

Commonwealth Environmental Water Office's (CEWO) submission to the Victorian Government's Goulburn to Murray Trade Rule Review – Regulatory Impact Statement – assessing changes to trade, tagging and operating arrangement, March 2021.

The CEWO welcomes the review of the trade and delivery of water from the Goulburn River to the River Murray to avoid environmental damage caused by delivery of Inter-Valley Transfers (IVTs). This review is recognised as a significant step towards improving the environmental health of the lower Goulburn River.

Multiple years of scientific monitoring in the Goulburn valley have confirmed the considerable environmental damage resulting from the unseasonal and sustained delivery of large water volumes over summer months. These IVT deliveries have caused significant geomorphological damage and considerably undermined the environmental gains that had been achieved in the Goulburn valley through the delivery of environmental water.

The CEWO supports measures to limit the delivery of sustained, unseasonably high operational flows (and limit the trade that drives these deliveries). However, any solution should not consequentially place further limits on the rights of individual Goulburn water entitlement holders to call on their water for use within the catchment.

In summary, of the options presented within the Regulatory Impact Statement, the CEWO:

- considers the limits on IVT provided by Option 1 will afford the highest level of environmental protection. However, to balance the needs of all water users, provides tentative support for Option 2, on the proviso that Commonwealth and other environmental water entitlements can be used within the Goulburn without additional impediments.
- does not support the proposed operating rule, which limits the delivery of *all* water (as opposed to just limiting IVT) for a 6-month period and is an extreme limitation on the management and delivery of environmental water.
- believes the proposed operating rule will:
 - undermine local environmental values and outcomes within the Goulburn valley and jeopardises the ability to supply 'return flows' from Goulburn entitlements to meet downstream environmental demands (including for the Victorian Murray).
 - undermine the capacity to achieve the objectives of the Basin Plan, and
 - treat Commonwealth environmental water inequitably and is inconsistent with the *Intergovernmental Agreement on Implementing Water Reform in the Murray Darling Basin*.
- considers the application of a static hydrograph to manage all flows between November and April as severely constraining, limiting any flexibility to respond or adapt to dynamic seasonal conditions.
- supports raising of in-channel pumps as this would provide greater operational flexibility, thus increasing management options available for improving the environmental condition of the Goulburn River.
- supports the proposed scientific monitoring to examine the effects of the IVT rule change and strongly recommends this work is aligned with recently completed Commonwealth and Victorian studies to ensure data are comparable.
- considers the previous underwriting of IVT losses through the Lower Broken Creek by the CEWO as a temporary arrangement, which cannot be assumed into the future.

The CEWO welcomes future opportunities to engage with DELWP, together with VEWH (Victorian Environmental Water Holder), GBCMA (Goulburn-Broken Catchment Management Authority) and GMW (Goulburn-Murray Water) in an effort to refine river operating arrangements for the Goulburn.

Context

The Commonwealth Environmental Water Holder (CEWH) is a statutory, independent position established under Part 6 the *Water Act 2007* (Water Act) and is responsible for managing the Commonwealth environmental water holdings.

The CEWH is supported by staff of the Commonwealth Environmental Water Office. Under law, Commonwealth environmental water holdings must be managed to protect and restore the environmental assets of the Murray-Darling Basin, including watercourses, lakes, wetlands and floodplains, in the national interest. The CEWH's function is a critical part of the sustainable management of the Murray-Darling Basin's water resources over the long-term for environmental, social and economic outcomes.

Commonwealth environmental water holdings are subject to the same trade, allocation and carryover rules for each entitlement type as all other entitlement holders (e.g. agricultural users). The CEWH also pays the same fees and charges as equivalent entitlement holders.

Commonwealth environmental water management in the Goulburn catchment

The Commonwealth holds 312,557 ML of high reliability shares and 42,467 ML low reliability shares in the Goulburn system. The CEWO is reliant on partnerships with state water and environment agencies, with all Commonwealth environmental water in the Goulburn valley delivered through the Victorian Environmental Water Holder.

How and when environmental water is delivered in the Goulburn system is consistent with the Victorian Seasonal Watering Plan. This plan is informed by catchment plans developed by the GBCMA, as well as the Basin annual environmental watering priorities and the Basin-wide Environmental Watering Strategy developed by the Murray-Darling Basin Authority. This work is underpinned by local community consultation and a long-established science-based monitoring and evaluation program.

Feedback on the Goulburn to Murray trade rule review – Regulatory Impact Statement

Trade rule and tagging restrictions

The CEWO supports trade rules that manage allocation trade from the Goulburn to the Murray system in a way that limits environmental damage to waterways.

The CEWO also supports bringing tagged water use in line with trade limits. When these tagged entitlements are used, they currently add to the Goulburn IVT balance outside of the trade limits and result in less allocation trade being made available under the Goulburn-Murray trade rule.

The proposed operating rule will limit environmental flows, with negative consequences for the health of the lower Goulburn River and the Murray valley

The proposed operating rule, which limits the delivery of *all* water for a 6-month period, will place extreme limitations on the management and delivery of environmental water. The CEWO cannot support a rule that will prevent waterway managers from being able to call on and deliver

Commonwealth (or other) environmental water from late spring, through summer and into early autumn.

