

## 2 Comparison of major urban centres

### 2.1 Background on major urban centres comparison data

This chapter provides comparative tables and figures about a selection of key indicators (water resources, pricing, environment, finance, and customer) for major urban centres (each of which generally corresponds to a capital city and its environs. The exception is South East Queensland which includes Brisbane as well as Logan, Redlands and the Gold Coast). The tables and figures are compiled using data supplied by the utilities detailed in Table 2.1. Any exceptions are indicated in the notes provided for each table.

This year, comprehensive South East Queensland metrics and performances are provided, with Redland City Council reporting for the first time in the 2014–15 year.

Because utilities' structures vary, the figures in this chapter should be treated with some caution and be read in conjunction with the notes accompanying the tables. For example, to provide figures that represent Sydney, Melbourne, and South East Queensland, it is at times necessary to aggregate the numbers for both bulk and retail utilities servicing those areas. Notes on the methods used to derive figures are provided for each table.

It should be noted that historical values for all financial indicators have been adjusted using consumer price index (CPI) data to facilitate comparison in real terms.

In some instances sufficient data was not available to compile a comprehensive major urban centre-scale view. This is denoted by a blank cell in a table.

**Table 2.1 Data source for capital city analysis**

Major urban centre	Utility data
Perth	WC (Perth)
Adelaide	SA Water
Canberra	Icon Water <sup>1</sup>
South East Queensland	Seqwater (B), Qld Urban Utilities, Unitywater, Gold Coast, Redland, and Logan
Sydney	Water NSW (B), and Sydney Water
Melbourne	Melbourne Water (B), City West Water, South East Water, and Yarra Valley Water
Hobart	No data—TasWater services this area; however, performance data is available only on an aggregated basis for the entire State of Tasmania.
Darwin	P&W (Darwin)

### 2.2 Water Resources

#### 2.2.1 W1, W2, W3.1, W4—Volume of water sources

The volume of water sourced from surface water, groundwater, desalination, and recycled water in each city is shown in Table 2.2 and is represented by the indicators W1, W2, W3.1, and W4 respectively. The dependence on surface water as a main source of water is evident in all centres with the exception of Perth. In Perth, desalinated and groundwater are the city's key water sources. Adelaide is also relatively dependant on desalinated sea water; however, the 2014–15 year saw a substantial drop (63 per cent) in its use with a corresponding increase (52 per cent) in surface water use. South East Queensland's desalination plant has been operating in 'hot standby' mode since 2013–14 and produces minimal potable water for the water supply system.

The total volume of water sourced by major urban centres in Australia remained relatively constant compared with last year at 1,800 GL. Within each centre, however, there was a slight decrease in volumes sourced by Sydney (3 per cent), South East Queensland (2 per cent), and Canberra (3 per cent), with increases observed in Adelaide (2 per cent) and Darwin (12 per cent).

<sup>1</sup> In 2014–15, ACTEW Water was renamed Icon Water. There were no changes to their operations that affected data for the purposes of this report.

In 2014–15, nationally there was a significant drop in the volume of sourced desalinated sea water (18 per cent) and recycled water (13 per cent) and a marginal drop in sourced groundwater volumes (4 per cent) compared with 2013–14. This was complemented by an increase in the volume of surface water sourced (2 per cent).

**Table 2.2 Volume of water sourced from surface water, ground water, desalinated sea water, and recycled water in each urban centre**

Major urban centre	Surface water (W1)		Groundwater (W2)		Desalination (W3.1)		Recycled water (W4)		Total	
	2013–14	2014–15	2013–14	2014–15	2013–14	2014–15	2013–14	2014–15	2013–14	2014–15
Sydney	530,587	516,041	0	0	0	0	41,543	38,280	572,130	554,321
Melbourne	399,596	401,899	0	0	0	0	16,316	13,059	415,912	414,958
South East Queensland	282,698	284,202	10,462	9,218	1,435	1161	22,027	16,259	316,622	310,840
Perth	49,025	47,519	124,850	122,127	113,060	119457	7,767	7,564	294,702	296,667
Adelaide	80,836	122,634		0	60,953	22725	5,258	5,054	147,047	150,413
Canberra	48,731	47,114	0	0	0	0	4,372	4,352	53,103	51,466
Darwin	34,396	40,530	6,343	5,139	0	0	347	492	41,086	46,161

**Table notes**

Sydney surface water includes the total volume of Sydney Water's surface water and the water it received from bulk suppliers (W5).

