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, and the figures in this chapter should be treated with some caution and read in conjunction with the notes for each of the tables. For example, to provide figures that represent Sydney, Melbourne and South East Queensland, it may be necessary to aggregate the numbers for both bulk water authorities and utilities servicing those areas. 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), City West 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 decreased by 5% from 2019–20 to 2020–21. Perth and Adelaide reported a 2% increase in water sourced by volume, but total water sourced decreased for all other major cities. South East Queensland had the largest decrease (17%).

Perth remains the largest supplier of groundwater (137,064 ML) and desalinated marine water (143,641 ML) to an urban centre. Melbourne sourced the highest volume of recycled water (41,716 ML) followed by Sydney (37,669 ML), which sourced the highest volume in 2019–20.

Adelaide and Sydney's reliance on desalination water decreased by 87% and 72%, respectively, due to increases in surface water availability.

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	
	2019–20	2020–21	2019–20	2020–21	2019–20	2020–21	2019–20	2020–21	2019–20	2020–21
Adelaide	127,928	163,007			40,001	5,139	23,803	26,627	191,732	194,773
Canberra	55,331	49,267					75	27	55,406	49,294
Darwin	40,663	36,313	2,794	4,271					43,457	40,584
Melbourne[a]	330,687	313,791			118,879	125,381	42,877	41,716	492,443	480,888
Perth	17,424[b]	17,157[b]	135,517	137,064	140,048	143,641	20,681	22,579	313,670	320,441
South East Queensland[c]	365,315	290,939	14,842	13,699	13,805	19,486	14,874	15,468	408,836	339,592
Sydney[d]	467,605	510,487			71,147	19,609	46,919	37,669	585,671	567,765

Notes:

a Melbourne's surface water is sourced from Melbourne Water and South East Water, while its recycled water is sourced from Melbourne Water and the 3 retailers (Yarra Valley Water, South East Water, and City West Water). Western Water is not included in the Melbourne major urban centre.

b Perth's surface water (W1) volume reflects Water Corporation transferring water into surface water storages. In 2020–21, it diverted 98,358 ML from surface water (W1) and returned 81,201 ML. In 2019–20, WC (Perth) diverted 101,929 ML from surface water (W1) and returned 84,505 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, Gold Coast and Redland City).

d Sydney's surface water (W1) is the total of the water received by Sydney Water Corporation 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 2019–20 to 2020–21 for most major urban centres. The exception was Perth, whose annual average volume of residential water supplied was steady at 227 kL/property.

Canberra had the highest decrease (13%), which reflects to the high rainfall Canberra received during the period. Canberra's annual average volume per property in 2020–21 is the lowest it has been over the past 5 years. Sydney continued a downward trend, reporting a 2% decrease from 2019–20 to 2020–21; its 2020–21 average is 10% lower than that of 2016–17.

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

Major urban centre[a]	2016–17	2017–18	2018–19	2019–20	2020–21	Change from 2019–20 (%)
Adelaide	171	195	202	198	196	-1
Canberra	190	197	204	202	176	-13
Darwin	361	368	380	373	360	-3
Melbourne[b]	149	0	151	148	147	-1
Perth	223	219	219	227	227	0
South East Queensland[b]	158	0	158	162	159	-2
Sydney	206	215	199	189	186	-2

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

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 decreased by 3% from 2019–20, but it is still 8% higher than 2017–18 levels. Adelaide and Perth increased their supply of recycled water (by 12% and 9%, respectively), while Sydney had the largest decrease in volume (9,250 ML). 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	2016–17[a]	2017–18	2018–19	2019–20	2020–21	Change from 2019–20 (%)
Adelaide	21,316	26,564	30,533	23,803	26,627	12
Canberra	4,404	77	60	75	27	-64
Darwin	541	451	488	0	0	0
Melbourne[b]	32,442	38,147	45,535	42,877	41,716	-3
Perth	9,568	12,100	9,817	20,681	22,579	9
South East Queensland[b]	14,755	13,056	15,445	14,874	15,468	4
Sydney	38,339	42,833	44,020	46,919	37,669	-20

Notes:

a Data for 2016–17 were sourced from the 2016–17 published NPR, as the definition of W26 changed from 2017–18.

b Melbourne and South East Queensland figures for W26 are the aggregated figures for the bulk utility and the retailers.

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.

All major urban centres reported a decrease in total typical residential bill for 2020–21 with Adelaide reporting the largest decrease (17.9%). In real terms, total typical residential bills for Canberra, Darwin, Melbourne and Sydney in 2020–21 are lower than 2016–17 levels.

Customers in Melbourne and Sydney had the lowest typical residential bill across all major urban centres ($1,022), while those in Darwin had the highest, continuing the pattern seen in previous years.

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

Table 2.5 Total typical residential bill ($)

Major urban centre[a]	2016–17	2017–18	2018–19	2019–20	2020–21	Change from 2019–20 (%)
Adelaide	1,243	1,330	1,355	1,337	1,098	-17.9
Canberra	1,212	1,223	1,175	1,189	1,100	-7.5
Darwin	1,916	1,905	1,917	1,887	1,831	-3.0
Melbourne[b]	1,070	1,064	1,035	1,027	1,022	-0.5
Perth	1,479	1,533	1,593	1,632	1,598	-2.1
South East Queensland[b]	1,425	1,466	1,472	1,512	1,503	-0.6
Sydney	1,158	1,180	1,135	1,141	1,022	-10.4

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 (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).

