



# Submission on the proposed options for the Goulburn to Murray trade rule

May 2020

The Murray—Darling Basin Authority (MDBA) welcomes the opportunity to provide a submission to the Department of Environment, Land, Water and Planning (DELWP) on proposed changes to the Goulburn to Murray trade rule (Goulburn IVT rule), as outlined in the DELWP [Consultation Paper](#).

## Context

The River Murray has been managed collaboratively since 1914 under joint government arrangements between the Commonwealth, Victorian, New South Wales, and South Australian governments, as set out in the Murray—Darling Basin Agreement (the Agreement). Under the Agreement, the MDBA's role is to manage the system's built assets, share the waters between the States, and direct river operations to meet States' water needs.

The MDBA allocates the States' share of River Murray water according to the rules set out in the Murray-Darling Basin Agreement and schedules releases so there is enough water in the right part of the river at the right time to meet demand. This river operations role is carried out on behalf of the joint venture States in accordance with the rules set out in the Agreement and state statutory rules such as the Goulburn IVT.

The Murray—Darling Basin Authority facilitates fair, consistent and transparent water trade across the Murray—Darling system. It provides information on water trading and works with Basin state governments to ensure the state rules comply with the Murray—Darling Basin Plan's trading rules.

The MDBA also facilitates the trade of water entitlements and allocations between States and valleys within the southern connected system and is responsible for monitoring trade across the Barmah Choke, and if necessary restricting trade across the Choke to protect water delivery to existing entitlement holders.

A key responsibility of the MDBA in fulfilling these functions is to protect all States from third party impacts arising from the delivery of the shared waters of the River Murray system.

Given the highly connected nature of the physical River Murray system and its tributaries, and the multi-jurisdictional arrangements for sharing and delivering water, any change to the operation and trade rules of the Goulburn River can have direct effects on other States, and water users.



As the River Operator for the Murray, the MDBA suggests the following issues should be considered in assessing any changes to the Goulburn to Murray trade rule.

- How the MDBA ‘calls’ on water from the Goulburn to the Murray as this also impacts volumes likely to held in the Goulburn system and volumes able to be delivered
- The impacts on Murray resources due to the volumes of water held for carryover in the Goulburn System and any implications for other States water availability through changed trade rules, including through special accounting and second year water accounting
- The likely demand pattern and volumes for traded water in the Murray from the Goulburn and ensuring that any traded water can be delivered to match the demand that trade has created
- The likely impacts of changed Goulburn IVT delivery on capacity and delivery shortfalls in the Murray system
- Likely changes to the southern Connected Basin water market in order to help Victoria in informing the market of any likely outcomes arising from a rule change
- Understanding the likely impacts of a changed Goulburn trade rule on other parts of the system such as the Barmah Choke and the Murrumbidgee valley
- Impacts of the transition period to any new rule for the River Murray

Further details of these and other considerations can be found under the section ‘Discussion on options and risks for Goulburn to Murray Trade rules’.

The MDBA offers to work with Victoria to inform the Goulburn trade rule options process to optimise the management of both the Goulburn and the southern connected Murray-Darling Basin.

Victoria’s Consultation paper is a high level document and as such does not provide technical details on the proposed Goulburn IVT rule options and related system operational rules. The MDBA undertakes to assist Victoria in understanding how these options interact with other settings of the River Murray System.

In this context, the MDBA’s submission provides background on how water trade rules and deliveries are managed by the MDBA and highlights some of the issues which could arise depending on how water trade is managed and delivered from the Goulburn system.

Given the high-level at which options in the consultation paper are described, advice contained in this submission may be revised once further detail is made available and is subsequently assessed.

The MDBA looks forward to discussing these issues in further detail with Victoria and other southern Basin States, to ensure that all parties’ interests are considered through these trade rule changes, and to identify any third party risks and jointly develop strategies to manage these risks appropriately.

## **Background**

### **Inter-valley Trade**

One of the major components of regulated tributary inflow to the River Murray is water held in State IVT accounts that is delivered from tributaries under arrangements with the State Constructing Governments.

