

Help Shape Our Water Future: Ballarat and Region Submission from John Barnes

The premise under which this paper is written is unsubstantiated and fundamentally wrong and the language unnecessarily loaded in order to draw readers into the faulty reasoning it promotes.

The Premise

This has three components:

1. Ballarat's potable water is secure for something like 10 to 15 years and will require further augmentation that demands we plan for this now.
2. That the technical considerations of how rain and storm water might be controlled and harvested needs to be considered prior to basic economic assessment of the options to achieve this.
3. That the whole of water cycle approach adopted in this paper ignores the reality of inter-catchment transfers and precludes market solutions to meet Ballarat's future needs.

Loaded Language

Catchments are catchments. They are not agricultural catchments as outlined throughout the paper (pages 35, 43, 60). Catchments are subject to demands for the use of water and for the absorption of water from a variety of sources:

- primary industry (surface and ground water for irrigation and domestic and stock uses),
- urban (surface and ground water for domestic, commercial and industrial uses),
- rural lifestyle (surface and ground water for aesthetic and fire safety reasons) and
- the environment (surface and ground water for the health of ecosystems around rivers, riparian areas and wetlands, flood plains and for estuaries and coasts).

The language in the paper takes us back to an era that pre-dates the opening of water markets, and away from the National Water Initiative principle that water should be managed in a way which sees it go the highest value end user if we are to have an efficient and productive economy, and a sustainable and healthy environment.

10-15 years potable water security for Ballarat currently.

This is mentioned in the Chair's introduction on p3 and again on p32, where reference is made to modelling that shows a unique way of looking at the dynamism of catchments, with the upshot that 9GL (or more in wetter years) may be available from rain and storm water run-off with judicious use of the Cardigan Aquifer. This modelling is NOT one of the appendices to the report. Nor is any detail of the Cardigan Aquifer Project in the public domain. I have asked for a copy of the modelling to be sent to me, but have been denied by DEPI staff. Without it, there is no way to substantiate this central premise.

My contention is that the modelling is wrong, if it exists at all. I spent 9 years as Chair of CHW during the period of the Millennium Drought and the building of the Goldfields Superpipe. The plain facts are:

- That with approximately 100,000 people now dependent on the Ballarat water supply system, using around 12GL p.a. on Permanent Water Saving Rules (i.e. unrestricted use), and

- The combined capacity of local reservoirs and groundwater (currently at over 5 years supply), and
- The ability for CHW to pump 19GL p.a. through the Superpipe (and even more with minor engineering changes), and
- With storage entitlements in Lake Eppalock allowing CHW to stockpile some of the 22GL permanent water entitlement it has purchased from farmers already and pump as needed.

Water security for Ballarat is considerably more than 10 -15 years, even at the upper end of growth forecasts of 2.1% p.a. The Goldfields Superpipe has diversified and broadened Ballarat's drought risk profile, for it is no longer dependent on rain falling on local catchments for its supply (which would still be the case with capture and storage in the Cardigan Aquifer). When there is drought in both the local and Goulburn catchments, as there inevitably will be, urban communities like Ballarat will always be able to pay whatever the market demands to supply itself. This is the same for any urban area which is part of a broader supply grid with capacity to take advantage of the water market. Farmers who now grow grass for dairy will make more out of their water entitlements during drought by going on extended holiday on the Gold Coast and selling their annual entitlements until it rains again, than they would by using water to continue growing grass.

Ballarat's use of 19GL p.a. (which could be increased with some relatively inexpensive augmentation of the Superpipe) is a modest demand on the Goulburn Murray system with annual secure allocations of around 2000GL annually and even more additional sales water in wetter years. My contention is that with competent management, Ballarat's supply is secure for the next 30 years plus, and relative to the threat posed by climate change and drought to agriculture in Victoria's foodbowl, is immaterial.

Assuming that 9GL can be stored in the Cardigan Aquifer, what is the cost and how does it compare to other supply options? The paper gives no details.

No basic economic assessment of options for future supply for Ballarat.

Money and time could have been saved on this project by doing the same sort of basic economic analysis of augmentation options followed in the preparation of regional sustainable water strategies. These canvassed the options and combinations of options for additional water, giving an upper and lower cost estimate of supply costs (\$/ML for recurrent and amortised capital), thus providing a ready comparison of the relative costs of each option. They also provided a risk analysis of each option to provide a relatively simple to understand summary of the relative merits of competing options for water supply. Why has this not been done in this instance? Before proceeding with any further investigation of this Living Victoria project, this exercise should be done, and if the costs and risks are significantly higher than through provision of water through existing sources (and via their future augmentation), the whole project should be abandoned.

This is not to decry the benefits of Water Sensitive Urban Design (WSUD). It is just to go into it knowing what the costs are, and how far we might justifiably push this line without causing unnecessary increases in the affordability of new housing in Ballarat West. Weighing up the benefits of slower release of storm water to the environment and potable substitution compared to relative costs of engineering whole of development solutions versus rain water tanks versus a combination of both, versus the cost of CHW avoiding or delaying water and waste water treatment infrastructure are the sorts of considerations that are missing from the Living Victoria paper. Let's be smart about our investments, taking into account what our current capacities are, and optimising our existing assets.

Whole of water cycle model precluding water market considerations

One could be forgiven for coming away from reading this paper and not knowing that Ballarat is connected to the Goulburn system by the Superpipe, and what the capacity of it is to secure Ballarat's water supply. The preoccupation with the 'new' model (p32) has come at the cost of touching reality. The reality is we have a water market, and national water policy that endeavours to drive water use to the highest value end user. Ballarat is not unique, but it is in a position to participate in the broader water market. We should not pretend it is otherwise.

On p50 the report asks us to set goals to reduce reliance on extractions from the Moorabool River Catchment, but we already have the capacity to do this through the Superpipe, to which no consideration is given! Breathing Life Into the Yarrowee does not mention that the base flows in the Yarrowee River below Sebastopol are from the Ballarat South Waste Water Treatment Works settling ponds, and that this water is mostly transferred from the Moorabool River. The same applies to base flows in the Burrumbeet Creek. The Superpipe represents a considerable inter-catchment transfer. We should not ignore this reality in water modelling by restricting our whole of water cycle model to single catchments.