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 (GHG) emissions (t CO_2 equivalent/1,000 properties), aggregated by major urban centre, is reported in Table 2.6.

Emissions decreased for most of the major cities, and the highest decrease in emissions occurred in Canberra (41%).

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	2016–17	2017–18	2018–19	2019–20	2020–21	Change from 2019–20 (%)
Adelaide	250	285	434	332	342	3
Canberra	242	268	363	331	196	-41
Darwin	179	229	215	213	199	-7
Melbourne[a]	268	243	249	278	249	-10
Perth	828	754	510	701	695	-1
South East Queensland[b d]	-	179	200[c]	204	205	0
Sydney	176	173	180	175	169	-3

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 retailers.

b South East Queensland figures are the weighted average of the retailers (i.e. E12/C4 – Total connected properties).

c Gold Coast did not report against this indicator in 2017–18.

d No data were available for South East Queensland in 2016–17.

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, which reported a 3% increase. Darwin, which experienced a large increase in from 2018–19 to 2019–20 due to changes in corporate overheads and COVID-19, reported a decrease of 6% in 2020–21. Canberra and Sydney also reported large decreases (10% and 9%, respectively).

See Section 5.3 for combined operating cost for all utilities.

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

Major urban centre[a]	2016–17[a]	2017–18[a]	2018–19	2019–20	2020–21	Change from 2019–20 (%)
Adelaide	580	573	601	546	561	3
Canberra[b]	1,046	965	1,014	965	873	-10
Darwin	1,026	963	912	1,215	1,147	-6
Melbourne	960	932	940	934	898	-4
Perth	626	628	564	631	603	-4
South East Queensland	1,136	1,164	1,201	1,234	1,183	-4
Sydney[c]	718	695	741	743	677	-9

Notes:

a Data for 2017–18 and later are equal to F13; for 2016–17 the data are equal to F11 – Operating cost per property: water supply plus F12 – Operating cost per property: wastewater.

b Canberra figures for 2016–17 include a water abstraction charge and a utilities network facility tax.

c Sydney figures are for Sydney Water and include the bulk water purchases from WaterNSW.

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 across all capital cities decreased slightly from 2019–20 to 2020–21, and all but one major urban centre reported a decrease in total capital expenditure. The largest decreases were reported by Adelaide (17%) and Canberra (16%), who both reported large increases in the previous year. The only major urban centre to report an increase was Melbourne with 4%.

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	2016–17	2017–18	2018–19	2019–20	2020–21	Change from 2019–20 (%)
Adelaide	283,968	219,630	290,238	345,599	285,502	-17
Canberra	97,968	92,001	90,764	103,819	87,233	-16
Darwin	23,733	47,625	34,479	20,802	20,568	-1
Melbourne	845,012	917,356	999,332	1,050,558	1,089,687	4
Perth	464,259	495,224	474,939	405,194	371,371	-8
South East Queensland	600,920	622,745	708,323	837,105	827,771	-1
Sydney	691,690	846,968	1,194,870	1,030,995	988,592	-4

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

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.

Four 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 2020–21. Perth had the lowest levels of complaints with 0.6 total water and sewerage complaints per 1,000 properties, and Canberra had the largest decrease in complaints (35%).

Perth, Sydney, 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	2016–17	2017–18	2018–19	2019–20	2020–21	Change from 2019–20 (%)
Adelaide[a]	2.5	2.5	2.1	2.2		
Canberra	4.3	3.7	2.8	3.4	2.2	-35
Darwin	85.1	68.4	60.4	50.9	59.2	16
Melbourne	6.3	6.2	6.9	6.9	7.7	11
Perth	0.8	1.2	0.8	0.8	0.6	-25
South East Queensland	5.1	5.2[b]	5.3	5.7	5.7	-1
Sydney	2.1	2.2	2.4	2.1	2.0	-5

Notes:

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

b Logan did not report against this indicator before 2017–18.

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.

Adelaide and Melbourne were the only 2 major urban centres that had a decrease in the average duration of unplanned interruptions to water supply (by 8% and 3%, respectively). Those cities are at levels lower than their 2016–17 reporting year.

The highest increase was reported by Perth, which had a 26% increase in the average duration of unplanned interruptions for water. Perth experienced an increased number of burst mains in 2020–21, which incurred relatively longer repair times.

Darwin had major unplanned interruptions in 2020–21.

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	2016–17	2017–18	2018–19	2019–20	2020–21	Change from 2019–20 (%)
Adelaide	195	237	243	204	188	-8
Canberra	135	125	135	136	147	8
Darwin					139	
Melbourne	106	101	95	101	98	-3
Perth	103	112	103	111	140	26
South East Queensland	94	125	124	114	121	6
Sydney	133	155	143	187	200	7

Note: No data are available for Darwin in previous years.