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National performance report 2016–17: **urban water utilities**

PART A

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Note: The 2017 Urban NPR was updated on 20 March 2018 to correct an error in Figure 1.4a and 1.4b. The error impacted the representation of desalinated water in Western Australia for the historical years 2011–2012, 2012–2013, 2014–2015 and 2015–2016.



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PART A



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A guide to this report

The following explanatory notes are provided to assist you to read and interpret this report.

Key terms and abbreviations

Utilities which form part of a city, shire or regional council, or a similar local government entity are reported under the town or city name within the tables and charts in the report. For example, Dubbo Regional Council is referred to as 'Dubbo' in tables and charts throughout the report.

In addition, several utilities are represented by shorter forms of their full names to aid presentation in charts and tables.

- Aqwest–Bunbury Water Corporation = Aqwest–Bunbury
- Busselton Water Corporation = Busselton
- Dubbo Regional Council = Dubbo
- Kalgoorlie–Boulder = Kal–Boulder
- Power and Water = P&W
- Queanbeyan–Palerang Regional Council = Queanbeyan
- Water Corporation = WC

The majority of utilities in this report provide both water and sewerage services. Where a utility provides only a single service (e.g. only water supply) it is denoted by the use of a code after the utilities name. The codes are

- (W) = Water supply only
- (S) = Sewerage only

Bulk water authorities

Bulk water authorities operate in a number of jurisdictions across Australia and provide wholesale water and wastewater services. These authorities do not have direct relationships with retail customers. For example, Melbourne Water supplies bulk water and wastewater services to the eight retail utilities in and surrounding the Melbourne metropolitan region².

Utility groups

For the purpose of this report, the contributing utilities are grouped based on their number of connected properties. The utility groups used are:

- Major—100,000+ connected properties
- Large—50,000–100,000 connected properties
- Medium—20,000–50,000 connected properties
- Small—10,000–20,000 connected properties.

Bulk water authorities are grouped separately and are not included in the analysis unless explicitly stated.

2 City West Water, South East Water, Yarra Valley Water, Western Water, Gippsland Water, Barwon Water, South Gippsland Water, and Westernport Water

Reporting year

References to the 'reporting year' or '2016–17' refer to the reporting year between 1 July 2016 and 30 June 2017 inclusive.

Missing or unavailable data

Missing or unavailable data is denoted in a table by a blank cell.

Interpreting 'overview of results' tables

Example Figure 1 shows how to interpret the 'Overview of results' table provided for each indicator.

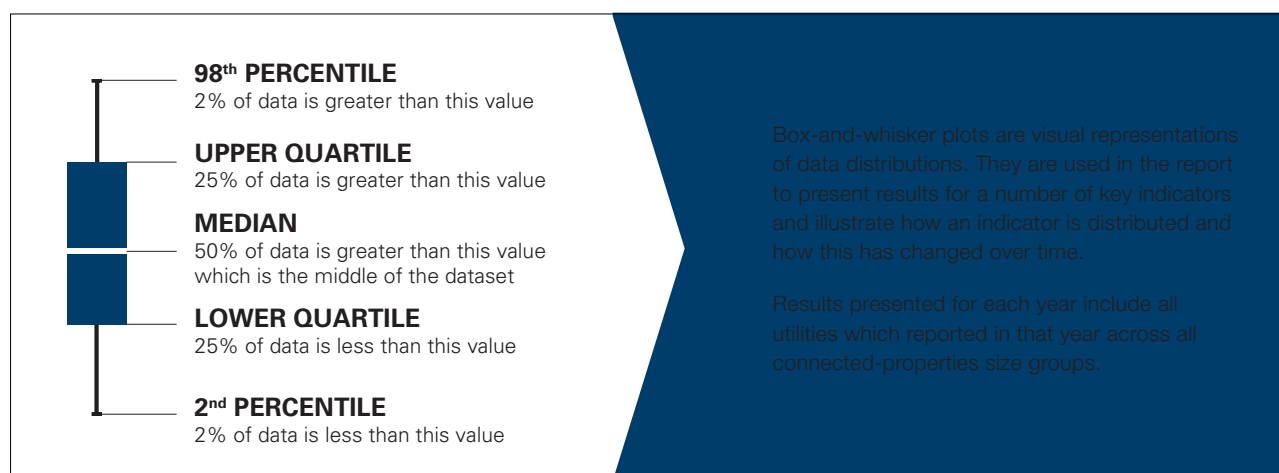
Size group	Range		Number of utilities with increase/decrease from previous year		Median or Total		Change from previous year %
	High	Low	Increase	Decrease	Previous year	Current year	
Major	249	140	10	1	158	162	3
	WC (Perth)	Logan					
Large	454	130	9	1	164	181	10
	P&W (Darwin)	Toowoomba					
Medium	479	143	17	1	175	201	15
	Lower Murray Water	MidCoast Water					
Small	450	80	19	5	174	179	3
	Multiple utilities	Ballina					
All size groups	479	80	55	8	166	177	7
	Lower Murray Water	Ballina					

