From:

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I have perused "*Australia's Urban Water Sector - Productivity Commission Draft Report*" and would like to comment on one aspect in particular – that concerning the installation and use of domestic rainwater tanks.

I am skeptical of some of the claims (quoted from research etc) regarding the savings that can accrue from domestic systems.

Over the past seven years, I have been maintaining a domestic rainwater tank modelling system for a typical installation in the Townsville urban region, based on the requirements set out in the Queensland Development Code (Mandatory Part 4.2).

A summary report is available from the following link:

http://people.aapt.net.au/jclark19/

and the document is:

http://people.aapt.net.au/jclark19/ReportNov09RWaterTanks-Townsville.pdf

The provision of rainwater tanks in the Townsville region under QDC 4.2 provisions would be a HUGE waste of resources.

An earlier version of this report was instrumental in obtaining exemption from QDC 4.2 (when I was Building Officer (Statutory) at the former Thuringowa City Council).

Admittedly, the analysis is for a region where there are usually marked 'wet' and 'dry' seasons.

What surprises me is that I have not seen any similar modelling for other regions, even though the daily rainfall figures for most urban regions are available from BoM.

Most studies seem to use average weekly or monthly rainfall figures, but in my opinion these are all useless. It is necessary to 'map' collection and usage on a daily basis. Any realistic model needs to know when the tank is full (so the next day's rain goes on the ground) and when the tank is empty.

I have not supplied a link to or copy of the actual model, as it is my own work and therefore "commercial – in confidence", but access can be arranged if the Commission is interested.

My opinion is that there is really no viable alternative to large-scale containment. Desalination is very expensive. Micro-containment can also be pointless if the rainfall pattern is seasonal and/or includes rainstorms. There may be scope for stormwater harvesting into downstream containments, particularly if this can be combined with aquifer replenishment.

On the other hand, I have no particular objection to recycling wastewater: I used to live in the Thames Valley (UK) where (at least in the 1970s) it was common knowledge that a "glass of water was drunk seven times on its way down to the estuary".

Regards,

Martin Clark