



Our Yarra: Healthy, Protected and Loved

Submission by the Yarra Riverkeeper,
to the Inquiry into the Management Governance and use of
Environmental Water,
by the Environment, Natural Resources and Regional Development
Committee of the Victorian Parliament

The Yarra Riverkeeper appreciates and welcomes the opportunity to comment on the use of environmental water in Victoria.

Who we are

Established in 2005 the Yarra Riverkeeper Association is an independent group of citizen-advocates who speak on behalf of the Yarra River and its tributaries and more broadly the catchment. Our spokesperson is the Yarra Riverkeeper and he regularly patrols the river in our boat and observes and records changes along the river. We are part of the Waterkeeper Alliance of more than 300 waterkeepers worldwide

With Environment Victoria, the Yarra Riverkeeper worked to support the allocation of Environmental Water for the Yarra River

Context

Australia has little water thinly spread over a vast continent, and what water there is highly variable, which means we lead the world in our understanding of how water impacts on the environment and how water can be well managed and how beneficial impacts can be maximized, and negative impacts minimized. This is hard fought knowledge, the result of many droughts and floods, that has only begun to be consolidated in recent years, and which builds on tens of thousands of years of indigenous knowledge. We are only beginning to truly appreciate how agricultural and urban settlement has radically altered the Victorian landscape in the past two hundred years. There is now a much better understanding that the great estate of Australia has been a managed environment, often through careful burning regimes. Much of the traditional management was devoted to ensuring water availability throughout the years and in drought. We live in a managed landscape and we have a duty to ourselves, our children and our grandchildren to manage it well.

Water is the essential ingredient both for landscape health and for agriculture, recreation and tourism, both in urban and regional Victoria. The importance of recreational use of water in urban setting is often under-appreciated yet the Yarra is more intensively used for recreation than any other waterway in Victoria, and has more tourists visits than most other places in Victoria. Lake Wendouree is another example of a vital urban water resource. Its recreational value was all the more appreciated when it dried in the millennial drought, which impacted on tourism operators as much as on rowing clubs and schools.

Environmental flows

River flows around the world are highly variable and that is particularly so in Australia. The appreciation of the critical importance of the variability of flows rather than a necessary minimum volume has been a relatively recent phenomenon and it is slowly taking grip on the broader imagination. Flow variation is complex with many combinations and permutations, with differing ecological outcomes. Flows vary in five ways: magnitude, timing, duration, frequency and rate of change. Those variations can be classified into five states: extremely low flows, low or base flows, high flow pulses, small floods and large floods. Environmental flows sustain water volumes not only for environmental uses but also for tourism and recreation and also maintain water quality. The variation in the flows drives much of the ecology of our landscape, not least in terms of fish stocks.

Our understanding of the impact of environmental flows is expanding and the appreciation of their value, including economic value is expanding. One of the measures of environmental flows, and the drivers for environmental flows, has been fish health. There is now an appreciation that the benefits of environmental flows are not restricted to the waterway but are also found in estuaries, bays and oceans into which waterways flow. Perhaps the most telling example of this is the work of the Arthur Rylah Institute, funded by VR Fish, that has identified strong spring flows as a critical factor in the recruitment of the sand flathead. Sand flathead populations, once one of the most populous fish in Port Phillip Bay, have now collapsed due to a lack of suitable flow volume at the right time. There is now evidence that the reduction in freshwater flows into the bay affect the breeding of several key fishing species in the bay, including the iconic bream.

World Leader

Australia, and Victoria, now leads the world in growing the base of knowledge of water management and environmental flows, both for environment purposes and for consumptive purposes. Two Australian initiatives stand out:

1. Our vibrant if still relatively young **water market**, which is used to drive both irrigation and environmental outcomes. The market is evolving to help deliver water to the most valued uses, and assist in the best timing of water delivery for the best outcomes.
2. In 2007, the **Brisbane Declaration** on Environmental Flows was endorsed by more than 750 practitioners from more than 50 countries at the International River Symposium in Brisbane in 2007. The declaration is the premier statement of the values of environmental flows and was announced as an official pledge by a community of water experts to work together to protect and restore the world's rivers and lakes.

