

## FACT SHEET -RECYCLING

There is a real desire on behalf of the community and its representatives to recycle water in order to benefit from a water supply that is not climate dependant. The technology is becoming available to enable more widespread use of reclaimed water and governments and the water industry itself have set targets for water recycling.

There are however, some challenges to recycling in Australia that limit its uptake. These include:

Businesses that could use significant quantities of reclaimed water are becoming scarcer as water has now become a significant cost for industry (i.e. the amount paid reflects the amount consumed). Those that remain have often either converted their processes to reduce water consumption (e.g. replacing the use of mains water for cooling) or they recycle their own water in-house.

Irrigation is a potentially significant user of reclaimed water. Generally, however, the demand for irrigation water is remote from the source of supply (e.g. in rural areas or on the urban fringe) and requirements are highly seasonable. The cost of storage of reclaimed water to overcome seasonal variability is expensive and technically difficult.

Reclaimed water is also used for non-drinking purposes (such as toilet flushing, garden watering etc) in new residential areas – the so-called ‘dual supply’ or ‘third pipe systems’ – but concerns over the cost-effectiveness of such schemes are growing.

Indirect potable reuse of water is a highly viable and sustainable option for the use of reclaimed water to augment fresh water supplies. Unplanned indirect potable reuse has been practiced for decades. It involves the discharge of high quality reclaimed water to a river by an upstream town and its extraction for drinking water purposes by a town downstream. In recent times, rather than releasing water to the river, some towns recycle the water to underground aquifers and/or surface reservoirs before further treatment and use for drinking water within the community – a process known as planned indirect potable reuse.

Direct potable reuse involves the discharge of the high quality reclaimed water to a reservoir used for drinking water purposes or even directly to the distribution network. For various reasons, but principally on account of a lack of understanding of water science in the community, both planned indirect potable reuse and direct potable reuse have yet to find wide community and government support in Australia.

The significant investment in seawater desalination plants by governments to diversify water supplies in coastal cities and support for rainwater tanks in urban communities could well mitigate against a more rapid uptake of water recycling as a means of augmenting our finite fresh water supplies.

