

## Appendix A: Comparison of major urban areas

This appendix provides comparative tables of a selection of indicators for major urban areas (each of which generally corresponds to a capital city and its environs).

Because utilities' structures vary, the figures in this appendix 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 southeast 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 indicators with costs have been adjusted for CPI increase.

Where appropriate, data for southeast Queensland is aggregated data from Seqwater, Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water. It excludes data from Redland Council, although this council is within the southeast Queensland region. Not all utilities reported figures on all indicators, and this detail as well as the exclusion of Redland Council is noted in the relevant tables.

Where indicated, the Sydney Catchment Authority (SCA) is combined with Sydney Water Corporation to represent the major urban area of Sydney. While SCA services not only Sydney Water but a number of other customers, services provided to those other customers are minor in comparison to those to Sydney Water; therefore, the impact may be immaterial. It is, however, important to note that the impact will vary across indicators.

Unless otherwise stated, data for other major urban areas in this appendix is sourced from a single utility for each major urban area, and therefore no modifications have been made. Those utilities are:

- Water Corporation (Perth) for Perth;
- SA Water for Adelaide (SA Water provided specific data for the city of Adelaide, although it also, for the first time in 2013–14, provided data for all of South Australia);
- ACTEW for Canberra;
- TasWater for Hobart (previously, Southern Water reported data for the whole southern region of Tasmania, including Hobart); and
- Power and Water (Darwin) for Darwin.

Some of these utilities did not provide data in 2013–14 and other years and hence are not shown in all the tables. For example, Southern Water did not provide information for several indicators.

**Table A1 W1, W2, W3, W4—Volume of water sourced from surface water, groundwater, desalinated water, and recycling, 2013–14 (ML)**

Major urban area	Surface water	Groundwater	Desalination	Recycled water	Total
Sydney	530,587	0	0	41,543	572,130
Melbourne	399,596	0	0	16,316	415,912
southeast Queensland	282,698	10,462	1,435	22,027	316,622
Perth	49,025	124,850	113,060	7,767	294,702
Adelaide	80,836	0	60,953	5,258	147,047
Canberra	48,731	0	0	4,372	53,103
Darwin	34,396	6,343	0	347	41,086

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.

The volume of southeast Queensland surface water, groundwater, and desalination water is derived from Seqwater.

The volume of southeast Queensland recycled water is the total derived from Seqwater, Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan City Council, although Logan City Council did not report on recycled water in the 2013–14 year.

**Table A2 (W12) Average annual residential water supplied, 2009–10 to 2013–14 (kL/property)**

Major urban area	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
southeast Queensland	178 <sup>1</sup>	142 <sup>2</sup>	146 <sup>3</sup>	156	164	4.9%
Sydney	205	197	193	198	206	4.0%
Perth	276	264	250	249	254	2.1%
Canberra	199	177	180	199	203	1.9%
Melbourne	142	138	142	152	150	-1.5%
Darwin	458	405	471	454	407	-10.4%
Adelaide	191	180	179	193	183	-5.2%

**Table notes**

<sup>1</sup> Queensland Urban Utilities and Unitywater did not report against the indicator for that specific year.

<sup>2-3</sup> Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Melbourne figures are the weighted average of its three retailers (that is (W12 / C4—Total connected properties) while southeast Queensland's figures are the weighted average of Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water.

**Table A3 W26—Total recycled water supplied (ML) and W27—Recycled water (% of effluent recycled), 2011–12 to 2013–14**

Major urban area	W26—Total recycled water supplied			W27—Recycled water (% of effluent recycled)		
	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
Adelaide	22,714	28,393	25,515	26	32	28
Canberra	4,607	4,416	4,372	13	15	15
Melbourne	38,100	37,633	36,155	11	11	11
southeast Queensland	11,432 <sup>1</sup>	23,136	23,082	6 <sup>2</sup>	9	11
Sydney	45,929	46,951	46,943	8	10	10
Hobart (TasWater)	0	0	5,239	0	0	9
Perth	10,370	10,272	10,029	8	8	7
Darwin	376	499	347	0	3	2

**Table notes**

<sup>1</sup> Gold Coast City Council, Logan City Council and Seqwater did not report against the indicator for that specific year.