### **What are Inter Valley Trade (IVT) accounts?**

IVT accounts exist for both the Goulburn and Murrumbidgee valleys. The accounts have been set up as part of the retail water trade process that allows water users to trade entitlements and allocations between valleys in the southern connected system. An 'IVT account balance' represents the volume of water 'owed' to the Murray valley for each of these valleys due to the net trade of water between the valleys.

### **IVT accounts and trade limits**

The management of the volumes in IVT accounts including the setting of trading rules and limits is the responsibility of the relevant state.

For the Goulburn, Victoria's Goulburn to Murray trade rule, based on limiting the maximum IVT balance, was designed to manage resource availability risks and spill risks but does not address current delivery risks or environmental issues associated with delivery. The setting of this trade rule occurred before the implementation of the Basin Plan trading rules in 2014.

IVT accounts manage direct resource risk by ensuring that commitments resulting from trade are matched by an equivalent volume of water resource. This is done by comprehensively accounting for events that credit and debit both commitments and resource. For example, credits to the IVT account are given for trade out (including allocations to historic 'exchange rate' trade and use against a tagged entitlement) and debits to the IVT accounts are given for trade in, call out by river managers that deliver water to the Murray, or spills.

Victoria's current trading rules prevent allocation trade from the Goulburn System (Goulburn, Broken, Loddon and Campaspe systems) to the Victorian Murray and interstate if the balance of the Goulburn IVT is greater than 200 GL. However, there are actions that occur that are not subject to this trade limit that can result in the balance of the Goulburn IVT increasing above 200 GL. These are allocations that are linked to Victorian Murray allocation that are made to historic 'exchange rate' trades whereby Goulburn entitlements were cancelled and converted into Murray entitlements; trade to support Snowy water recovery; and use against a tagged entitlement (noting that from December 2019, changes in Victorian policy were announced to limit use against tagged entitlements when allocation trade is restricted).

Victoria has noted that the purpose of the current Goulburn to Murray trade rule is to manage the potential resource risk to Victorian Murray entitlements of spills and loss of resource from Lake Eildon. Under current IVT rules, trades out of the Goulburn, Campaspe and Loddon systems in the current season, cannot impact on the reliability of Murray entitlements, as the Murray can call on the water at any time. However, if the river operator does not, or is unable to call out water, the debt owed to the Murray is then at risk of being spilled from Lake Eildon in the next season, eroding water available to the



Murray. Similarly, if seasonal limitations on delivery are restricted from matching the demand created by trade then this could also increase the risk of spill in Eildon and may create delivery shortfalls in the Murray

### Summary of IVT to Murray Trade rules

There are also IVT rules that apply to trade between the Murrumbidgee and Murray Valleys in NSW. Current trade limits that affect the IVT accounts relevant to River Murray Operations are as follows:

- *For the Goulburn system*, allocation trade out is permitted if the Goulburn IVT balance is less than 200 GL<sup>1</sup>. Victorian allocation trade rules allow back trade until the IVT balance reaches 0 GL, in practice, calls on Goulburn IVT from the MDBA are halted when the balance reaches 20 GL for the management of delivery constraints in the Murray and to allow for the continuation of trade. Within these limits the MDBA arranges delivery of IVT with Goulburn-Murray Water. The available opportunity for allocation trade out and back trade (and the balance of the IVT account) is available on the Victorian Water Register website<sup>2</sup>. Whilst allocation trades are prevented when the account exceeds 200 GL, the account balance can continue to climb due to the adjustment made as a result of the Snowy water savings and the legacy of historic permanent exchange rate trades.
- *For the Murrumbidgee system*, allocation trade out is permitted up until the IVT balance reaches 100 GL. Trade back in is permitted once the balance is less than 85 GL until the IVT balance reaches 0 GL. The MDBA can arrange delivery of IVT with NSW when the net trade volume balance is above 0 GL. The balance of the IVT account is available on the WaterNSW Customer Service web page<sup>3</sup>.