Melbourne's surface water is that sourced by Melbourne Water while its recycled water is the total sourced by Melbourne Water and the three retailers (Yarra Valley Water, South East Water, and City West Water).

The volume of South East Queensland surface water, groundwater, and desalinated water is derived from Seqwater.

The volume of South East Queensland recycled water is the total derived from Seqwater and the retailers (Qld Urban Utilities, Unitywater, Gold Coast, Redland, and Logan).

## 2.2.2 W12—Average annual residential water supplied

This indicator represents the average annual volume of residential water supplied to customers for each capital city. Canberra and Perth experienced a notable decrease in the average annual volumes of residential water supplied compared with that of the previous year (Table 2.3). Melbourne continued to supply the lowest average volume (149 kL/property) and Darwin continued to supply the highest average volume (409 kL/property).

For more detail on average water supplied to customers by each urban utility in Australia, refer to [Section 3](#).

**Table 2.3 W12—Average annual residential water supplied (kL/property), 2010–11 to 2014–15**

Major urban centre	2010–11	2011–12	2012–13	2013–14	2014–15	Change from 2013–14 %
Adelaide	180	179	193	183	186	1.6
Darwin	405	471	454	407	409	0.5
Melbourne	138	142	152	150	149	-0.7
South East Queensland	142 <sup>b</sup>	146 <sup>b</sup>	156	164	160 <sup>a</sup>	-2.4 <sup>a</sup>
Sydney	197	193	198	206	201	-2.4
Perth	264	250	249	254	244	-3.9
Canberra	177	180	199	203	188	-7.4
Hobart						

**Table notes**

<sup>a</sup> Redland reported for the first time in 2014–15; therefore the percentage change for South East Queensland does not provide a direct comparison between the 2014–15 and 2013–14 years.

<sup>b</sup> Gold Coast and Logan did not report against the indicator for that specific year.

The figures exclude bulk utilities because they do not supply to customers.

Melbourne and South East Queensland figures are the weighted averages of their respective retailers (that is, W8/C2—Total connected residential properties: water supply).

### 2.2.3 W26—Total recycled water supplied

This indicator represents the total volume of recycled water supplied to customers, aggregated for the capital cities. There were significant changes this reporting year in the total recycled water supplied in most urban cities. Melbourne (31 per cent) and Adelaide (14 per cent) both saw a large increase in their volumes of recycled water supplied to consumers, whereas South East Queensland and Sydney recorded decreases of 19 and 8 per cent respectively (Table 2.4). Following recommendations from a Ministerial Review of Operating Arrangements for the Western Corridor Recycled Water Scheme (WCRWS) in late 2012, Seqwater stopped producing and supplying recycled water during 2014–15, putting WCRWS into a care-and-maintenance state on 31 March 2015 (Science and Innovation Committee 2015). Among the urban centres, Darwin remains by far the smallest producer of recycled water, both by total volume (Table 2.4) and as a percentage of total effluent collected. The 42 per cent increase in recycled water supply in Darwin was due to a return to normal operation in 2014–15 after major operational issues were experienced by Power and Water—Darwin’s water reclamation plant in 2013–14.

For more detail on recycled water supplied to customers by each urban utility in Australia, refer to Section 3.