<sup>2</sup> Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Melbourne figures for W26 are the total volume of Melbourne Water and the three retailers. Melbourne figures for W27 are the weighted average of Melbourne Water and the three retailers (that is, W26 / W18.5—Volume of treated sewage effluent).

Southeast Queensland figures for W26 are the aggregated figures for Seqwater, Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water. Southeast Queensland figures for W27 are the weighted average of those utilities.

**Table A4 P3—Typical residential bill (water) and P6—Typical residential bill (sewerage), 2009–10 to 2013–14 (\$)**

Major urban area	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Melbourne	693	784	896	909	1,077	18.4%
Perth	1079	1,132	1,185	1,238	1,287	4.0%
southeast Queensland	1,210 <sup>1</sup>	1,119 <sup>2</sup>	1,150 <sup>2</sup>	1,251	1,262	0.9%
Sydney	1,091	1,117	1,146	1,142	1,142	0.1%
Darwin	1,083	1,199	1,490	1,825	1,784	-2.2%
Canberra	1,066	1,034	1,127	1,206	1,099	-8.8%
Adelaide	960	1,010	1,206	1,399	1,282	-8.3%

**Table notes**

<sup>1</sup> Queensland Urban Utilities and Unitywater did not report against the indicator for that specific year.

<sup>2</sup> Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Melbourne figures are the weighted average of the three retailers.

Southeast Queensland figures are the weighted average of Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water.

**Table A5 E12—Total net greenhouse gas emissions, 2009–10 to 2013–14 (net t CO<sub>2</sub> equivalents per 1,000 connected water properties)**

Major urban area	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Perth	532	573	647	663	731	10%
Sydney	164	143	72	85	85	0%
Darwin	217	189	208	219	205	-7%
Melbourne		250	239	253	229	-9%
Canberra	422	362	313	288	260	-10%
Adelaide	262	293	328	422	278	-34%

Sydney figures are for Sydney Water only, excluding SCA.

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

The Adelaide city figure was unavailable this year.

**Table A6 F13—Combined operating cost—water and sewerage, 2009–10 to 2013–14 (\$/property)**

Major urban area	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2012–13
Melbourne	640	661	786	749	1,004	34%
southeast Queensland	899 <sup>1</sup>	802 <sup>2</sup>	897 <sup>3</sup>	937	1,065	14%
Perth	530	520	557	590	608	3%
Sydney	616	622	646	675	665	-1%
Canberra	786	756	825	796	740	-7%
Darwin	958	1,033	1,100	1,127	1,005	-11%
Adelaide	483	455	488	620	600	-3%

**Table notes**

<sup>1</sup> Queensland Urban Utilities and Unitywater did not report against the indicator for that specific year.

<sup>2-3</sup> Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Figures for F13 are the combined amounts for F11—Operating cost (water) and F12—Operating cost (sewerage).

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

Melbourne figures are the weighted average of the three retailers. The operating costs for the three retailers include bulk purchases from Melbourne Water.

Southeast Queensland figures are the weighted average of Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water. The operating costs for these utilities include bulk purchases from Seqwater.

**Table A7 F16—Total capital expenditure for water and sewerage, 2009–10 to 2013–14 (\$000)**

Major urban area	2009–10	2010–11	2011–12	2012–13	2013–14	% change from 2011–12
Sydney	1,450,228	792,425	778,888	701,467	618,785	–12%
Melbourne	1,508,082	1,333,598	926,228	723,126	599,560	–17%
southeast Queensland	413,244 <sup>1</sup>	496,451 <sup>2</sup>	972,917 <sup>3</sup>	642,306	508,995	–21%
Perth	912,813	688,815	540,938	495,976	258,141	–48%
Canberra	201,625	252,441	226,951	140,895	58,400	–59%
Darwin	63,839	51,122	57,102	63,673	25,172	–60%
Adelaide	1,023,355	595,851	530,075	331,038	187,945	–43%
Hobart (TasWater)	0	0	0	0	74,161	

**Table notes**

<sup>1</sup> Queensland Urban Utilities and Unitywater did not report against the indicator for that specific year.

<sup>2–3</sup> Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Sydney figures include Sydney Water and SCA.

Melbourne figures are the aggregate for Melbourne Water and the three retailers.

Southeast Queensland figures are the total of Seqwater, Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water.

