	344,769	12,928	12,856	7,240	9,627	17,949	14,439	366,003	381,691
Sydney ^d	472,179	528,804	-	-	67,996	35,216	41,198	40,361	581,373	604,381

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 2023–24, it diverted 136,512 ML from surface water (W1) and returned 77,674 ML. In 2022–23, Water Corporation – Perth diverted 120,263 ML from surface water (W1) and returned 55,800 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) volume includes water supplied by WaterNSW to Greater Sydney and the volume of water sourced directly by Sydney Water Corporation from surface water.

2.1.2. Average volume of residential water supplied per property – W12

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

In contrast to the previous year, which saw a decrease in residential water supply for almost all major urban centres, 2023–24 experienced increases across the board. The highest increase was in Darwin (11.5%), driven by hot weather, increased demands, and higher groundwater extraction following chlorine disinfection. Perth followed with a 10.5% increase due to unusual hot weather from September 2023 to March 2024 and the associated increased demands. The lowest increase was in South East Queensland (1.3%).

For Darwin and Perth, the annual average volume of residential water supplied per property was the highest since 2019–20. After experiencing annual declines for 3 years since 2019–20, Sydney, Melbourne, Canberra and Adelaide had increases of 2.8%, 2.9%, 6.3% and 8.4%, respectively, compared to the previous year. However, their supplied volumes remained below the 2019–20 levels. For the second consecutive year, South East Queensland reported an increase (2.7%) in the volume of residential water supplied per property compared to 2021–22.

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

Major urban centre ^a	2019–20	2020–21	2021–22	2022–23	2023–24	Change from 2022–23 (%)
Adelaide	198	196	195	179	194	8.4
Canberra	202	176	163	159	169	6.3
Darwin	373	360	374	349	389	11.5
Melbourne ^{bc}	148	147	146	140	144	2.9
Perth	227	227	228	219	242	10.5
South East Queensland ^b	162	159	147	149	151	1.3
Sydney	189	186	178	176	181	2.8

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. $W8 - \text{Total volume of water supplied to residential customers} / C2 - \text{Number of connected residential properties: water supply}$).

^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.

The total recycled water supplied across the major urban centres reached its highest volume in the past 5 years, reflecting a 6.1% increase from 2019–20 and a 10.0% increase from 2022–23 on the national scale. Among all major urban centres, Adelaide, Melbourne and Canberra reported an increase in their total supplied recycled water, with Canberra having the highest increase (82.4%; from 17 ML in 2022–23 to 31 ML in 2023–24) mainly due to higher recycled water supply to non-residential customers than the previous year. South East Queensland, Perth and Sydney reported

a decrease in their total supplied recycled water, with South East Queensland representing the highest decrease of 19.6% from the previous year. In the current year, as in the past 5 years, Darwin did not supply any recycled water to customers.

See Section 3.2 for recycled water supplied by all utilities.

Table 2.4 Total volume of recycled water supplied (ML)

Major urban centre	2019–20	2020–21	2021–22	2022–23	2023–24	Change from 2022–23 (%)
Adelaide	23,803	26,627	33,122	20,706	27,021	30.5
Canberra	75	27	24	17	31	82.4
Darwin	0	0	0	0	0	0.0
Melbourne ^{ab}	42,877	41,716	45,242	40,704	53,804	32.2
Perth	20,681	22,579	21,759	23,337	22,660	-2.9
South East Queensland ^a	14,874	15,468	13,554	17,949	14,439	-19.6
Sydney	46,919	37,669	37,693	41,198	40,361	-2.0

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

Nationally, the total typical residential bill increased by 2.4% from the previous year. All major urban centres reported increases in their total typical residential bill except Melbourne which reported a decrease of 1.5% from the previous year. Despite the increase in the typical residential bill for water supply in Melbourne, the overall decrease in the total bill was primarily due to reductions in wastewater service bills by South East Water Corporation and Yarra Valley Water Corporation.

Adelaide reported the highest increase (5.2%) and South East Queensland reported the lowest increase (1.8%) from 2022–23. For the past 5 years, Melbourne and Darwin have been reporting the lowest and highest total typical residential bill, respectively, among all major urban centres.

After experiencing annual declines since 2019–20, the total typical residential bill in most major urban centres increased in 2023–24 compared to the previous year. Melbourne was an exception, where the decreasing trend extended to 2023–24. The increased values, however, were still below the 2019–20 levels, with Adelaide reporting the highest decline of 23.5% (from \$1,557 in 2019–20 to \$1,191 in 2023–24) and Darwin reporting the lowest decline of 7.4% (from \$2,198 in 2019–20 to \$2,036 in 2023–24) over the past 5 years.

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

Table 2.5 Total typical residential bill (\$)

Major urban centre ^a	2019–20	2020–21	2021–22	2022–23	2023–24	Change from 2022–23 (%)
Adelaide	1,557	1,279	1,237	1,132	1,191	5.2
Canberra	1,385	1,281	1,215	1,109	1,133	2.2
Darwin	2,198	2,133	2,121	1,982	2,036	2.7
Melbourne ^{bc}	1,185	1,180	1,088	1,024	1,009	-1.5
Perth	1,901	1,861	1,807	1,708	1,743	2.0
South East Queensland ^b	1,761	1,751	1,653	1,586	1,614	1.8
Sydney	1,329	1,190	1,145	1,115	1,165	4.5

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

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

Compared to the previous year, emissions per 1,000 properties decreased in Canberra, Melbourne and Sydney to a nearly equal extent (~12.0%), while emissions increased in Adelaide, Darwin, Perth and South East Queensland. Perth had the highest increase of 19.0% from the previous year. Similar to the past 5 years, Perth also had the highest total emissions per 1,000 properties of all major urban centres in 2023–24 (451 t CO₂ equivalent/1,000 properties). This correlates with Perth's high reliance on desalinated water.

