

# Water Outlook for Melbourne

1 December 2011



131 691

[www.citywestwater.com.au](http://www.citywestwater.com.au)



131 867

[www.southeastwater.com.au](http://www.southeastwater.com.au)



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[www.yarravalleywater.com.au](http://www.yarravalleywater.com.au)



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[www.melbournewater.com.au](http://www.melbournewater.com.au)

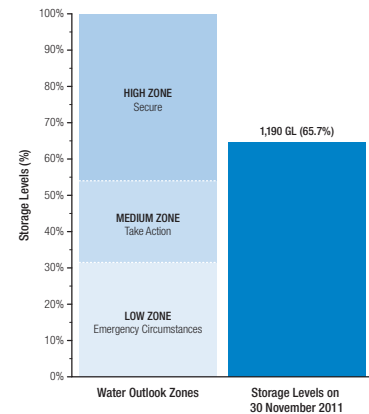
## Water storages are increasing

Melbourne's water supply has increased over the past year and storages are at 65.7% on 30 November 2011.

Diagram 1 shows that at this level, water storages are assessed as being in the High Zone. This means the existing water supply system can deliver at least five years' of water under a range of modelled climate and demand scenarios.

Melbourne's largest reservoir – Thomson – is currently holding 53.4% of its capacity. Thomson acts as Melbourne's drought reserve. Ensuring the recovery of storage levels in Thomson during wetter years substantially enhances Melbourne's resilience to future droughts.

Diagram 1 – Storage levels on 30 November 2011



## Water use at record lows

Melburnians continue to demonstrate a sustained commitment to using water efficiently with per person water use currently at record lows.

Despite continuing growth in population and the relaxation of restrictions from Stage 3 to Stage 2 in late 2010, Melburnians continue to reduce their water use.

Chart 1 outlines recent trends in water use. It shows that recent water use is lower than in any year in the past decade.

Overall water use can be broken down into three segments – residential, non residential and non revenue water.

### Residential water

Residential water use has reduced. Chart 2 shows the trend on a per person basis with residential water use dropping to a record low **146 litres/person/day**.

This result demonstrates a continued commitment by Melburnians to use water wisely. While this outcome is likely to have been influenced by water restrictions and higher rainfall than in previous years, it remains an impressive achievement.

### Non residential water

Non residential water use includes water used by large and small businesses, schools, universities, hospitals, parks and sportsfields. Non residential water use is also reducing.

Businesses in Melbourne that use five megalitres of water or more per year are encouraged to complete a water management action plan, called a waterMAP, to help reduce water use in their facilities and processes. Water use by waterMAP program participants has dropped by a collective 22.4 gigalitres (GL) since 2007.

There are also rebates available to small business, and grants and professional advice from water utilities to further help improve water efficiency.

Chart 1 – Melbourne's water use

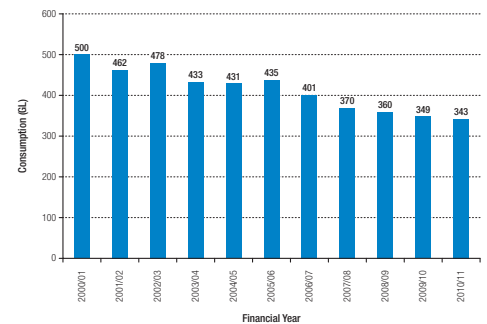


Chart 2 – Residential water use trends

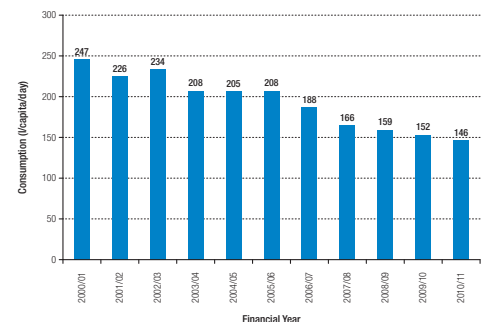
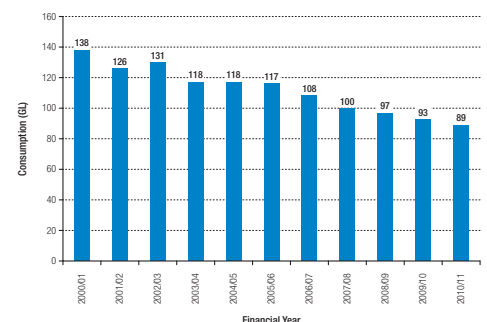


Chart 3 – Non Residential water use trends



## Non revenue water

Non revenue water is water that is not billed to customers. This includes loss of water through bursts and leaks of mains, water used for fire fighting and theft of water.

