

The Role of Water Efficiency in Australian Urban Water Planning

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The recent, and in some areas, continuing drought in Australia has led to a major disruption in urban water supply-demand planning. It has tested not only the ability of our water supply systems to cope, with many cities reaching previously unheard of dam levels, but it has also tested the decision-making processes and institutional arrangements just at the time when water efficiency is being taken seriously by a number of utilities and government agencies.

This paper addresses these issues from a national perspective, using examples from around Australia to illustrate. It will reinforce three key points.

Firstly, water efficiency has a very important role to play in water supply-demand planning. The ‘conservation potential’ that exists in the houses, gardens, offices, shops and factories, as well as in the reticulation system itself, represents a major resource. This is based on the principle that a permanent and reliable reduction in demand through improved efficiency is equivalent to a similar increase in supply, usually at a much lower cost, available more quickly and with major benefits in terms of reduced greenhouse gas emissions. Some governments and utilities are recognising the importance of water efficiency and demand management and are investing hundreds of millions of dollars in the roll out of demand management programs to tap into the conservation potential in their region.

Secondly, the most recent drought has highlighted the role of contingency, or ‘readiness’ options. These are supply or demand options that can be planned for, and/or implemented rapidly during a drought worse than the worst on record, in other words a drought for which pre-planned temporary water restrictions will not be sufficient to guarantee security. Accelerated demand management programs have an important role to play in this context, especially when there are tight timelines for constructing emergency supply options. The rapid implementation of water efficiency measures, including pressure and leakage reduction, business water efficiency programs, washing machine, toilet and shower head exchange or retrofit programs can buy valuable time in a situation of declining storages, and the benefits, and water savings, can be lasting.

Thirdly, a well-defined process of decision-making that follows an agreed procedure is extremely important, and is often one of the first casualties during a drought. Such a decision making process requires a clear determination of constraints and objectives up front, including agreement on the acceptable levels of service that will apply over the long run *with full community involvement in determining these levels*. There has been insufficient community debate or engagement in recent decisions being made on water supply planning or in the setting of levels of service in many regions. The level of investment in supply options and demand side (water efficiency) options and recycling should be based on a robust decision making process, taking into account all the costs and benefits and, if water efficiency is the lowest unit cost option then it should have the appropriate level of investment and implementation. Finally, monitoring and evaluation are crucial parts of that decision-making process and essential to close the loop on the planning cycle.