

New Dams. Mick Harewood. 13.11.2006

Most of what European invasion and settlement has done to catchments has had the effect of increasing quickflow runoff and decreasing the duration of base flows between rainfall events. This includes the introduction of hard-hoofed animals, draining swamps, clearing swamps or wetlands to grow crops (with the associated erosion of these areas and downstream stream-bank erosion), pumping water from streams during times of low flow for irrigation or urban water supply, replacement of oldgrowth forest with dense regeneration or (worse still) exotic plantations, construction of roads which intercept interflow and turn it into overland flow, etcetera. The only contrary effect of European development has been the construction of dams. West of the Great Dividing Range, pretty well all the dams that might have made economic sense have been built already. Storages in the MDB deprive downstream river reaches of natural flows for weeks and weeks. The slope of the MDB streams is a hundred meters or so over thousands of kilometres.

By contrast, a high proportion of the quickflow runoff in catchments east of the divide is out-to-sea within a day or so. Capturing and storing a proportion of this quickflow (or stormflow) runoff may go some way towards restoring the pre-European-invasion hydrological regime.

I am not a big fan of off-stream storages such as that proposed for the Tuross tributary because it will require pumping from the trunk stream.

However, it may be a better option for a secure water supply to places like Tuross Heads than extraction of very low flows from the Tuross in drought times.

Both Bega and Eurobodalla urban water schemes are relatively integrated. For example, when the flow in the Towamba falls so low that there is no surface flow across the sand aquifer above the tidal limit, Ben Boyd and Yellow Pinch Dams can be drawn down. Yellow Pinch is kept filled as drought progresses and the flow in the Tantawangalo fails by pumping from the Bega Sands Aquifer (of 30,000 Ml) with the new pipeline. This is expensive in electricity (and emissions) but can ameliorate the environmental effects on the source streams of the Tantawangalo and the Towamba.

Nuanced scrutiny of all new dam proposals is required if SERCA is to make credible contributions to the debate.

Regards,

Mick Harewood.