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 CO_2 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 CO_2 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.