

BETTER than a DEBATE

Scientists propose more efficient policy measures than an un-economical North-South pipeline

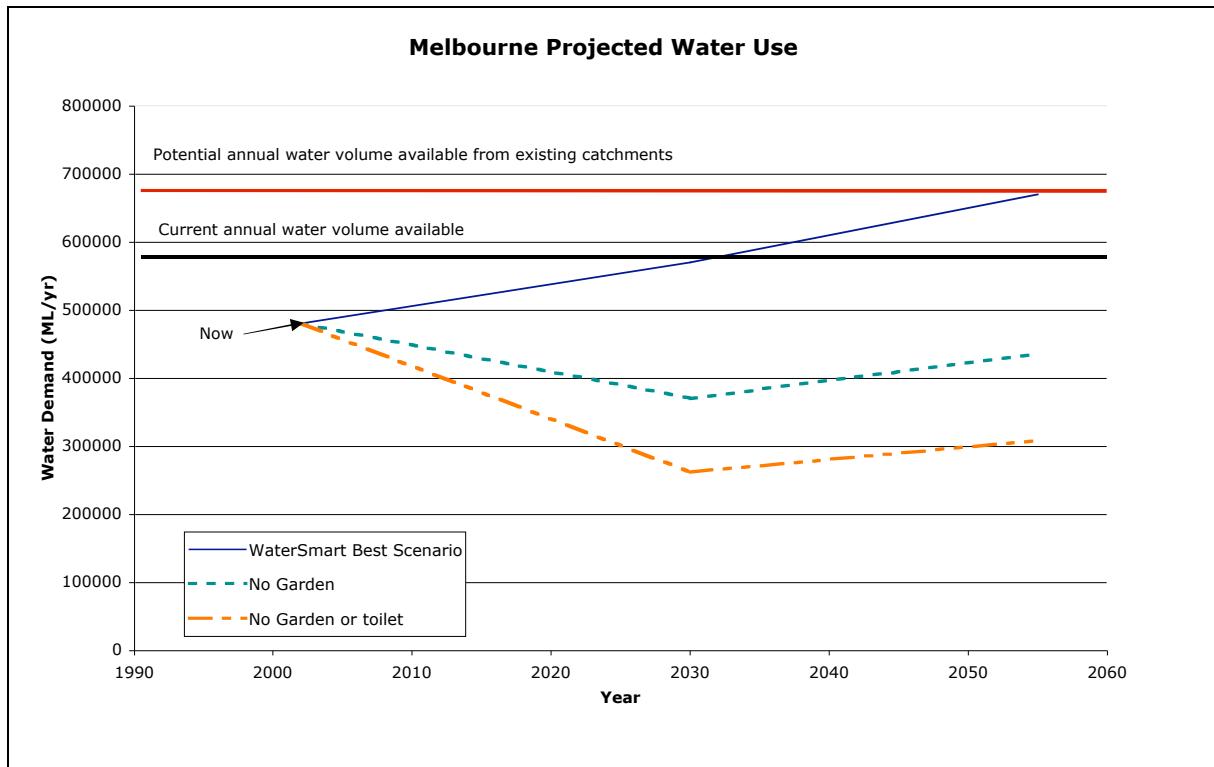
On Tuesday, 5 February, the Premier of Victoria, the Hon John Brumby MP, delivered the 2008 Annual Statement of Government Intentions to Parliament with the commitment to accessible and accountable decision-making - the very same criteria that prompted our desire for a robust Debate. After considerable communication from 3717 Watch Inc. the Affirmative team – The Hon Tim Holding, Water Minister, Victorian Government; David Downie, General Manager, Office of Water, and Peter Harris, Department Secretary, Dept. Sustainability & Environment - in the last week, declined to attend/or to send a representative. We will keep you posted, of a future date to be proffered for the debate.

Instead, science was taking the stage in front of a 150 plus, full Yea Hall. Three high-calibre experts were invited to provide us with the bigger picture of the water crisis in Victoria, its origins and the policy measures available to overcome it. Their verdict: The North-South pipeline is not needed, it is an inefficient approach and compared to more economic alternatives, a waste of money. So, let's see why.

With over twenty years experience as a university academic **Assoc./Prof. Dr. Brian Finlayson**, a physical geographer with specialist expertise in geomorphology and environmental hydrology started with a graph from the last major review of Melbourne's water supply system, which was conducted by an expert panel chaired by Prof. Nancy Millis. The forecasts starting in the late 90s showed that with modest conservation measures and increasing amounts of extracted water from the catchments, the next major augmentation of Melbourne's water supply would not be needed until 2050. If so, why is it that just eight years after this report the government feels compelled to put new supplies into place in the form of the North-South pipeline and a desalination plant? The reason for such an early turn to new water supply infrastructure are the recent series of drought years that caused major concern for the government and the water authorities. Whether the dry spell reflects a new trend or the normal variability of the Australian climate is difficult to ascertain, but the concerns are none-the-less real. However, it is also a reality that wastewater treated up to the standard of drinking water is a successful option used in cities like Singapore and Paris. Using treated grey water for watering the garden, for washing cars, cleaning windows or for commercial use has great potential to save this precious resource.