Adelaide has been reporting the highest decrease of 57.8% among all major urban centres over the past 5 years (from 332 t CO₂ equivalent/1,000 properties in 2019–20 to 140 t CO₂ equivalent/1,000 properties in 2023–24) despite reporting an increase of 4.5% in 2023–24 from its previous year. The lowest decrease in total emissions per 1,000 properties since 2019–20 was observed in South East Queensland (10.3%; from 204 t CO₂ equivalent/1,000 properties in 2019–20 to 183 t CO₂ equivalent/1,000 properties in 2023–24). Darwin was the only urban centre reporting an increase of 16.4% compared to 2019–20.

Canberra, Melbourne and Sydney followed a downward trend in the total emissions per 1,000 properties over the past 5 years and with notable declines compared to their 2019–20 levels. Darwin has had an increasing trend in total emissions per 1,000 properties since 2020–21 (24.6%).

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	2019–20	2020–21	2021–22	2022–23	2023–24	Change from 2022–23 (%)
Adelaide	332	342	143	134	140	4.5
Canberra	331	196	177	175	154	-12.0
Darwin	213	199	223	233	248	6.4
Melbourne ^{ac}	278	249	245	229	202	-11.8
Perth	701	695	567	379	451	19.0
South East Queensland ^b	204	205	202	164	183	11.6
Sydney	175	169	168	158	139	-12.0

Notes:

^a Melbourne figures are the weighted average of the 3 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. Total capital expenditure: water supply and wastewater – F16

Table 2.7 shows the combined capital expenditure (\$000s) related to the utilities’ water and sewerage operations, aggregated by major urban centre. Historical values are adjusted using the CPI index.

Overall, the sum of total capital expenditure for water supply and wastewater service increased by 24.4% from the previous year. All major urban centres, except Canberra, experienced an increase compared to the previous year. While Darwin reported the highest increase of 76.7% from 2022–23 – driven by the Manton Dam return to service project – it had the lowest total capital expenditure (\$67,251 thousand) of all major urban centres. South East Queensland reported the lowest increase of 18.4% from the previous year. Sydney reported the highest total capital expenditure for the third consecutive year since 2021–22 (\$2,237,578 thousand). Canberra was the only major urban centre experiencing a decline (6.5%) in the total capital expenditure compared to the previous year due to a reduction in capital expenditure for wastewater services.

All major urban centres, except Canberra, have followed an increasing trend in total capital expenditure since 2021–22, with Darwin having the highest increase (140.7%; from \$27,941 thousand in 2021–22 to \$67,251 thousand in 2023–24), and South East Queensland the lowest increase (29.3%; from \$974,252 thousand in 2021–22 to \$1,259,250 thousand in 2023–24).

See Section 5.1 for combined capital expenditure for all utilities.

Table 2.7 Total capital expenditure: water supply and wastewater (\$000s)

Major urban centre	2019–20	2020–21	2021–22	2022–23	2023–24	Change from 2022–23 (%)
Adelaide	402,574	332,569	281,405	295,121	364,269	23.4
Canberra	120,935	101,614	74,606	75,450	70,564	-6.5
Darwin	24,231	23,959	27,941	38,063	67,251	76.7
Melbourne ^{ab}	1,216,434	1,262,030	1,237,091	1,405,221	1,704,883	21.3
Perth	471,994	432,595	385,360	417,631	649,634	55.6
South East Queensland ^a	975,109	964,236	974,252	1,063,611	1,259,250	18.4
Sydney ^a	1,200,962	1,151,570	1,376,062	1,812,901	2,237,578	23.4

Notes:

^a Melbourne, South East Queensland and Sydney figures are aggregates for the bulk utility and their 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. Average duration of an unplanned interruption: water supply – C15

Table 2.8 shows the average duration (minutes) of unplanned interruptions to water supply in a utility's operation, aggregated by major urban centre.

Compared to the previous year, Adelaide, South East Queensland and Perth reported an increase in their average duration of unplanned water supply interruptions, with Adelaide reporting the largest increase of 64.8%. The 12.9% increase in South East Queensland was due to a single large interruption recorded by Logan City Council in May 2024 that impacted 100 customers for an extended period of time. Melbourne reported no changes compared to the previous year. Canberra, Darwin and Sydney reported a decline in their average duration of unplanned water supply interruptions, with Sydney and Darwin representing the highest and lowest decreases of 22.5% and 1.3%, respectively, while Darwin also reporting the shortest duration of unplanned water supply interruptions (76 minutes) among all major urban centres in 2023–24.

Canberra and Darwin continued decreases in average duration of unplanned interruptions in water supply since 2020–21, with decreases of 45.3% and 19.7%, respectively. After experiencing annual declines since 2019–20, Adelaide reported an increase from 204 minutes in 2019–20 to 272 minutes in 2023–24. In Perth, an change from 111 minutes in 2019–20 to 170 minutes in 2023–24 represented an increase of 53.2%.

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

Table 2.8 Average duration of an unplanned interruption: water supply (minutes)

Major urban centre	2019–20	2020–21	2021–22	2022–23	2023–24	Change from 2022–23 (%)
Adelaide	204	188	181	165	272	64.8
Canberra	136	147	136	132	118	-10.6
Darwin	-	139	102	77	76	-1.3
Melbourne ^{ab}	101	98	103	110	110	0.0
Perth	111	140	141	162	170	4.9
South East Queensland ^a	119	121	134	132	149	12.9
Sydney ^a	187	200	192	231	179	-22.5

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.