



GLOBAL CONNECTIONS DAY
OCTOBER 23, 2019

**WATER: SAFETY, EFFICIENCY
AND CONSERVATION**

2019 ANNUAL CONFERENCE
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Addressing MS1 Water Scarcity on the
Driest Continent on Earth:
Lessons Learned in Australia

Neil Savery
Chief Executive
23 October 2019

Slide 2

MS1

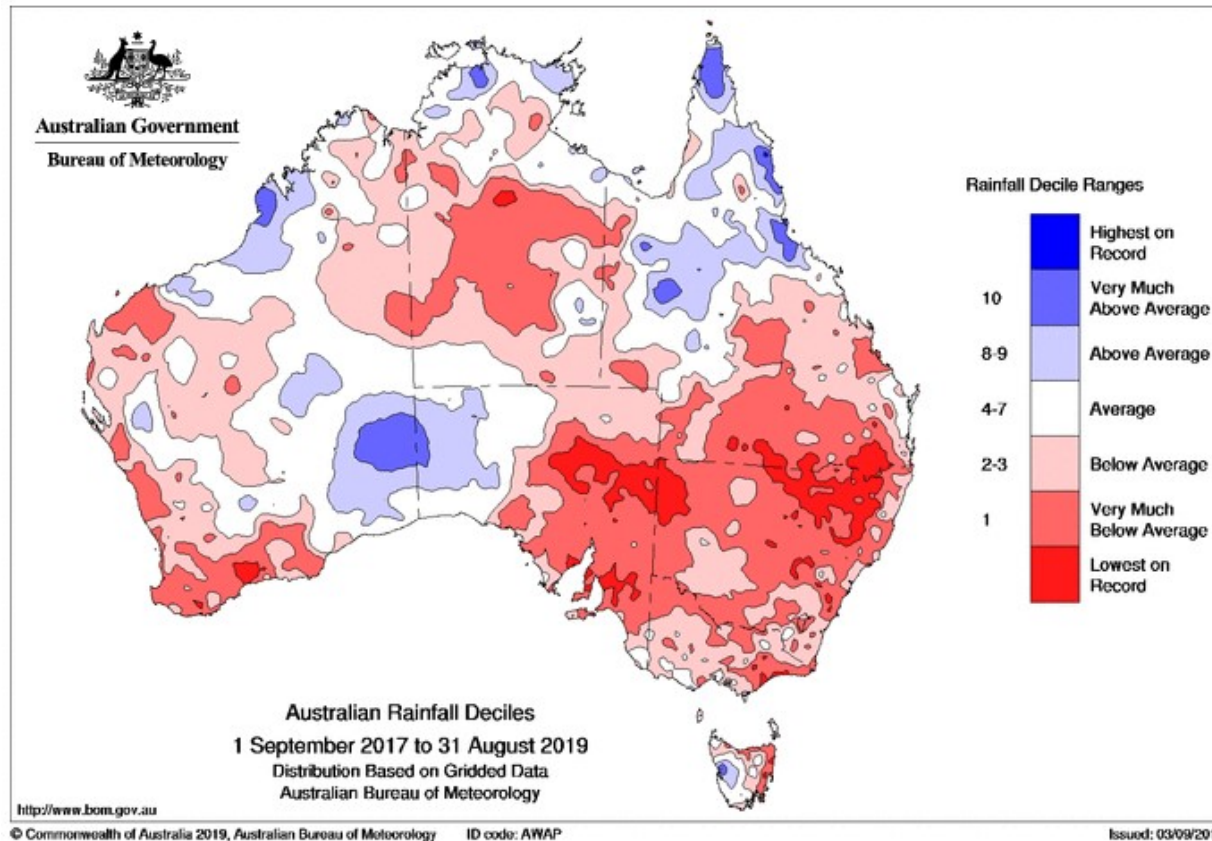
The driest continent is Antarctica, Australia is the second driest or the driest inhabited continent.

Murray, Scott, 9/24/2019

Reaching 'day zero', as water supplies dry up



Current state of Australia





Australian Building Codes Board



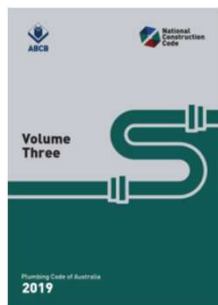
- Council of Australian Governments (COAG) standards writing body established in 1994
- responsible for development of the National Construction Code (NCC), comprised of the Building Code of Australia (BCA) and the Plumbing Code of Australia (PCA).
- The NCC's key objective is to provide the minimum necessary requirements for safety and health; amenity and accessibility, and sustainability in the design, construction, performance and liveability of new buildings
- Provides a vital link for industry between building and plumbing practice, and government building and plumbing regulatory policy.