**Table A8 F24—Net profit after tax (\$000) and F30—NPAT ratio (%), 2011–12 to 2013–14**

Major urban area	F24—NPAT (\$000)			F30—NPAT ratio (%)		
	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
Darwin	18,237	29,879	69,637	16	23	39
Perth	554,122	520,274	677,763	26	23	27
Sydney	428,516	463,028	490,372	14	17	18
Adelaide	233,441	270,844	199,912 <sup>1</sup>	17	18	15 <sup>1</sup>
Canberra	29,181	24,835	38,742	10	8	13
southeast Queensland	156,087 <sup>2</sup>	265,628	290,895	7 <sup>2</sup>	9	10
Hobart (TasWater)			27,236			10
Melbourne	495,752	112,171	253,690	16	4	6

**Table notes**

<sup>1</sup> Adelaide data for 2013–14 applies to entire SA Water operations as no data specific for Adelaide was available.

<sup>2</sup> Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Sydney NPAT figures are the aggregate for Sydney Water and SCA. NPAT ratio is the weighted average of Sydney Water and SCA (F24 / Total income/revenue).

Melbourne total NPAT (F24) figures are the aggregate for Melbourne Water and the three retailers. NPAT ratio (F30) is the weighted average of Melbourne Water and the three retailers (F24 / Total income/revenue).

Southeast Queensland figures for total NPAT (F24) are the aggregate for Seqwater, Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water. NPAT ratio (F30) is the weighted average of those utilities.

Perth data is for Water Corporation as a whole, as data were unavailable for Water Corporation (Perth).

**Table A9 F20—Dividend (\$000) and F21—Dividend payout ratio (%), 2011–12 to 2013–14**

Major urban area	F20—Dividend (\$000)			F21—Dividend payout ratio (%)		
	2011–12	2012–13	2013–14	2011–12	2012–13	2013–14
Canberra	29,181	24,835	38,742	100	100	100
Adelaide	229,166	242,141	196,717 <sup>1</sup>	98	89	98 <sup>2</sup>
Perth	411,523	390,109	491,264	74	75	72
Hobart (TasWater)			18,647			68
Sydney	280,718	325,951	279,900	66	70	57
southeast Queensland	78,996 <sup>3</sup>	40,105	70,954	63 <sup>3</sup>	49	46
Melbourne	254,867	63,982	46,600	51	57	18
Darwin						0

**Table notes**

<sup>1,2</sup> Adelaide data for 2013–14 applies to entire SA Water operations as no data specific for Adelaide was available.

<sup>3</sup> Gold Coast City Council and Logan City Council did not report against the indicator for that specific year.

Sydney F20 figures are the aggregate for Sydney Water and SCA. F21 is the weighted average of Sydney Water and SCA (F20 / F24).

Melbourne total dividend (F20) figures are the aggregate for Melbourne Water and the three retailers. The dividend payout ratio (F21) is the weighted average of Melbourne Water and the three retailers (F20 / F24).

Southeast Queensland figures for total dividend (F20) are the aggregate for Queensland Urban Utilities, Unitywater, Gold Coast Water, and Logan Water. Dividend payout ratio (F21) is the weighted average of those utilities.

Perth data is for Water Corporation as a whole, as data were unavailable for Water Corporation (Perth).

## A1 Sydney

The total volume of water sourced (W1–W4) in Sydney increased marginally (2%) for 2013–14 to 572,130 kL, and was associated with increased surface water sourced.

The average residential water supplied in Sydney increased by 4% to 206 kL in 2013–14. Sydney experienced a minimal increase to the average residential bill of 0.1%. This was attributed to an increase in sewerage charges only. The operating cost saw a small decrease of 1% to \$665/property. Sydney's total capital expenditure reduced by 12% for 2013–14, which is attributed to Sydney Water Corporation reduction in spending, as Sydney Catchment Authority spending increased.

There was a 13% increase in the reported sewer overflows per 100km of sewerage main.

NPAT increased by around \$27 million in 2013–14, although that is \$51 million below 2009–10 levels.

Sydney's dividend payout ratio decreased from 70% to 57%, and the total dividend paid was \$46 million (or 16%) lower than in 2012–13. In fact, the NPAT, dividends, and payout ratio have all returned to 2011–12 levels.