Non revenue water has been reducing over recent years due to the implementation of a variety of programs including a proactive leak detection and repair program. In 2010/11 non revenue water remained at the low level set in 2009/10. Melbourne's level of non revenue water and leakage is among the lowest in the world.

## Forecast for summer is warmer and drier than the median

The latest Bureau of Meteorology seasonal climate outlook indicates the likelihood of below median rainfall conditions and warmer temperatures over the upcoming summer.

Although a desalination plant is being constructed, Melbourne's water supply system is still significantly affected by climate conditions, particularly rainfall and temperature. The amount of rainfall significantly influences streamflows into water reservoirs while higher temperatures can reduce streamflows by 'drying out' catchments and result in increasing demand for water, particularly for gardens, parks and sportsfields.

**Rainfall outlook** – The Australian Bureau of Meteorology outlook for rainfall (issued on 22 November 2011) for the period December 2011 to February 2012 indicates that for Melbourne and its water supply catchments there is a **35-45% chance of exceeding the seasonal median rainfall**.

**Temperature outlook** – The Bureau's outlook for temperature (issued on 22 November 2011) for the period December 2011 to February 2012 indicates that for Melbourne and its water supply catchments there is more than an **80% chance of exceeding the seasonal median maximum temperatures**.

## Future storage levels

Under all but the lowest streamflow scenarios, Melbourne's water storages are likely to be assessed as in the High Zone on 30 November 2012.

This Water Outlook seeks to provide the community with an understanding of water security over the next 12-month period.

Predicting Melbourne's water storage level in the coming year is a complex undertaking due to difficulty in predicting future climate and streamflow conditions.

Still, the water utilities have assessed where water storages might be in November 2012 based on a range of modelled climate and demand scenarios.

Under all but the lowest streamflow scenarios, Melbourne's water storages are likely to be assessed as in the High Zone on 30 November 2012.

There is currently uncertainty on when the new desalination plant will be able to deliver water into Melbourne's water supply system. When assessing future storage levels the water utilities have assumed no water is sourced from the desalination plant.

Consistent with Government Policy, no water is sourced from the North-South pipeline.

Chart 4 – Non revenue water use trends

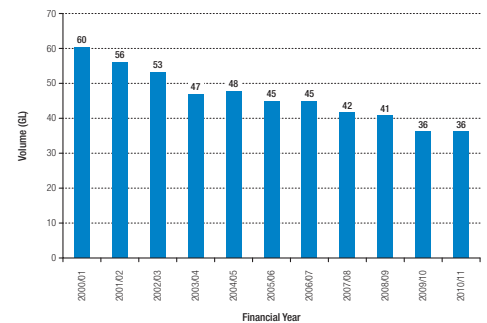


Chart 5 – Seasonal Rainfall Outlook Dec 2011 – Feb 2012

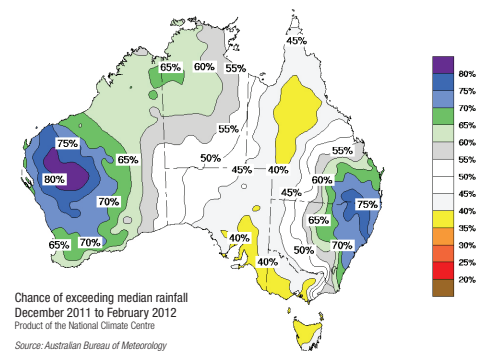
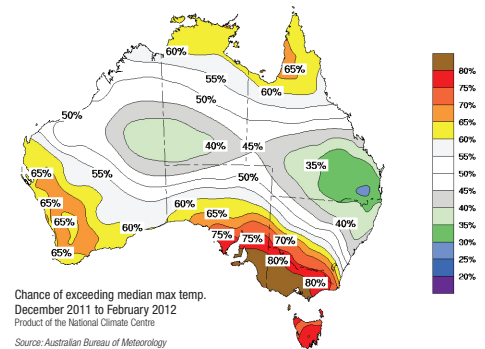


Chart 6 – Seasonal Temperature Outlook Dec 2011 – Feb 2012



## Water restrictions relaxed

On 30 November the Minister for Water, having considered all of the above, announced that Stage 1 restrictions would apply in Melbourne from 1 December 2011. This replaces Stage 2 restrictions which have been in place for over a year.