Slide 5

- TR4** Abbreviations not required and will be lost on international attendees as they will not be familiar with the terminology.
Tom Roberts, 9/30/2019
- MS5** Noted. To be removed if not suitable.
Murray, Scott, 9/30/2019
- TR5** Slide is text heavy, could it be reduced with the details moved to speaking notes.
Tom Roberts, 9/30/2019
- MS6** I agree, however this is a standard ABCB slide.
Murray, Scott, 9/30/2019

Australia's Approach to Water Conservation

- Plumbing Code of Australia
 - WaterMark Certification Scheme
- Water Efficiency Labelling Scheme
- States & Territories of Australia
 - Water restrictions
 - Design and infrastructure
- Private initiatives – On-site water harvesting and recycling.



Plumbing Code of Australia



- Mandates the following:
 - Dual (full and half) flush toilets.
 - Maximum water flow of 9L/min for Shower, Basin, Kitchen Sink or Laundry trough.



Plumbing Code of Australia



- Non-drinking water service
 - Secondary supply of water not suitable for human consumption.
- Uses include irrigation, garden watering, laundry and toilet flushing.



Product Regulation



- The Plumbing Code of Australia (PCA) requires certain installation requirements and requires certain plumbing and drainage products to be certified and authorised for use in a plumbing and drainage system in Australia.
- The WaterMark Certification Scheme (Scheme) is the mandatory certification Scheme referenced by the PCA for use when certifying plumbing and drainage products to ensure they are fit for purpose.
- The Australian Building Codes Board (ABCB) owns and administers the Scheme.
- The Scheme is regulated at the point of installation of a plumbing and drainage product by the Australian State or Territory Plumbing Administration having jurisdiction.





Innovations

- Sensor taps and fixtures
- Smart plumbing fixtures
- Vacuum toilets
- Composting toilets



Innovations

- Rainwater harvesting is increasingly being mandated
- Plumbing Code Still applies



Water Efficiency Labelling and Standards (WELS) scheme

- Mandatory consumer labelling information scheme to reduce water use, operating since 2005
- Reduces demand for high quality water and reduces energy use
- Products in scheme are showers, taps, flow controllers, toilets, urinals, dishwashers, clothes washers
- Products must be tested for water efficiency, registered with WELS and supplied with a water rating label
- Eighty per cent of operating funds are paid by industry through registration fees