## Delivering IVT water to the Murray

The MDBA arranges the delivery of IVT water to the Murray in consultation with the relevant State. Implementing deliveries (and associated arrangements) are formalised using an MDBA instruction (often referred to as an ‘IVT callout’) and issued to the relevant State Construction Authority (SCA).

In theory, to avoid any third-party impacts, IVT water should be delivered in a way that matches the use of the water traded from the valleys. However, in practice the IVT accounts have recently also been used to support the supply of peak summer demands.

When volumes of IVT to be delivered are relatively small, the call on the IVT can be made in summer to assist with managing the capacity restrictions of the Barmah Choke, a narrow section of the Murray River between Cobram and Echuca, in order to meet peak summer demand. In these cases, the IVT has been treated as an additional source of supply, with flexibility in the timing and rate of its delivery.

## Trade and IVT trends

The volume of trade from the tributaries has grown in recent years as water users have increasingly made use of the water trading options available to them to supplement entitlements available on the Murray.

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<sup>1</sup> Whilst allocation trades are closed when the account reaches 200 GL, the account balance can continue to climb due to allocations made to historic ‘exchange rate’ trades; trade to support Snowy water recovery.

<sup>2</sup> <https://waterregister.vic.gov.au/>

<sup>3</sup> <https://www.watnsw.com.au/customer-service>

For example, a recent trend of net trade of water out of the Goulburn system to the Murray system has driven an increasing requirement for IVT deliveries from the Goulburn valley in 2017-18 and 2018-19. In those years, annual volumes of around 300-400 GL have been delivered from the Goulburn system to meet this shifting demand.

On the Murrumbidgee, for the same years (2017-18 and 2018-19), water traded from the Murray into the Murrumbidgee. This curtailed the delivery of IVT from the Murrumbidgee as the IVT account remained at or near zero in those years (Figure 1). In 2019-20 this trend has reversed with net trade out of the Murrumbidgee exceeding 100 GL. Understanding the drivers for change in market behaviour and potential consequential impacts to other parts of the system will be important in designing a new Goulburn to Murray trade rule that is robust under all conditions.