**Table 2.4 W26—Total recycled water supplied (ML), 2010–11 to 2014–15**

Major urban centre	2010–11	2011–12	2012–13	2013–14	2014–15	Change from 2013–14 %
Darwin	305	376	499	347	492	41.8
Melbourne	32,244	38,100	29,734	27,890	36,428	30.6
Adelaide	19,802	22,714	28,393	25,515	29,177	14.4
Canberra	4,305	4,607	4,416	4,372	4,352	-0.5
Perth	9,134	10,370	10,272	10,029	9,354	-6.7
Sydney	47,521	45,929	46,951	46,943	43,075	-8.2
South East Queensland	11,947 <sup>a</sup>	11,432 <sup>a</sup>	23,136	23,082	18,774 <sup>b</sup>	-18.7
Hobart						

**Table notes**

<sup>a</sup> Gold Coast and Logan did not report against the indicator for that specific year.

<sup>b</sup> Redland reported for the first time in 2014–15; therefore the percentage change for South East Queensland does not provide a direct comparison between the 2014–15 and 2013–14 years.

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

## 2.3 Pricing

### 2.3.1 P8—Typical residential bill

This indicator reports the typical residential bill received by customers in each capital city, including water and sewerage services. Typical residential bills for water and sewerage are presented in Table 2.5.

There was a notable increase in South East Queensland (5.7 per cent), Adelaide (3.4 per cent), and Darwin (3.1 per cent). Darwin continued to have the highest average residential water bill of all Australian capital cities as well as the largest price increase over the last five years.

Additionally, there was a significant drop in the typical residential bill in Melbourne (-11.6 per cent) for 2014–15, returning it closer to the typical bill in previous years following a high result in the 2013–14 year. The Victorian State Government’s Fairer Water Bills Initiative precipitated this decrease, which resulted in reduced bills for residential customers of Melbourne’s three major metropolitan retailers. Melbourne still has the lowest average residential water bill compared with the other major urban areas in Australia.

For more detail on the typical bills charged by each urban utility in Australia, refer to Section 4.

**Table 2.5 P8—Typical residential bill (P3 water and P4 sewerage combined), 2010–11 to 2014–15 (\$)**

Major urban centre	2010–11	2011–12	2012–13	2013–14	2014–15	Change from 2013–14 %
South East Queensland	1,144 <sup>a</sup>	1,177 <sup>a</sup>	1,274	1,301	1,375 <sup>b</sup>	5.7 <sup>b</sup>
Adelaide	1,010	1,206	1,399	1,282	1,326	3.4
Darwin	1,219	1,516	1,857	1,815	1,871	3.1
Perth	1,151	1,205	1,260	1,310	1,336	2.0
Sydney	1,136	1,165	1,162	1,161	1,155	-0.5
Canberra	1,052	1,147	1,227	1,118	1,096	-2.0
Melbourne	798	912	926	1,107	979	-11.6
Hobart						

**Table notes**

<sup>a</sup> Gold Coast, Logan, and Redland did not report against the indicator for that specific year.

<sup>b</sup> Redland reported for the first time in 2014–15; therefore the percentage change for South East Queensland does not provide a direct comparison between the 2014–15 and 2013–14 years.

Melbourne and South East Queensland figures are the weighted average of the retail utilities (that is, P3/C2—Connected residential properties: water supply and P6/C6—Connected residential properties: sewerage).

The figures exclude bulk utilities as they do not supply to customers.

## 2.4 Environment

### 2.4.1 E12—Total net greenhouse gas emissions

This indicator reports the contribution of the utilities' operations to greenhouse gas (GHG) emissions, aggregated here by major urban area. There was a significant drop of 20 per cent in the GHG emissions in Darwin (Table 2.6), with abatement attributed to the use of variable speed drive units at the water and sewerage major pump stations. Perth continued to be the highest GHG-emitting capital city by a significant margin and a continued increasing trend, predominantly as a result of its diversification of water sources from surface water to desalinated sea water. There was also a notable decline in GHG emissions in Melbourne, which is a continuing trend. Adelaide observed an increase (16 per cent) in emissions despite less water being sourced from desalinated sea water and recycling in the 2014–15 year.

For more detail on GHG emissions from each urban utility in Australia, refer to [Section 8](#).