Victorian Environmental Water Holder

The Victorian Environmental Water Holder (VEWH) was established on the 1 July 2011 through an amendment to the Victorian Water Act. VEWH manages the environmental water entitlement in Victoria. It is broadly respected by stakeholders across the spectrum. It represents innovative, world-class Victorian thinking in the water space. The Water Holder is a customer of the water corporations just like any other and

Comments on the Terms of Reference

- *The assessment of the role of environmental water in preventing and causing 'blackwater' events*

The current problems with 'blackwater' events that may occasionally follow from environmental flow releases are the result of restrictions on overbank flows and the lack of sufficient environmental water to release adequate flows, both of which prevent adequate flushing of excess organic matter in the system. As the carbon in the forest needs to be managed by an adequate frequency of cool burns, so the carbon in the litter in the riverine corridor needs to be managed by adequate flushing flows. There needs to be additional funding provided to help build a detailed understanding of blackwater events, especially after severe droughts. Some blackwater events are natural occurrences that have the ecological benefit of releasing carbon into the ecosystem as a useful nutrient. Any SDL adjustment mechanisms need to be considered in the light of how effectively they deal with the issue of excess carbon building up in the system.

- *Consideration of what barriers exist to the more efficient use of environmental water and how these may be addressed*

One major barrier is that environmental water in the Yarra may be pumped out of the river downstream of the point of release before it reaches the estuary, effectively converting from environmental water back into drinking water supply. The environmental water should ideally be allowed to reach the estuary and if this does not happen a discount rate should be applied so additional water is released to compensate for the withdrawal from the system before it has travelled the length of the waterway.

Watering wetlands is a challenge on the Yarra and elsewhere, to efficient use of environmental water due to the challenge of no longer being able to allow overbank flows. The structural issue of how to water the Yarra wetlands needs to be looked at in a holistic and integrated way. Some wetlands are now better watered from stormwater while others are better watered from the river, either through lowering entry points and using one-way valves and a combination of environmental water and naturally high flows or through pumping. The advantage of pumping, when managed properly, is that it can exclude exotic species such as carp and mosquito fish.

Notifying recreational users of significant environmental releases adds recreational value to their release.

Certainly, in the southern basins the need is often for larger flows which often deliver proportionately higher returns for the environment than more modest flows.

- *Assessment of fees and charges applied to environmental water and whether these differ from those imposed on other water users.*

Given the importance of the environmental benefits provided by the environmental water flows in the Yarra, benefits that are enjoyed by a broad range of people and often by people within the urban segment of the catchment, any fees and charges while useful as a management tool should be set well below those of consumptive users who are deriving a direct economic profit from the water they purchase. Further those environmental benefits should be valued and that value set against any charges for environmental water. The environmental benefits include supporting fish stocks, improving water quality, providing passing flows, cooling, supporting biodiversity and bird migration.

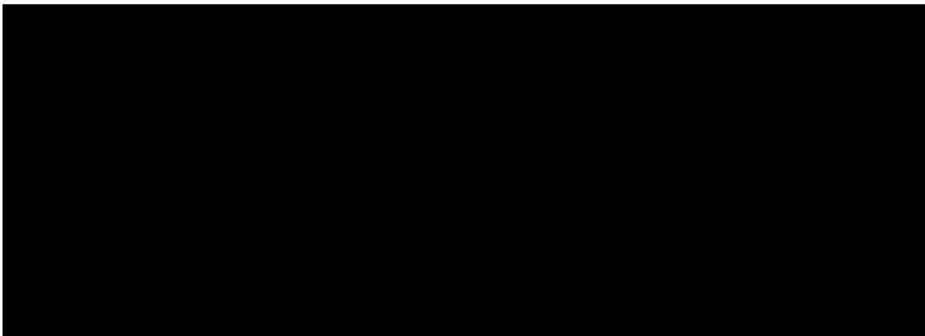
Closing note

The Yarra Riverkeeper would be pleased to attend any public hearing called, to expand or clarify the above comments.

References

Winstanley, Ross "Port Phillip Bay Sand Flathead' *Fishing Lines*, Summer 2015. (Available at the following link:
http://docs.wixstatic.com/ugd/f98545_4ca719431a964fec987bdd5f734828bd.pdf)

Yours sincerely,



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