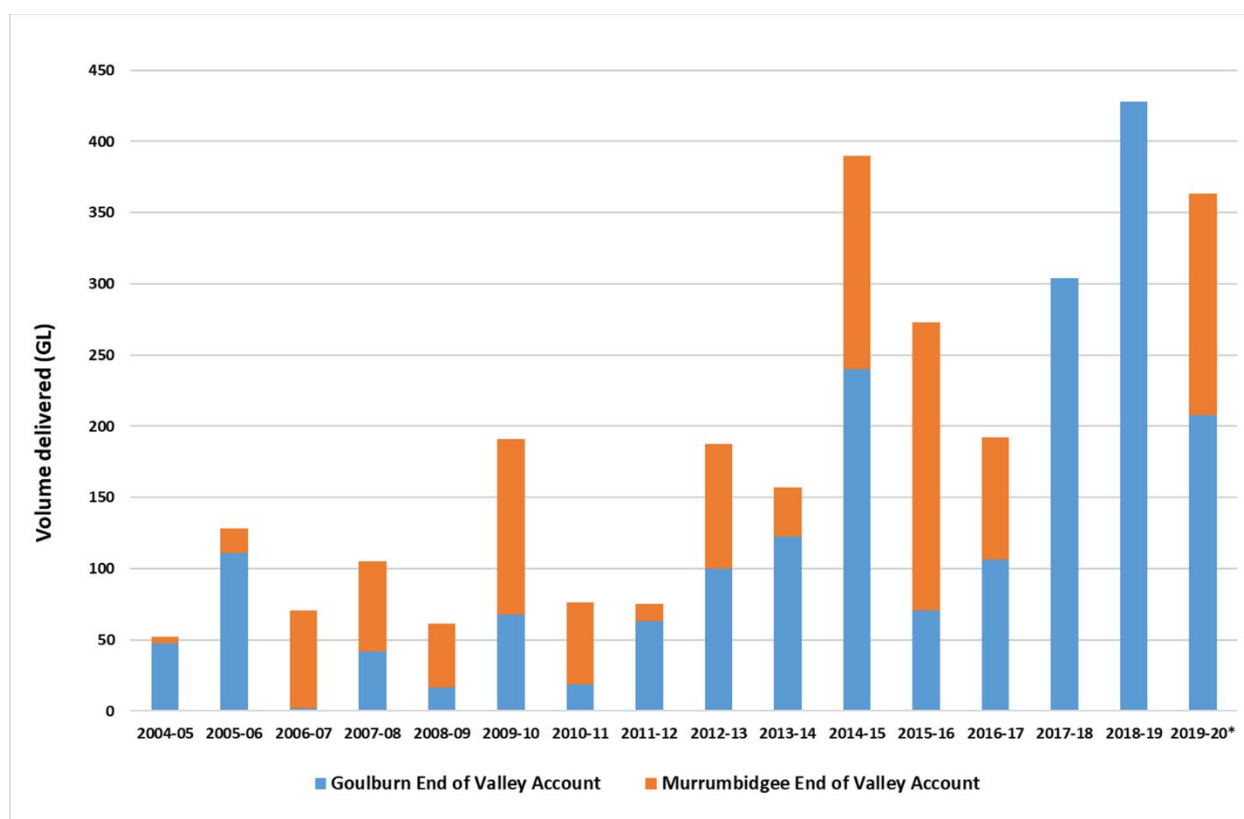


Figure 1 - Annual IVT delivery volumes since 2004

\* till end April, yet to be confirmed.

## Emerging environmental and deliverability issues

Recent growth in trade out of the Goulburn system has resulted in the following potential issues for the management and delivery of Goulburn IVT:

- Delivering (increasingly large) volumes of IVT as sustained unseasonal high flows from the Goulburn system has caused damage to the environmental condition of the lower Goulburn.
- Matching demand and delivery in the use of traded water from the Goulburn is more difficult as River Operators do not know if this water is for use in the current year or for carryover in the next, leading to less certainty in predicting demand. As an example, if the Goulburn owed the Murray say 150 GL at the start of December, traditional operations would require transfers to meet all this

demand. However, it may be that those trading the allocation intend to utilise carryover to secure supply for the following year. If the full volume were called too much water would have been released from the Goulburn or Murray valleys which would then be held in Lake Victoria at a higher risk of spill.

- Not being able to deliver the demand supported by trade can impact on:
  - Environmental condition of the Barmah Choke – this may increase the volume of water required to be moved through Barmah Choke, potentially increasing the times the Choke is being run at ecologically undesirable flow rates;
  - River Murray delivery shortfall risks – this would increase reliance on capacity of other parts of the system to supply peak demands, and potentially increase the risk of not being able to deliver enough water downstream of the Barmah Choke at the time it is needed. Note this risk has always existed, and strategic use of Goulburn IVT is one of several mechanisms that can be employed in river operations to help manage the risk<sup>4</sup>.
  - Murray resources – if there is a spill from Lake Eildon and the IVT volumes carried over from the previous year spill, Victorian Murray resources will need to supply associated downstream Victorian Murray demands.
  - Goulburn resources – if there is a spill from Lake Eildon and the component of IVT that is protected from spill has not been delivered, Goulburn system resources will be affected by not having drawn down the volume.

Exacerbating these issues is the fact that whilst IVT account related trade limits apply to allocation trading opportunities, on the Goulburn system, there are a number of trades and trade types to which the limits do not apply. These did include use from tagged accounts (up to December 2019) and continue to include traded volumes generated automatically through the Snowy water savings process, and allocations to the legacy of historic permanent exchange rate trades. The MDBA notes that these ‘legacy’ trade volumes will be ‘quarantined’ as a principle in the options put forward by Victoria. The MDBA support this principle as it acts to protect the upper limit on the Goulburn IVT and hence mitigates spill risks for the Goulburn IVT and associated potential Murray resource impacts.