**Table 2.6 E12—Total net greenhouse gas emissions, 2010–11 to 2014–15 (net tonnes CO<sub>2</sub> equivalents per 1,000 connected water properties)**

Major urban centre	2010–11	2011–12	2012–13	2013–14	2014–15	Change from 2013–14 %
Adelaide	293	328	422	258	299	16
Perth	573	647	663	731	738	1
Canberra	362	313	288	260	257	-1
Sydney	143	72	85	85	84	-1
Melbourne	250	239	253	229	215	-6
Darwin	189	208	219	205	165	-20
South East Queensland						
Hobart						

**Table notes**

Sydney figures are based on data provided by Sydney Water.

Melbourne figures are the weighted average of the three retailers (that is E12/C4—Total connected properties) plus Melbourne Water's emissions, expressed on a per connection basis.

2013–14 Adelaide figures are based on data for the entire State of South Australia operated by SA Water. The 2014–15 year includes Adelaide-specific data. Data for years prior to 2013–14 were not available as a result of boundary changes.

## 2.5 Finance

### 2.5.1 F13—Combined operating cost of water and sewerage

This indicator reports the combined operating cost of the utilities' water and sewerage operations, aggregated here by major urban area (Table 2.7). In 2014–15, there was an 11 per cent decrease in operating cost for Melbourne and an 8 per cent decrease for Adelaide from 2013–14. Adelaide now has the lowest operating cost of all the major cities (\$553/property) and South East Queensland continues to have the highest (\$1,081/property).

For more detail on operating cost of each urban utility in Australia, refer to [Section 5](#).

**Table 2.7 F13—Combined operating cost: water and sewerage (\$/property)**

Major urban centre	2010–11	2011–12	2012–13	2013–14	2014–15	Change from 2013–14 %
Canberra	769	840	810	752	764	2
South East Queensland	816 <sup>a</sup>	913 <sup>a</sup>	1,000 <sup>b</sup>	1,083 <sup>b</sup>	1,081	0 <sup>c</sup>
Sydney	633	657	687	676	664	-2
Perth	508	545	579	595	579	-3
Adelaide	455	488	620	600	553	-8
Melbourne	672	799	762	1,021	909	-11
Darwin	1,050	1,119	1,146	1,022		
Hobart						

#### Table notes

<sup>a</sup> Gold Coast, Logan, and Redland did not report against the indicator for that specific year.

<sup>b, c</sup> Redland reported for the first time in 2014–15; therefore the percentage change for South East Queensland does not provide a direct comparison between the 2014–15 and 2013–14 years.

Sydney figures are for Sydney Water. Sydney Water's operating costs include bulk water purchases, including from Water NSW.

Perth and Adelaide figures are based on reported F13—Combined operating cost: water and sewerage (\$/property).

- F11 and F12 contain common corporate operating cost and therefore F13 is less than the sum of F11 and F12.
- The breakdown of Adelaide figures for F11 and F12 was not available for the Adelaide metropolitan city area.

Melbourne and South East Queensland figures are the weighted average of the retailers. The operating costs for the retailers include bulk purchases (that is F11/C2—Connected residential properties: water supply and F12/C8—Total connected properties: sewerage).

### 2.5.2 F16—Total capital expenditure for water and sewerage

This indicator reports the combined capital expenditure related to the utilities' water and sewerage operations, aggregated here by major urban centre. Capital expenditure for water increased significantly in Perth (34 per cent) and Melbourne (13 per cent) from the 2013–14 year; however it was still well below the peak in expenditure that occurred in 2010–11 during the height of the Millennium Drought (Table 2.8). Canberra and Adelaide saw a significant reduction in capital expenditure (18 and 19 per cent respectively), continuing their downward trend.

For more detail on the capital expenditure of each urban utility in Australia, refer to [Section 5](#).