## A2 Melbourne

The total volume of water sourced (W1–W4) in Melbourne decreased by 7% for 2013–14 to 415,912 kL, and was associated with a decrease across all water sources: surface water, desalination water, and recycled water.

This is coupled with a decrease in average volume of residential water supplied to Melbourne customers by 1.5% to 150 kL from 152 kL in 2012–13 (which was the highest over the past five reporting years of 2009–10 to 2013–14).

The volume of recycled water supplied and percentage of effluent collected decreased for 2013–14 by 4% and 6% respectively.

A 9% decrease in greenhouse gas emissions (GHG) occurred in Melbourne. Melbourne Water was a major contributor, reporting a 9% reduction in emissions (a decrease of 32,272 t CO<sub>2</sub> per 1,000 properties), despite a 3% increase in the sewage collected and treated at its wastewater treatment plants.

Despite lower volumes delivered, Melbourne's operating costs increased by 34% in 2013–14. Melbourne had the greatest increase of all the cities, with 75% of the change attributed to increased water supply costs related to the desalination plant (Essential Services Commission Victoria [ESCV] 2013), and the remaining 25% of the change was associated with increased sewerage operating costs. This contributed to an associated increase in the typical residential bill for water (35%) and sewerage (5%).

Capital expenditure decreased by 17% from 2012–13 (the 5th consecutive significant decrease). This brought Melbourne below Sydney as the highest-spending city for the first time in the past five reporting years.

The higher operating cost was offset by lower capital cost and higher revenue, resulting in a growth in net profit for Melbourne compared to 2012–13; however, the 2012–13 year showed an unusual trough in the past five reporting years, due to the return of unrequired desalination payments to customers and Melbourne Water reporting a negative NPAT. The net profit and NPAT ratio for Melbourne is still low compared with the earlier 2009–10 to 2011–12 years.

The dividend paid in 2013–14 reduced further to \$46 million from the 2012–13 figure of \$64 million, and from the peak of \$255 million recorded for 2011–12. The dividend payout ratio of 18% is historically the lowest in the past five reporting years, and represents a 68% decrease from 2012–13.

## A3 Southeast Queensland

The total volume of water sourced (W1–W4) in southeast Queensland increased by 3% for 2013–14 to 316,622 kL and was associated with an increase in surface water use, with the overall increase being partially offset by decreased use of the other water sources, groundwater, desalination water, and recycled water.

Southeast Queensland's average annual volume of residential water supplied for 2013–14 was 164 kL, which was the second lowest consumption per property for the major urban areas after Melbourne, consistent with the data for the four previous reporting years of 2009–10 to 2012–13.

Southeast Queensland's average typical residential bill in 2013–14 was \$1,262 is the fourth highest of the major urban areas after Darwin (\$1,784), Perth (\$1,287) and Adelaide (\$1,282).

Capital expenditure reduced 21% compared to 2012–13; however, operating costs per property increased to \$1,065 in 2013–14, the highest for all the urban areas.

Southeast Queensland's capital expenditure was \$509 million in 2013–14, the third highest after Sydney and Melbourne.

NPAT increased by 1% to 10% and the dividend payout increased significantly by 77%.

## A4 Perth

The total volume of water sourced (W1–W4) in Perth was 294,702 kL for 2013–14, with only a 1.8% increase compared to 2012–13. Surface water, desalination water, and recycled water each showed a slight increase, while groundwater showed a decrease.

In 2013–14, Perth's average annual volume of residential water supplied remained comparatively high at 254 kL.

Perth residents are not as reliant on surface water as residents in other jurisdictions. Diversification of supply sources has seen an increase in the volumes of water sourced from desalination and easing of its reliance on groundwater.

Perth has had a continued increasing trend of GHG emissions over the five reporting years (2009–10 to 2013–14), with an additional 10% increase in the 2012–13 levels. This has been attributed to an increased reliance on water sourced from desalination. It is the highest GHG-emitting major urban area by a significant margin.

Operating costs increased by 3%, reflecting growth in both the number of properties serviced and external cost pressures, including costs associated with the operation and maintenance of increasing and diverse infrastructure (Water Corporation 2014: 15). Perth, however, still has the lowest operating costs of the major urban areas, with the next highest being Sydney.