- 1 The range shows the utilities with the highest and lowest result in the current reporting year for each utility group.
- 2 These columns show the number of utilities reporting an increase, or a decrease from the previous year's results for each utility group. Utilities who did not report in both years are not included in this column.
- 3
 - The median value is the middle number in the range of results. For example, if five utilities reported for this indicator and their results are 190, 195, 206, 207, and 210, the median is 206 as it is the middle number. For indicators that are not represented as an 'average' for the utility (e.g. average duration of water interruptions), or are divided by the number of properties (per property), the summary tables presents the sum (or total) of the results.
 - The total is the sum of all results.
 - Utilities who did not report in both years are not included in this column.
- 4 This column shows the percentage change between the current and previous years and is rounded to the nearest integer.
- 5 'Multiple utilities' is used when more than one utility recorded the same value.

Example Figure 1 How to interpret an 'Overview of results' table

Interpreting box-and-whisker plots

The report utilises box-and-whisker plots to show trends in the annual distribution of key indicators as shown in Example Figure 2.



Example Figure 2 How to interpret a box-and-whisker plot

Interpreting data and commentary

When interpreting data and commentary in the report, it is important to consider:

- The indicator codes are noted in the titles of each section (e.g. W12, F3, P7) and can be cross-referenced with the *National Performance Framework: 2013–14 urban water performance report indicators and definitions handbook*.
- The median is the preferred metric for the reporting dataset, as outlier results can affect the average, which can skew results towards the outliers.
- With the median, 50 per cent of utilities fall above and 50 per cent fall below the median value. Where average results are presented in addition to the median, they are to be interpreted together with the full dataset.
- Many factors can influence the performance of a utility and individual performance indicators need to be interpreted in context. A low ranking for one indicator may not accurately reflect the overall performance of a utility. For example, a utility might have a low operating cost per property, but also poor drinking water quality and environmental performance, and a high level of complaints.
- In discussions of indicators the ‘normaliser’ is often omitted to improve the flow of the commentary about indicators. For example, in the discussion of results for water main breaks per 100 km of water main, the commentary refers to a utility’s ‘water main breaks’. In this case, it is not the absolute number of water main breaks, rather, the number of breaks per 100 km of the water main.
- Single-service utilities are only included in the analysis of an indicator when a comparison on a like-for-like basis with utilities that provide both water and sewerage services can be made. For example, the overview tables for water and sewerage operating expenditure per connected property and for typical residential bills do not include single-service providers, but the overview tables for sewer overflows per 100 km of sewer main include all utilities that provide sewerage services.
- Financial time-series information is given in real 2016–17 dollars; the impact of inflation is removed to ensure that years can be compared on a like-for-like basis. CPI figures can be found in Appendix E (CPI Indexation).
- The percentage (%) change is calculated from 2015–16 reporting year to 2016–17 with figures rounded to the nearest integer, except in cases where additional precision is required.

Executive summary

The *National Performance Report 2016–17: urban water utilities* (2017 Urban NPR) compares the performance of 79 utilities and councils (utilities) and 5 bulk water authorities providing urban water services to over 20 million people² across Australia. The 2017 Urban NPR is published by the Bureau of Meteorology (the Bureau) with information provided by utilities across Australia's States and Territories. The report is the twelfth in the series, and the fourth to be produced by the Bureau.

Part A of the report provides commentary and analysis for key indicators. Part B of the report contains data for the full set of 182 indicators reported on by utilities and bulk water authorities for all reporting years.