**Table 2.8 F16—Total capital expenditure for water and sewerage, 2010–11 to 2014–15 (\$000)**

Major urban centre	2010–11	2011–12	2012–13	2013–14	2014–15	Change from 2013–14 %
Perth	700,348	550,203	504,668	262,529	351,732	34
Melbourne	1,355,928	942,090	735,799	609,752	686,136	13
Sydney	805,693	792,228	713,762	629,305	641,685	2
South East Queensland	504,764 <sup>a</sup>	989,579 <sup>a</sup>	653,563	517,648	487,636	-6 <sup>b</sup>
Canberra	256,668	230,838	143,365	59,393	48,937	-18
Adelaide	595,851	530,075	331,038	187,945	152,124	-19
Darwin	51,978	58,080	64,789	25,600		
Hobart						

**Table notes**

<sup>a</sup> Gold Coast, Logan, and Redland did not report against the indicator for that specific year.

<sup>b</sup> Redland reported for the first time in 2014–15; therefore, the percentage change for South East Queensland does not provide a direct comparison between the 2014–15 and 2013–14 years.

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

## 2.6 Customer

### 2.6.1 C13—Total water and sewerage complaints

This indicator reports the combined water and sewerage complaints received by the utilities, aggregated here by major urban area. There was a general trend of decreasing water and sewerage complaints across the country in 2014–15 (Table 2.9), with the exception of Canberra, which saw a marginal increase (8 per cent). This result is consistent with the focus on enhancing customer experience across the urban water sector in Australia.

For more detail on customer complaints received by each urban utility in Australia, refer to [Section 6](#).

**Table 2.9 C13—Total water and sewerage complaints (per 1,000 properties)**

Major urban centre	2010–11	2011–12	2012–13	2013–14	2014–15	Change from 2013–14 %
Canberra	6.4	5.0	4.8	4.0	4.3	8
Sydney	3.4	3.5	3.9	3.2	2.6	-19
Perth	12.1	9.5	0.6	1.0	0.8	-20
Darwin	53.1	72.7	37.5	49.9	39.5	-21
Melbourne	4.8	6.3	7.4	5.3	4.0	-25
South East Queensland					3.8 <sup>a</sup>	
Adelaide		1.5	2.4			
Hobart						

**Table notes**

<sup>a</sup> Logan did not report against the indicator for that specific year.

Melbourne and South East Queensland figures are the weighted average of the retailers (that is, C13/C4—Total connected properties: water supply). The figures exclude bulk utilities as they do not supply to retail customers.

### 2.6.2 C15—Average duration of an unplanned interruption to water supply

This indicator reports the average duration of unplanned interruption to water supply in a utility's operation, aggregated here by major urban area. Canberra recorded an increase (14.9 per cent) in average duration of unplanned interruptions in their water supply (Table 2.10). South East Queensland also recorded an increase; however, this may be attributed to Unitywater and Redland City Council commencing reporting on C15 in the 2014–15 year. Overall, Darwin recorded the shortest average duration of unplanned interruptions compared with the other major urban areas, followed closely by Perth and Melbourne.

For more detail on interruptions to water supply recorded by each urban utility in Australia, refer to [Section 6](#).

Table 2.10 C15—Average duration of an unplanned interruption—water, 2010–11 to 2014–15 (minutes)

Major urban centre	2010–11	2011–12	2012–13	2013–14	2014–15	Change from 2014–15%
South East Queensland			106 <sup>a</sup>	104 <sup>a</sup>	137 <sup>a</sup>	31.7 <sup>b</sup>
Canberra	111	119	148	104	120	14.9
Adelaide		201	158	153	165	7.8
Melbourne	109	102	103	99	99	0.1
Sydney	147	155	153	151	147	-2.6
Perth	114	118	130	117	96	-18.2
Darwin	92	72			94	
Hobart						

**Table notes**

<sup>a</sup> Unitywater and Redland did not report against the indicator for that specific year.

<sup>b</sup> Redland reported for the first time in 2014–15; therefore the percentage change for South East Queensland does not provide a direct comparison between the 2014–15 and 2013–14 years.

Melbourne and South East Queensland figures are the weighted average of the retailers (that is, C15/A2—Length of water mains).

The figures exclude bulk utilities as they do not supply to retail customers.