Capital expenditure reduced dramatically by 48% to \$258 million, while NPAT and dividend payout also increased significantly by 30% and 77% respectively compared to last year. Residential bills, however, increased by 4%, continuing an increasing trend over the last five reporting years.

## A5 Adelaide

A 3.2% decrease in the total volume of water sourced from 2012–13 to 2013–14 and a corresponding decrease in the average annual volume of residential water supplied (down 5.2% to 183 kL per property) was reflected in a reported reduction of water sourced from surface water. Water sourced from desalination increased in 2013–14. The volume of water sourced from recycling was consistent with that reported in 2012–13. Adelaide's adoption of recycled water is further reflected in the percentage of effluent treated and reused. In 2013–14 Adelaide remained the best performing urban area recycling 28% of sewage effluent produced.

Adelaide had the third lowest volume of residential water supplied, after Brisbane (164 kL/property) and Melbourne (150 kL/property).

In 2013–14, there was a significant decrease in capital expenditure (43%), while operating costs decreased only slightly (3%). NPAT and dividend data were not available, therefore an appropriate comparison could not be made against Adelaide data for 2012–13.

## A6 Canberra

The total volume of water sourced (W1–W4) in Canberra was 53,103 kL for 2013–14, with only a 1.6% increase in volume compared with 2012–13. This was attributed to an increase in surface water sourced.

Average annual volumes of residential water supplied in Canberra increased marginally by 1.9% to 203 kL per property, the highest in five reporting years (2009–10 to 2013–14).

The typical residential bill decreased by 9% from 2012–13. It was similar to bills in Melbourne and Sydney.

Canberra continues its decreasing trend in GHG emissions, reporting a decrease of 10% from 2012–13. This is a result of a multitude of carbon and energy reduction programmes at ACTEW (2014: 23).

Capital expenditure dropped significantly by 59% in 2013–14 compared with 2012–13, while operating cost reduced by 7%. NPAT increased by 56% to \$39 million. Dividends increased by 56%, as a result of the ACT Government's 100% dividend payout ratio policy.

## A7 Darwin

The total volume of water sourced (W1–W4) in Darwin was 41,086 kL for 2013–14, showing a 5% decrease in volume compared with 2012–13. This is mostly attributed to an increase in the volume of surface water sourced.

Darwin also experienced a 10% decrease in the average annual volumes of residential water supplied in the reporting year, but remained, by a substantial margin, the major urban area with the highest residential consumption. Its volume of 407 kL per property was almost double that of the next highest, Perth (254 kL), and almost triple that of Melbourne and southeast Queensland. The 2013–14 demand in Darwin approximately equal to the area's annual sustainable supply limit. Accordingly, Power and Water is focusing on driving more efficient water use in the community to extend the life of existing water resources, which may have contributed to the decrease in 2013–14 (P&W 2014a: 38).

Total recycled water supplied reduced by 30%. Among the major urban areas, Darwin's remains by far the smallest producer of recycled water by volume, and also as a percentage of wastewater effluent collected (at 2%).

GHG emissions decreased by 7%, and Darwin remains the second-lowest greenhouse gas emitter after Sydney.

Operating costs remained one of the highest among the major urban areas, despite decreasing by 11% from 2012–13.

A change to the methodology used to calculate capital expenditure by Power and Water (Darwin) resulted in a 60% decrease from 2012–13, with the 2013–14 capital expenditure reported as \$25 million.

NPAT rose by 133%, from \$30 million in 2012–13 to \$70 million in 2013–14. As a result, Darwin now has the equal highest NPAT ratio among the major urban areas.

Darwin experienced a small decrease in typical residential bills to \$1,784 (2%) after a large 22% increase in 2013–14, but continues to have the highest average bill of all the major urban areas.

## A8 Hobart

With TasWater reporting for the first time for the Tasmanian metropolitan area including Hobart, comparisons with previous years were not possible because TasWater data relates to the entire State of Tasmania. Neither is a comparison with data previously reported by Southern Water, which covers a subset area that included Hobart. Additionally, TasWater has only reported against some indicators due to a lack of audited data at this point in time.

In general, indicators for Hobart are the same order of magnitude as Canberra, which is the closest in terms of population. In particular: total recycled water supplied; total capital expenditure for water and sewerage (\$74 million); and NPAT (\$27 million).