According to Dr. Finlayson, currently garden watering accounts for 35% of Melbourne's water use and toilet flushing for 19%. With a gradual phase-in, by 2030 the use of grey water for the garden and toilet would bring water demand levels in Melbourne well below the levels where new water supply infrastructure is needed (see graph below).

Instead of perpetuating the supply sided focus that was reasonable for the 19th century, Melbourne can become totally water self-sufficient in a modern 21st century sustainable water supply system that includes rain water harvesting and recycling at a domestic level or at a city-wide level.



Source: A/Prof. Dr. Brian Finlayson

Biomedical and environmental scientist, former Director of Fisheries in Victoria and current research co-ordinator with the WaterMark Australia Project **Dr. Wayne Chamley** argued along a very similar line: An area of Australia's east coast, from Tamworth to Euroa, figures on the United Nations list of the ten global water hotspots on planet earth, together with Mexico City, the river Nile, and areas in the middle east amongst others. Despite this, nearly 80% of Australia's food is produced in this area, a significant part of the Murray Darling Basin. Only 12% of rain falling over the Australian continent can get into rivers along the coast where about 80% of the population lives, while the majority of rainfall is evaporating over central desert areas. In former dry periods, such as the one recorded from 1900 to 1940, the Australian population was below 10 million inhabitants, in contrast to the current drought, which is affecting some 21.3 million people. Thus, the future water availability and population growth is a topic in need of debate. In this context, water diversion from rural farmland to urban areas is dangerous, especially when it supports a very bad habit in our cities – the habit of only using water once.

To operate and function, Dr. Chamley remarks, the city of Melbourne needs about 480 GL of fresh water each year. In an average year 450 GL of storm water is allowed to flow into Port Phillip Bay unused. Another 350 GL of sewerage is released across Victoria and about 240GL just from Melbourne alone, a significant opportunity for recycling of sewerage. Meanwhile, voluntary savings as part of demand management strategies have only produced a 12% reduction in urban household consumption thus far rather than the earlier advertised 17-22% in the Government's water saving media campaign. The government, shying away from (less popular?) regulations that would allow a real move towards water savings, rainwater harvesting and grey-water recycling, has turned to large-scale supply sided infrastructure projects instead.

This lack of vision in our political leadership is costly. As demonstrated by Dr. Chamley, the

North-South Pipeline “produces” water at much higher costs than alternative options: For example, if 50% of irrigators in the Murray Darling basin were assisted in using technological world’s best practice, savings of 900 GL would be achieved at a cost of \$500 per Mega Litre of water. In comparison, the Food Bowl Stage 1 savings are achieved at \$4,500 per ML, while a ML of water from the North-South Pipeline is costing the taxpayer a staggering \$15,000!

Table: Value for Money?

	Murray Darling Basin	Food Bowl Stage 1.	N-S pipeline
ACTION	50% irrigators up to world best practise	Infrastructure upgrade	Pipe water to Melbourne
TOTAL WATER	900 GL	225 GL	75GL
COST \$	200-500 million	1 billion	1.08 billion
\$ per ML gained	\$200-500	\$4,500	~ \$15,000 ***

Source: Dr. W. Chamley.

Note: *** energy costs will be extra

And what about the environment? **Juliet Le Feuvre**, zoologist and member of the Healthy River Campaign of Environment Victoria, a not-for-profit organization in Victoria, reminds us of the incredibly valuable and rare natural treasures that we are just about to lose unless we act: The wetlands of the Murray river, iconic sites such as the Barmah-Millewa Forest, the Gonbower Koondrook-Perricoota Forests, the Hattah Lakes in Victoria and the Choowilla Floodplain and the Lakes at the Murray Mouth in South Australia. The Bramah-Millewa forest is the world’s largest River Red Gum forest (Red Gums are native to Australia only) and its wetlands are home to many flora and fauna species, including migratory birds, some of which are listed on the nationally endangered species list. Under the federal Environment Protection and Biodiversity Conservation Act and the international Ramsar Convention on Wetlands, the federal government has the responsibility to look after these species and their wetland habitat. For example, some water bird species last bred in Bramah in 2005 as a result of environmental flows that were channelled through to the forests in that year. However, with about 75% of Red Gums across Northern Victoria under stress or dying, a much more consistent and vigorous strategy is needed to save these iconic sites and the other wetlands along the Murray River. Already regulated with some 3500 dams and weirs bracing the river system, unfortunately the trend to more channels and interconnections for agricultural and urban water use continues. Meanwhile the ecosystem services provided by the Murray River, such as the wetland’s capacity to raise water quality through filtration, and the economic value of non-irrigation industries reliant on the Murray’s health (\$1.620 million) deserve the same attention.

The data and calculations presented by the three experts clearly suggest that the North-South Pipeline is economically inefficient, environmentally damaging, and a 19th century solution for a 21st century problem. All three speakers were opposed to new dams or other large supply-sided infrastructure projects as the solution to our present crisis. Solutions aimed at changing our relationship with water, such as rainwater harvesting, simple home retrofits, and water recycling are the way forward in securing Melbourne’s water for generations to come. We can only hope, as we ask our political leaders to rethink their present strategies, that they

will answer the call of our scientific experts to change the way we use water, with visionary leadership. (For a copy of the presentations visit <http://www.acheronvalleywatch.org.au/>)