These trade limits do not cap the annual volume of water that can be owed to the Murray or that can be delivered from the IVT account. The existing trade limits do not constrain the total volume that can be delivered over any period. For example, after a trade limit is reached, a further delivery of IVT could then decrease the balance of the IVT account such that it falls back below the trade restriction threshold. This is why in 2018-19, over 400 GL of IVT was delivered from the Goulburn within the rules. It is also why the Victorian Government is looking at the rules to identify if they remain appropriate for the contemporary water market and do not cause externalities which the environment or other entitlement holders must bear.

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<sup>4</sup> See Barmah Choke Study Report – Phase 3 Options Integration Phase  
(<https://www.mdba.gov.au/publications/report/barmah-choke-study-investigation-phase-report>)

## Goulburn River

River regulation and consumptive diversion on the Goulburn River has resulted in overall degradation of the river’s ecological condition. The provision and delivery of environmental water to better manage the flow regime has been a key management response to help improve environmental condition.

To assist in improving the environment of the lower Goulburn River, the MDBA has sought to work with Victoria to reduce the call on Goulburn IVT by instigating the following actions:

- Reducing peak callout volumes over the past summer period and balancing with calls on Murrumbidgee IVT (depending on trade, demands and available supply).
- Using Murray Irrigation Limited (MIL) infrastructure to bypass the Choke. Volumes of up to 2,400 ML/day can be released from MIL infrastructure to the Edward River subject to flow constraints downstream of Steven’s Weir. This action is often undertaken to boost the volume of water flowing around the Choke to meet system demands.
- Calling on Goulburn IVT earlier than historic norms in spring. Noting that this was able to be done as the risk of internal spill in Lake Victoria from Victoria to NSW was at appropriate levels, IVT volume from the Goulburn in the current year could be delivered to the Murray without increased risk to the Victorian resource position.
- Continue to seek advice from G-MW (and the GBCMA via G-MW) on the preferred pattern for delivery of required IVT volumes, noting conditions along the river can change thus can change the IVT requirements.
- MDBA sought permission from Ministerial Council to waive the end of system minimum reserve target at Lake Victoria in May 2020. Lower volumes in Lake Victoria allow for a reduced risk of spill within the storage and allow for earlier transfers of IVT
- Working with Victoria to maximise releases from mid-Murray storages during peak demand times.

## Discussion on options and risks for Goulburn to Murray Trade rules

The Goulburn to Murray Trade rule is the responsibility of the Victorian government. The MDBA supports this review into trade rule options. State trade rule changes can have third party impacts on other States and hence, in line with the responsibilities of the MDBA as the river operator for the River Murray under the Murray-Darling Basin Agreement, the MDBA acts to protect all southern connected basin states’ interests.

The MDBA supports the principles set out by Victoria in the options paper but seeks to clarify the application of those principles from an interjurisdictional approach. Assessment of any trade rule change should consider broader impacts on the southern connected system. This requires examination of the Goulburn trade rule and operational limits and how these interact with MDBA rules and practices for the call of IVT from the Goulburn to the Murray as this is critical to the volume of water that can be delivered in any given scenario.

The following issues should be considered when assessing options. Given potential impacts on the overall Murray system it is suggested these be worked through in conjunction with the MDBA and joint governments and the MDBA notes that Victoria has already engaged in this process.





## Deliverability

The MDBA supports the principle that trade should not occur unless the traded water is also deliverable. This principle should be applied not only on an annual basis, i.e. the volume in the IVT account should be able to be drawn down by the end of a year to meet supply, but also on a short-term basis as well. As an example, if a significant volume of the water traded to the Murray is to be used in say January, then the delivery of the traded water should aim to meet that peak January demand. Without this principle being applied, the risk of short-term shortfalls in the Murray will be increased.

Current work examining capacity and shortfall risks in the Murray could help in understanding impacts of potential trade rule changes.