Melbourne's households and businesses have demonstrated a strong commitment to the efficient use of water. The move to Stage 1 will provide Melburnians with greater flexibility on water use while ensuring that water is still used wisely. The water utilities will continue to implement programs that assist households and businesses to continue to achieve water efficient outcomes.

More information on Stage 1 is available from water utility websites.

<b>City West Water</b>	<a href="http://www.citywestwater.com.au">www.citywestwater.com.au</a>
<b>South East Water</b>	<a href="http://www.southeastwater.com.au">www.southeastwater.com.au</a>
<b>Yarra Valley Water</b>	<a href="http://www.yarravalleywater.com.au">www.yarravalleywater.com.au</a>

## Simplified STAGE 1 Water Restrictions

## Securing supplies into the future

The water utilities consider the management of water resources and supply security to be an ongoing task. Even when current water storage levels are in the High Zone, there remains a need to continue investment in programs that can contribute to the long term security of supply. Appendix 1 outlines programs and projects that the water utilities are undertaking to enhance supply security.

## Appendix 1 – Annual Action Plan<sup>1</sup>

PROGRAM/ PROJECT NAME	DESCRIPTION	BY WHEN	RESPONSIBILITY
<b>STAGE 1 RESTRICTIONS</b>	Implement Stage 1 under the new Drought Response Plan for Melbourne.	Implement on 1 December 2011	City West Water, South East Water, Yarra Valley Water
<b>RESIDENTIAL WATER EFFICIENCY PROGRAMS</b>	<p>Develop and maintain programs that target the four highest residential water use activities. This will include:</p> <ul style="list-style-type: none"> <li>→ Showerhead exchange program, including a trial of a 5 litres/per/minute showerhead to test and capture community experiences with lower flow units.</li> <li>→ Toilet retrofit program which seeks to replace single flush toilets with 4.5/3 litre dual flush units.</li> <li>→ Clothes washer changeover program trial which seeks to replace inefficient clothes washing machines with more efficient models.</li> <li>→ Water efficient gardening program designed to reduce potential for bounce back in water use post restrictions.</li> </ul> <p>Delivery of these programs will occur through a range of channels including schools, websites, events, bill inserts and smart bills.</p>	Continue program delivery over the next year	City West Water, South East Water, Yarra Valley Water
<b>WATER CYCLE EDUCATION AND AWARENESS PROGRAMS</b>	<p>Continue implementation of education and awareness programs including:</p> <ul style="list-style-type: none"> <li>→ the Water Learn it, Live it schools program.</li> <li>→ Whole of water cycle education programs.</li> <li>→ Publication of water information including daily storage levels.</li> </ul>	Continue program delivery over the next year	City West Water, Melbourne Water, South East Water, Yarra Valley Water
<b>INDUSTRY EFFICIENCY IMPROVEMENT PROGRAM</b>	<p>Continue to work with industry to deliver the voluntary waterMAP program that encourages businesses using greater than 5ML/year to invest in water efficiency and ranks each business against the National Business Water Efficiency Benchmark study.</p> <p>Develop and implement programs that seek savings from key non residential water uses such as cooling towers, evaporative coolers, fire protection systems, restaurant kitchens, Council irrigation systems and aquatic centres.</p>	Continue program delivery over the next year	City West Water, South East Water, Yarra Valley Water
<b>NON RESIDENTIAL REBATES, GRANTS AND OTHER INCENTIVES</b>	Promote the Living Victoria Water Rebate program for small businesses, assist businesses with water efficiency grants and water advisors.	Continue program delivery over the next year	City West Water, South East Water, Yarra Valley Water
<b>NON REVENUE WATER</b>	Continue with active leakage detection, reticulation mains renewals, pressure management, zone metering and rapid response to bursts.	Continue program delivery over the next year	City West Water, Melbourne Water, South East Water, Yarra Valley Water