Heavy rain benefits Adelaide's water savings

In 2016–17 the SA Water Corporation reported a record year of water savings, due to above-average rainfalls across the state. Across Adelaide decreased demand and the availability of surface water resulted in a reduction of the operating period for the Adelaide Desalination Plant. The SA Water Corporation reported a 17 per cent decrease in its average volume of water supplied to residential customers in Adelaide and more broadly across its entire operations.

For more about water resources see Chapter 3—Water Resources, and Tables A1 and A2 in Appendix A.

Perth increases reliance on desalination with deposits in the bank

Perth continues to increase its usage of desalinated water as a reliable source, showing an increase from 138,645 ML in 2015–16 to 149,823 ML in 2016–17. Desalinated water represents 50 per cent of the total water sourced for the Perth region, which also has a strong reliance on groundwater. Even though 2016–17 was very dry for Perth, Water Corporation returned or 'banked' 8,531 ML of water to surface water storages in the region.

For more about water sources for urban centres see Chapter 2—Major Urban Centres.

Increased rainfall keeps pressure off residential water supply

Above average rainfall across many parts of Australia saw over two thirds of utilities reporting decreased residential water use despite ongoing warmer than average temperatures (Figure A).

Notable increases included those for Central Coast Council, Hunter Water Corporation, and Sydney Water Corporation. The four per cent increase for these utilities is attributed to higher temperatures and lower rainfall, and, in the Hunter Valley, population growth.

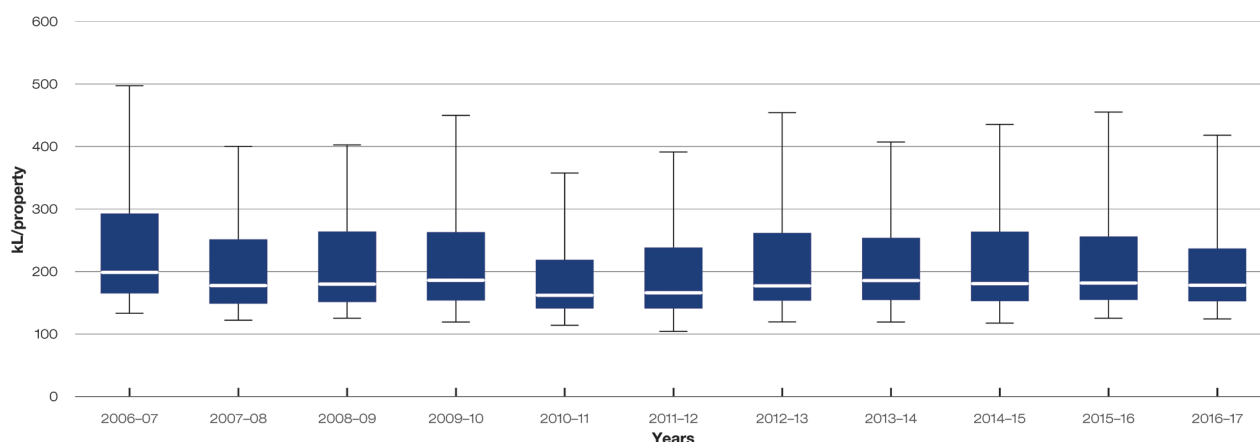


Figure A Average annual residential water supplied (kL/property), 2006–07 to 2016–17

For more about supply see Chapter 3—Water resources, and Table A1 in Appendix A.

² Australian Bureau of Statistics, *Australian Demographic Statistics*, March quarter 2017

Recycled water supply keeps on churning

Utilities in the Large utility group reported their third consecutive year of growth in recycled water supplied—40 per cent over the three-year period. Despite this increase, above-average spring and summer rainfalls across many parts of Australia led to decreased demand for recycled water. Nationally the total volume of recycled water supplied decreased by 6 per cent.

For more about recycled water see Chapter 2—Major Urban Centres and Chapter 3—Water Resources.

Typical residential bills plateau for water and sewerage

Sixty per cent of utilities reported a decrease in their typical residential bill in 2016–17, curbing the upward trend of the last 8 years. Nationally, the median typical residential bill decreased in 2016–17 by \$32 per annum (2 per cent) from 2015–16 (Figure B). This decrease was driven by a combination of decreased water usage and downward pressure on pricing through government initiatives.