In limiting environmental flows from 1 November to 30 April, the operating rule will have negative consequences for the environmental values of both the lower Goulburn and the Murray valley.

In the lower Goulburn, the rule will prevent flows that support native fish spawning and recruitment, riverbank vegetation and, perversely, flows that aim to limit bank erosion and slumping. This includes preventing:

- late Spring freshes for golden and silver perch spawning.
- Autumn freshes to support riverbank vegetation germination and condition, and/or support immigration of golden perch into the Goulburn from the Murray.
- recession flows on the back of natural in-flows, that are designed to slow the rate of fall in the hydrograph and reduce the risk of riverbank slumping.

Hundreds of gigalitres of Goulburn return flows have historically been delivered to internationally significant downstream environmental assets, such as Gunbower Forest, Hattah Lakes and the River Murray through to the Coorong. Where possible, Goulburn return flows are coordinated with flows from other water sources to achieve multiple environmental outcomes along the length of the Murray. For example, the late Spring flow in the Goulburn has been coordinated with flows in the Murray and other tributaries, to achieve whole-of-system outcomes, as part of the Southern Spring Flow (<https://www.environment.gov.au/water/cewo/catchment/southern-spring-flow-2020>).

A reduction in Goulburn return flows will impact on the delivery of the following objectives / outcomes:

- River Murray flow targets to support riverine productivity and native fish spawning.
- reduced River Murray connectivity, native fish migration and whole-of-system transportation of carbon and nutrients.
- alignment of tributary returns with other Victorian demands such as Gunbower Forest and Hattah Lakes.

The CEWO would need to undertake a detailed multi-year analysis of the potential effects the proposed rule change is likely to have on return flows. The MDBA would subsequently need to be consulted on the degree to which these return flow changes would limit achievement of Basin Plan objectives and the quantified environmental outcomes in the Basin-wide environmental watering strategy, and the need for additional water to be recovered. However, at face value, the CEWO believes this operational rule will undermine the capacity to meet obligations under the Basin Plan to deliver multi-site environmental outcomes both within the Goulburn River system and to downstream environmental assets.

The lack of return flows could increase competition to trade water from the Goulburn to the Murray

While the CEWH can trade water between the Goulburn and Murray zones similar to other water users, it has in recent years avoided doing so due to concerns that it would add to the IVT balance and increase the need for unseasonably high summer operational flows. In fact, since 2017-18 the CEWO has not traded any water from the Goulburn to the Murray.

However, if environmental water managers are prevented from delivering ecologically important flows in the Goulburn and not have the subsequent return flows available to meet downstream needs, the CEWH may consider the need to trade water from the Goulburn to the Murray. This would add additional competition with other water users for access to a newly limited opportunity to trade water out of the Goulburn.

The operating rule will treat environmental water users inequitably as compared to other water users in the lower Goulburn River

Scientific monitoring by the University of Melbourne¹ clearly demonstrates the geomorphological damage on the lower Goulburn River has been caused by the delivery of IVT. The CEWO believes that changes in operational arrangements should be focussed on holistic IVT management (timing, magnitude and overall IVT account limits), and not via the limitation of environmental water delivery. Effective management of environmental water over the last three years has enabled the recovery and rehabilitation of some of the riverbank damage caused by IVT deliveries.

As proposed, the rule treats environmental water inequitably, as the CEWO understands that environmental water holders will be the only water users in the Goulburn prevented from using their water. This is inconsistent with the *Intergovernmental Agreement on Implementing Water Reform in the Murray Darling Basin*, in particular, clause 5.2 of the agreement that identifies that the characteristics of licensed entitlements held for environmental use:

- will not be enhanced or diminished relative to like entitlements held and used for other purposes.
- will be subject to no less favourable conditions, including with respect to fees and charges, access to allocations, capacity to use, trade, and carryover, than like entitlements held for other purposes.

Any operating rule needs to provide environmental water managers with the flexibility to respond and adapt to prevailing conditions

Effective management of environmental water has been key to the recovery and improvement of the lower Goulburn River. Delivery of water for the environment in this valley needs to be flexible, responsive, and adaptively managed to secure the future health of the Goulburn River.

Pre-development Goulburn River flow patterns, on average, show lower summer / autumn flows punctuated with occasional pulses. The timing of these pulses varies significantly between years and is difficult to predict. Application of an operational flow based on a static hydrograph will likely lock in a pattern of flow delivery which may be difficult or impossible to alter if conditions change. A lack of operational flexibility may accelerate environmental degradation of the lower Goulburn river. The CEWO strongly recommends this Review considers the *Kaiela (Lower Goulburn River) Environmental Flows Study* (https://www.gbcma.vic.gov.au/downloads/Environmental_Water/Kaiela-Goulburn_Eflows%20Final%20Report.pdf), particularly in relation to an adaptive flow regime for the lower Goulburn.

The CEWO does not support the application of a 'fixed' or 'static hydrograph' to manage *all* flows over spring / summer / autumn. Flow patterns in the Goulburn River are dynamic and require a flexible and adaptive water management approach to ensure improved environmental health.

