RECYCLING – A BETTER OPTION FOR THE CENTRAL COAST THAN DESALINATION
TEC BRIEFING NOTE

Gosford and Wyong Councils are currently pressing ahead with plans to lease and operate as many as 20 portable desalination plants to augment water supply on the Central Coast. The push for desalination is proceeding despite strong community opposition and calls for recycling to be developed as a sustainable alternative. It is important, therefore, to examine the problems with desalination and options for recycling alternatives.

Recycling should be part of a wider strategy including demand management/efficiency measures, pricing reform, rainwater tanks and stormwater harvesting.

PROBLEMS WITH DESALINATION

- Desalination requires large amounts of electricity.
- Highly concentrated brine waste product creates problems with disposal.
- Entrapment of marine organisms in intakes.
- Perpetuates single use of water and fuels unsustainable consumption.
- Any money spent on desalination cannot be spent on recycling.

RECYCLING

- Requires less energy than desalination.
- By using water more than once sewage discharges to receiving waters are reduced.
- Lower cost to customers than desalination due to lower cost per kilolitre of water produced.

Types of recycling:

Non potable:

- Using recycled water for non-drinking purposes i.e. industry, irrigation, outdoor water use & toilet flushing.
- In residential use it is most suitable for greenfields developments where a second set of pipes (dual reticulation) can be installed during development stage.
- Currently in operation at Newington and Rouse Hill in Sydney.
- Difficult and expensive to retrofit in already developed areas.
- Eraring Power Station provides a large scale example of industrial non-potable reuse with treated effluent from western Lake Macquarie treated to better than drinking water standard and used in the power station boilers.

Indirect Potable:

- Highly treated effluent is put into streams or reservoirs, mixed with raw water and then treated to drinking water standard.
- Already happening in Western Sydney. Windsor and Richmond draw their drinking water directly from the Hawkesbury River downstream from tertiary treatment sewage treatment plants discharging into the river. Water drawn from the river is treated to drinking water standard.
- Does not require second set of pipes so is not restricted to greenfield sites.

REYCLING OPPORTUNITIES ON THE CENTRAL COAST

Recycling levels on the Central Coast are currently very low. As an example, in a 2004 submission to the Independent Pricing and Regulatory Tribunal (IPART) Wyong Council revealed that less than 0.1% of its effluent was recycled and that it was only planned to increase this to 0.8% by 2005. This indicates that recycled has the potential to be a major source of supply. Recycling opportunities for the Central Coast include:

Non-potable:

- Dual reticulation in new developments
- Industrial areas
- Power stations

Indirect Potable:

- Highly treated effluent could be returned to Mangrove Creek or Mardi Dam or simply returned to Wyong Creek. It would then mix with raw water before being subjected to normal purification and treatment process.
- Similar to the situation with Richmond and Windsor water supply.

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