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1 December 2011

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<b>INTEGRATED WATER MANAGEMENT (IWM) STRATEGY FOR THE SOUTH EAST</b>	Finalise strategy and implement actions associated with integrated planning and furthering local solutions. This builds upon the significant existing recycling program that focuses on residential, industrial and agricultural water use.	Strategy outlines various dates for each action. Will commence implementation in 2012	Melbourne Water, South East Water, Southern Rural Water
<b>EXPANSION OF RESIDENTIAL RECYCLED WATER SUPPLY SYSTEM IN THE SOUTH EAST</b>	The recycled water supply system will be extended to cater for new areas of residential demand (i.e. toilet flushing and outdoor use) at Keysborough and Pakenham / Officer as well as existing areas in Cranbourne.	Cranbourne 2011-20 Clyde North 2012-20	South East Water
<b>RECYCLED WATER SUPPLY FOR INDUSTRIAL / COMMERCIAL SITES</b>	Continue to work with developer to complete the design and installation of Class A recycled water transfer infrastructure for industrial and commercial use (Logis Estate).	Complete by end 2012	South East Water
<b>STORMWATER REUSE</b>	Provision of recycled stormwater to residential use (i.e. toilet flushing and outdoor use) to new infill development at Troupe's Creek.	Supply commences first half of 2012	South East Water
<b>HASTINGS INDUSTRIAL</b>	Complete upgrade of Somers Sewage Treatment Plant and commission infrastructure to supply Class A recycled water for industrial use.	Complete by end 2011	South East Water
<b>COMMUNITY OPEN SPACE</b>	Work with Frankston and Mornington Peninsula Council to investigate the viability of supply of recycled water to open space and recreational use at Monterey Community Park and the Briars.	Complete by end 2012	South East Water
<b>BUNYIP FOOD BELT</b>	Use completed pre-feasibility study to determine potential funding support for supply of recycled water for food production.	Complete by end 2012	South East Water
<b>IWM STRATEGY FOR THE NORTH</b>	Development of a servicing plan for the Northern Corridor integrating use of stormwater and Class A recycled water. Approximately 100,000 homes will be serviced with recycled water.	Complete by June 2012	Yarra Valley Water
<b>MERRIFIELD STORMWATER HARVESTING PROJECT</b>	Harvest stormwater from a large commercial development near Kalkallo and treat to a drinking water standard (with initial reuse into the recycled water supply).	Complete by June 2013	Yarra Valley Water
<b>COBURG STORMWATER HARVESTING PROJECT</b>	Harvest stormwater from the catchment around the Coburg Principal Activity Centre and return the treated water to new residential dwellings.	Complete by June 2013	Yarra Valley Water

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<b>DONCASTER HILL RECYCLED WATER PROJECT</b>	Retrofit a third pipe recycled water network supplied by a new sewer mine into all new developments within the Doncaster Hill Principal Activity Centre.	Complete by June 2014	Yarra Valley Water
<b>YARRA VALLEY IRRIGATION SCHEME</b>	Supply of recycled water from the Lilydale Sewage Treatment Plant to wineries and fruit/vegetable growers in the Yarra Valley.	Complete preliminary business case by June 2012	Yarra Valley Water
<b>IWM STRATEGY FOR CWW</b>	Development of a strategic framework and an implementation plan for IWM within CWW's service area.	Complete by June 2012	City West Water
<b>AQUIFER STORAGE AND RECOVERY</b>	Using aquifers in the western region to store alternative water as an option for supply and demand balance.	Continue investigations for implementation by 2014	City West Water
<b>WEST WERRIBEE DUAL SUPPLY PROJECT</b>	Provision of "fit for purpose" alternative water supply to new residential developments and public open spaces in the Wyndham Vale area.	Project construction continues for completion by 2014	City West Water
<b>ALTONA RECYCLED WATER PROJECT STAGE 2</b>	Provision of "fit for purpose" alternative water supply to industries in the Altona Industrial Precinct.	Business case under development.	City West Water
<b>WESTERN GROWTH AREA SCHEME</b>	Servicing of western growth area using an Integrated Water Management approach.	Investigations to continue to develop detailed business case	City West Water
<b>PARTNERSHIPS IN STORMWATER REUSE PROGRAM</b>	Partnering with Hobsons Bay, Brimbank, Maribyrnong, Moonee Valley, Wyndham, Melton and Yarra City Councils to deliver stormwater harvesting projects for irrigation.	Completed during 2012 and 2013	City West Water
<b>DOCKLANDS RECYCLED WATER PROJECT</b>	Provision of "fit for purpose" alternative water supply to remaining buildings in the Docklands Precinct.	Functional design and business case development approval in progress	City West Water

<sup>1</sup> The Drought Response Plans (DRPs) for City West Water, South East Water and Yarra Valley Water require the publication of a Water Outlook on 1 December. In addition, the DRPs require the development of an Annual Action Plan and a Medium Term Action Plan as a part of the Water Outlook.

Appendix 1 (above) constitutes an Annual Action Plan for the purposes of the DRPs. The water utilities are currently developing a Water Supply Demand Strategy (WSDS) for Melbourne. A draft WSDS will be published in the coming months and the community will be invited to make submissions on its content. The final WSDS will set out a Medium Term Action Plan that will be incorporated into the next Water Outlook.