Effectiveness of WELS

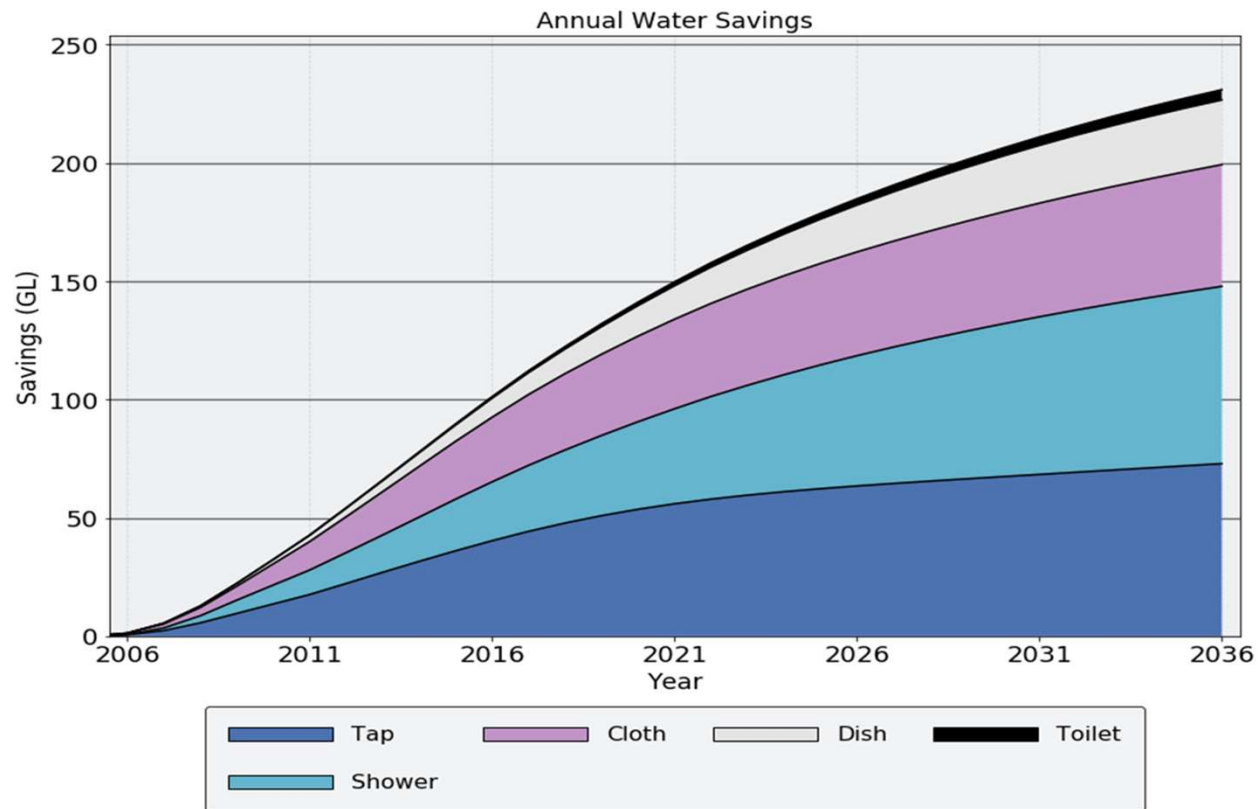


- 2014 market research found 87% of consumers recognised the WELS label, most used the star ratings and most were influenced by the label in deciding which product to buy.
- Estimated water and energy savings and reductions in greenhouse gas emissions attributable to WELS since it commenced in 2005.

	2017	2026	2036
Annual water savings (GL/year)	112	185	231
Cumulative GHG reduction (MT CO ₂ -e)	11.0	31.5	55.9
Annual household utility bill savings (\$m/year)	1048	1,766	2,638

Source: Evaluation of the environmental and economic impacts of the WELS scheme, Institute for Sustainable Futures, University of Technology Sydney, 2018

Water savings from WELS by product type



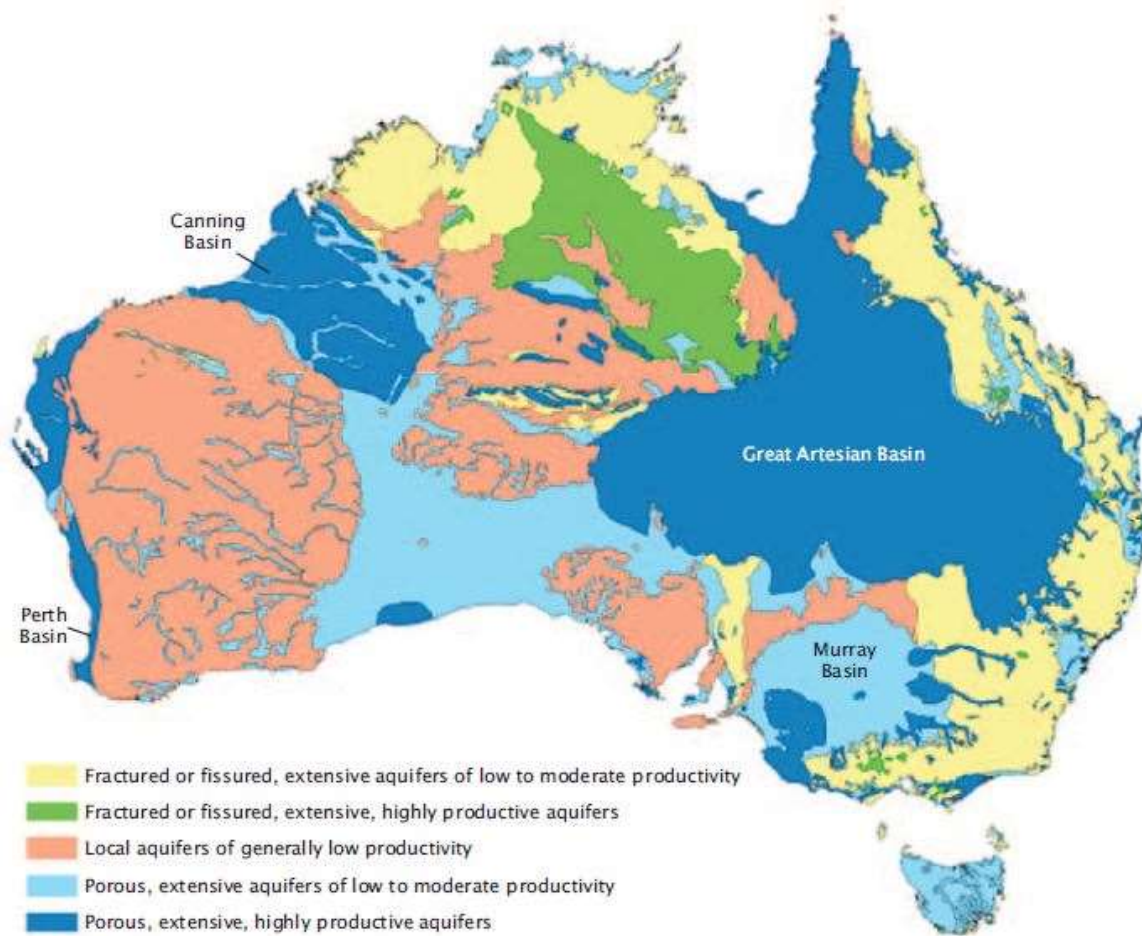
Source: Evaluation of the environmental and economic impacts of the WELS scheme, Institute for Sustainable Futures, University of Technology Sydney, 2018

