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Environment, Natural Resources and Regional Development Committee
Inquiry into the Management, Governance and use of Environmental Water
Parliament House, Spring St
EAST MELBOURNE VIC 3002

Inquiry into the Management, Governance and use of Environmental Water

Thank you for the opportunity to submit to the Inquiry into the Management, Governance and Use of Environmental Water. We are committed to actively participating in parliamentary processes that will lead to improved outcomes from the use of environmental water resources.

Melbourne Water's strategic direction is to enhance life and liveability and we share the Environment, Natural Resources and Regional Development Committee's interest in fair and effective practices for administering environmental water. Secure access to surface water resources underpins the productivity, sustainability and liveability of our region. Adequate flows are critical to maintaining environmental health and aquatic habitat within waterways.

Melbourne Water's role

As a designated Waterway Manager, Melbourne Water's role includes managing the Victorian Environmental Water Holder's (VEWH's) Bulk Entitlements in the Yarra, Tarago, Werribee systems. We prepare Environmental Water Management Plans and Seasonal Watering Proposals for VEWH who consider them when developing the State Seasonal Watering Plan. VEWH authorises Melbourne Water to implement the Seasonal Watering Plan via Seasonal Watering Statements for each system.

In addition to flow studies, Environmental Water Management Plans (EWMPs) are completed for each of the Werribee, Yarra and Tarago systems. EWMPs are evidence-based plans that provide a 5–10 year strategic vision for managing environmental water. EWMPs take into consideration the longer term threats on the availability of water.

As Storage Manager and Resource Manager for the Melbourne headworks system, Melbourne Water is responsible for supplying water under conditions specified in Bulk Water Entitlements held by VEWH and nine consumptive water authorities.

This submission relates primarily to our accountabilities as the Waterway Manager of the Port Phillip and Westernport region. It also addresses some of our accountabilities as Storage and Resource Manager for the Melbourne headworks system, specifically where they relate to environmental water management.



Position in response to Inquiry's Terms of Reference

1. *The assessment of the role of environmental water management in preventing or causing 'blackwater' events.*

Melbourne Water frequently releases water from the VEWH's Bulk Entitlements in summer to increase the levels of dissolved oxygen and decrease the salinity of rivers. The release of water for these purposes is consistent with the objectives set out in the Seasonal Watering Plans. Data indicates that the water quality objectives within the rivers are regularly met by environmental water releases, improving conditions for aquatic life and other river users.

Overbank flows can cause blackwater events by flushing large amounts of organic material from floodplains into the river channel. As the organic matter decays, it consumes dissolved oxygen in the water. Though the organic matter is sometimes a net source of energy and nutrient for the aquatic ecosystem, Melbourne Water does not use environmental water to deliver overbank flows.

2. *How environmental water and environmental water managers interact with, and utilise, management tools such as carryover and whether the carryover of environmental water impacts on the availability of water for irrigators;*

The entitlements and obligations of environmental and consumptive water users are detailed in their respective bulk entitlements, including access to carryover within the Melbourne headworks system.

Melbourne Water convenes regular meetings involving all major water users in the region to discuss the operation of the Melbourne water supply system. These meetings are also used to facilitate the resolution of potential bulk entitlement issues.

Like all entitlement holders, the VEWH may use carryover to manage inter-annual climate variability and ensure environmental objectives are reliably met. Water volumes carried over in each system is estimated each year in the Seasonal Watering Proposal. The Proposal is approved by the Storage Manager to ensure that the identified actions can be delivered and will not unnecessarily impact on other entitlement holders.

Within the Melbourne headworks system, Southern Rural Water holds bulk entitlements to supply irrigators downstream of Thomson and Tarago Reservoirs. The carryover of environmental water does not impact the availability of water for these irrigators.

Within the Werribee system, the VEWH holds entitlements and uses airspace and its share of storage to enable carryover. This does not impact the availability of water for irrigators. Within the Maribyrnong system, the VEWH may temporarily access unused allocations and does not utilise carryover.

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

Scientific knowledge is a barrier for more effective management of environmental water. Environmental watering action objectives have a sound theoretical basis, but may be only demonstrable over many years or even decades. A strong and ongoing commitment to aquatic science is required to provide environmental water managers with the information needed to maximise environmental water benefits.

Competition for water resources means insufficient environmental water allocations to meet all objectives in some catchments. In its System Strategy¹, Melbourne Water considers measures that can increase the volume of water available for the whole system. For example, harvesting water from alternative sources. A greater range of water sources can potentially mitigate the impacts of environmental water shortfalls.

¹ Melbourne Water (2017) *Melbourne Water System Strategy*, Melbourne Water.

Complementing (or piggy-backing on) natural events can help optimise the use of environmental water, by minimising the volume of water required to meet environmental objectives. However, piggy-backing is often prevented due to the difficulty in predicting natural catchment inflows and preventing environmental releases from adding to flood events.

In some cases, delivery infrastructure constrains our ability to achieve environmental objectives. Extra conduit and valve capacity can help meet multiple objectives by delivering environmental water while minimising third party impacts.

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

As charging obligations are reflected in the bulk entitlements, Melbourne Water has no specific commentary in relation to this issue.

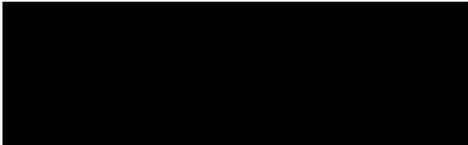
Concluding remarks

Successfully managing environmental water involves:

- Appropriate instruments and management systems to support environmental flow delivery
- Research and monitoring of instream conditions and needs
- Effective engagement with key stakeholders that have an interest in waterway health and adequate waterway extractions for consumptive purposes
- Ability to transparently deliver environmental water from key assets within multiple objectives and constraints in water supply systems.

Thank you once again for the opportunity to submit to the Inquiry into the Management, Governance and Use of Environmental Water and we look forward to hearing more about your findings.

Yours sincerely



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