The proposed operating limit appears to contradict and invalidate the Scientific Panel's underlying assumption for this Review... "All conclusions assume that delivery of water for the environment occurs and follows the principles of flexibility and adaptive management to maximise ecological outcomes. In this regard they are not delivered based on fixed rules but rather continue to vary in response to seasonal conditions, ecological monitoring and the latest science."

¹ <http://www.environment.gov.au/system/files/resources/6a0b5927-e8e0-40d7-afdc-c3d4ecb62445/files/2019-20-goulburn-mer-annual-summary-report.pdf>

The scientific basis for the proposed Option 2 hydrograph is unclear and appears to assume that ecological demands/needs for the Goulburn over this summer season are static, predictable and well known. The CEWO strongly recommends this hydrograph not be adopted until a formal scientific review of the proposed flow pattern—particularly for a 6,000 ML/d pulse—is undertaken.

It is unclear what process, if any, is available for environmental water managers to seek any adaptive change to the proposed hydrograph in any season. As mentioned, the CEWO is concerned that the adoption of a fixed hydrograph to drive river operations may result in increased river degradation. The CEWO would like the Review to clarify what process is available for water managers to suggest operational changes as seasonal conditions change.

The CEWO is an active member of the Goulburn Broken Operations Advisory Group (OAG) convened by Victorian Environmental Water Holder and including staff from GMW, MDBA River Operations, The Living Murray and GB CMA. The group meets at least monthly to discuss options and agree on delivery approaches prior to water orders being placed. The CEWO recognises the crucial role the OAG provides in balancing the delivery of flows to meet the range of water needs in the Goulburn River and downstream Murray sites. This important role is dependent on the capacity of the OAG to adaptively manage all flows including to achieve the best possible ecological outcomes and reduced environmental damage.

Raising in-channel pumps will provide greater flexibility

CEWO supports the raising of in-channel pumps. This would potentially increase the ability to deliver environmental water to support Goulburn River environmental demands throughout the water year.

There are current constraints in the lower Goulburn in the flow range up to around 10,000 ML/d at Shepparton that limit flow delivery. These include limitations on the ability to deliver flows above 3,000 ML/day for extended durations due to inconvenience for private diverters, and requirements for advance notification when flows are planned to exceed 3,000 ML/d.

The CEWO encourages the Victorian Government to accelerate resolution of constraints in the lower Goulburn River. Relaxing constraints in the lower Goulburn, including for flows less than 10,000 ML/d, will allow greater flexibility in the delivery of both environmental water and IVT for the benefit of the local environment. This will provide increased capacity for IVT to be delivered in an environmentally sensitive manner.

Align proposed IVT rule change monitoring with existing erosion studies

The CEWO supports the proposed scientific monitoring to examine the effects of the IVT rule change and strongly recommends this work is aligned with recently completed Commonwealth and Victorian studies to ensure data are comparable

The CEWO and its Victorian partners have made a considerable investment in monitoring Goulburn riverbank erosion. The CEWO strongly recommends the proposed IVT rule change monitoring take advantage of, and be aligned with these studies. In particular, the proposed IVT monitoring adopt similar methods and approaches to ensure comparative use of the data.

The CEWO strongly recommends that ecological monitoring of the IVT rule change also be undertaken for the relevant reaches of the Campaspe River and Lower Broken Creek. This is to ensure a sound evidence-based approach is used to evaluate increased IVT delivery pressure into these two waterways.

Underwriting transmission losses from Lower Broken Creek IVT delivery

Previous underwriting of IVT losses through the Lower Broken Creek by the CEWO were temporary arrangements and should not be assumed into the future.

Current operating rules enable partial delivery of Goulburn IVT via Lower Broken Creek. The CEWO had historically agreed to pay a 10% transmission loss for Lower Broken Creek IVT deliveries as these deliveries were able to meet environmental needs in the Lower Broken Creek. This temporary arrangement was an optional operational decision by GMW based on a request by the GB CMA to use the creek as there was a net saving in environmental water use. These temporary arrangements had multiple benefits, allowing additional IVT to be delivered and providing Lower Broken Creek environmental outcomes at a reduced cost to environmental water holders and other water users.

Recent years, however, have seen greater volumes of IVT pass down Lower Broken Creek with flow rates double what would likely have been targeted with environmental water (~500 ML/d compared to ~250 ML/d). While these higher IVT deliveries do not appear to have harmed the Lower Broken Creek, results from recent scientific monitoring (summer 2021) and community feedback indicates signs of increased riverbank erosion.

The CEWO is concerned about the underlying expectation that environmental water will continue to bear transmission losses irrespective of high IVT deliveries. The CEWO stresses there is no guarantee that Commonwealth environmental water holdings will be available to underwrite the transmission loss of IVT deliveries through the Lower Broken Creek.

The CEWO recommends this Review incorporate this scenario into the IVT operating rules and that Victoria consider bearing the 10% transmission loss of delivering IVT down Lower Broken Creek. This would align with the existing approach to accounting for lower Goulburn IVT (up to 3,000 ML/d) transmission losses.