States and Territories of Australia



- Water restrictions
 - 5 of the 8 (62.5%) Capital cities in Australia have invoked water restrictions.
 - Many rural towns and shires have Level 5 water restrictions.
 - Supplemented by community education
 - Water pricing to discourage waste

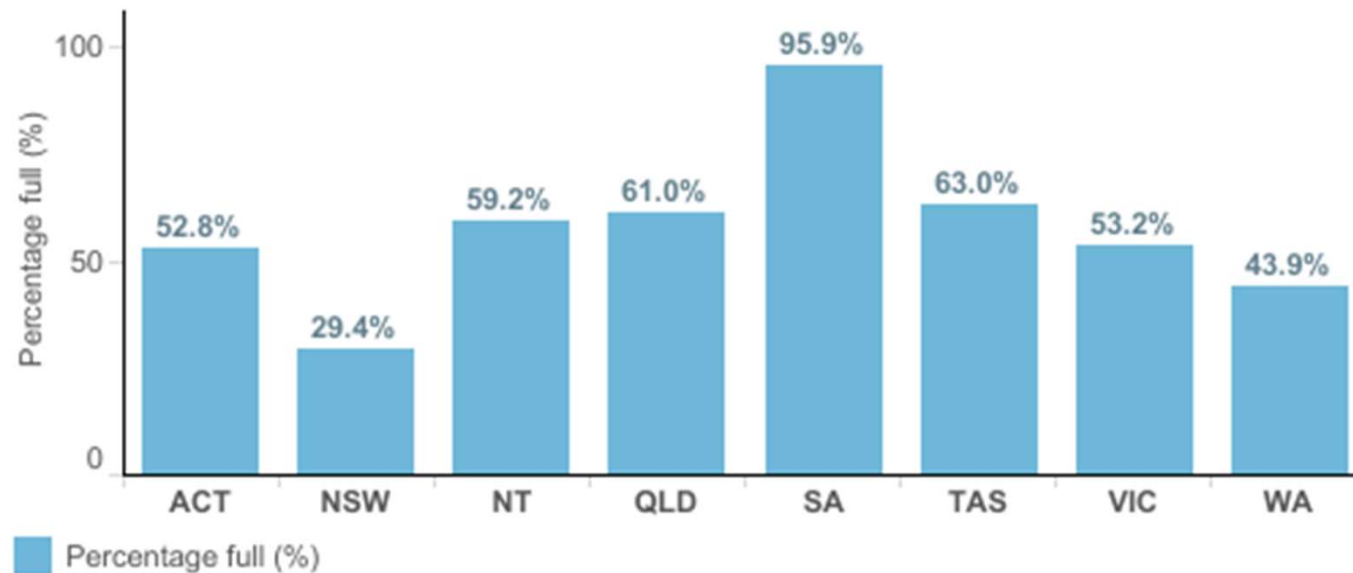
National Water Management



State and Territories of Australia



Percentage full - States and Territories



Source: Bureau of Meteorology, available from (<http://www.bom.gov.au/water/dashboards/#/water-storages/summary/state>)

Infrastructure and Design