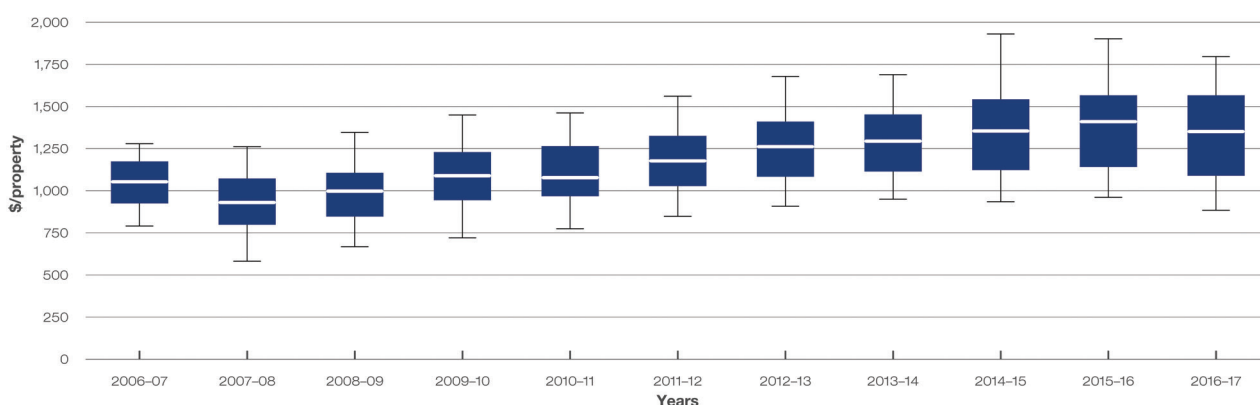


Figure B Typical residential bill: water and sewerage (\$), 2006–07 to 2016–17

For more about bills see Chapter 4—Pricing, and Tables A3 and A4 in Appendix A.

Operational expenses down

National median operating cost decreased 5 per cent, from \$940 in 2015–16 to \$892 in 2016–17. Figure C highlights this decrease in the median and also shows a reduction in the variance of the operating costs across utilities. While the result in isolation does not represent a new trend in operating costs, it does curb the existing trend of historical increases.

For more about operational expenditure see Chapter 5—Finance, and Table A8 in Appendix A.

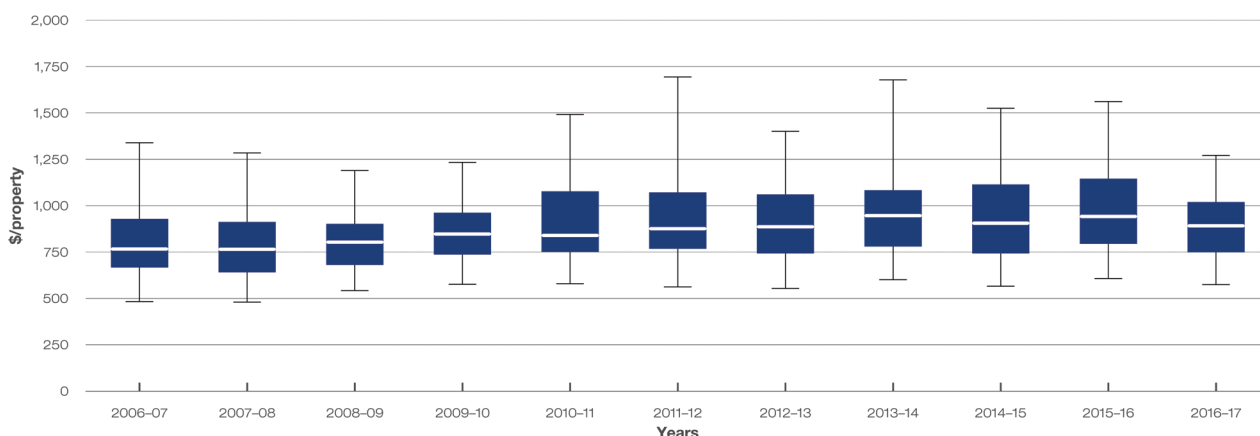


Figure C Combined operating cost: water and sewerage (\$/property), 2006–07 to 2016–17