Any trade rule change must not increase the risk of capacity constraints for third parties and should consider the impacts on other parts of the system. As an example, how would a reduced delivery from the Goulburn interact with delivering water from the other Victorian tributaries and from the Murrumbidgee. It should also consider the impacts on the Barmah Choke which also suffers degradation as a result of river regulation, noting that joint governments are investigating improved operating practices and potential river restoration works for this part of the River Murray.

## Basin Plan trading rules

Any options must be consistent with the trading rules set out in Chapter 12 of the Basin Plan.

## Transparency

Any trade rule change should be undertaken in a time frame that allows for considered operational planning for the shared River Murray system. Forward planning is critical to operating the River Murray system and any new rules must be known well in advance to enable Murray Operators to operate the river effectively. The MDBA notes that Victoria has already engaged with MDBA River Operators on flow regimes for the coming year.

Should any change in water market access be likely through the implementation of a new trade rule, the implications of this will need to be clearly outlined to water market participants in both the Goulburn and Murray valleys so the market has the best information to hand to inform business decisions.

The effect of changes to trade rules on the Water Market must also be considered. An altered Goulburn delivery is likely to affect water prices both in the Goulburn and the Murray and will need to be clearly outlined by Victoria to water market participants.

## Third party impacts

The implications of any rule changes on the transitional year should be well understood as the rule may begin to apply when there is already a significant volume of IVT water owed to the Murray. As an unintended consequence this could cause a complete cessation of any allocation water being able to be traded to the Murray from the Goulburn in that year (or possibly longer under sustained wet conditions)



Another consideration will be how often any water trade rule change may impact on the amount of time trade will be available from the Goulburn on an on-going basis. A current risk remains around the possibility of unregulated flows in the Murray occurring at a time when trade is closed out of the Goulburn. In this circumstance it is possible that although the Murray is in full flow and over supplied with water that people in the Murray may not be able to access traded entitlements from the Goulburn and therefore would not have access to this water resource.

There are many ‘types’ of water within the flow regime of the Goulburn River, such as water for Goulburn irrigators, minimum flows, water traded to the Murray for use, unregulated flows and held environmental flows. Any trade rule changes (along with operational limit considerations) should take account of the total flow regime and engage with all stakeholders to ensure the most benefit to all water users.

There can be interactions between Goulburn trade rules and volumes of IVT spill in the Goulburn that may affect Murray resources for all three States. As a result, any trade rule change outcomes will need to be worked through with the MDBA and other southern Basin States to ensure all parties interests are upheld. At this stage, more detail will be needed to fully consider impacts, if any.

## Options

The MDBA believes all the high-level options given in the Goulburn to Murray trade rule options paper should be considered. In addition, the MDBA believes that there may also be some alterations worth considering as well.

For Option 1, in which a net annual limit is set, consideration should be given to whether this net annual limit may be assessed and set on an annual basis by water resource managers in Victoria at the start of a given year. Factors such as water availability, current trade patterns, access to other water sources could be used to inform this decision. Although this may increase uncertainty for markets above that of a volume set permanently, this may allow for additional flexibility in risk management, weighing up the delivery impacts whilst maximizing water market access in a given year.

For Option 3, the MDBA believes that this option, though worth considering, may result in substitution of tagged and traded water. Although allocation trade may be limited, there may be a high use of tagged water over the non-peak periods as described in this option leaving any allocation to be used entirely in the peak period. This could result in an increase in capacity and shortfall risks. This risk would need to be managed within this option.

An alternative option could be a trade limit that decreases over the year to maximise the chance of the volumes held in the Goulburn IVT being reduced by the end of a water year.

## Conclusion

The MDBA fully supports Victoria in the Goulburn to Murray Trade Rule review and Victoria’s aim to support the environment of the Goulburn River and the Basin Plan’s objectives of the sustainable use of the Murray-Darling Basin’s resources along with the economic and social well-being of water users.



The MDBA’s role in managing the resources of the Murray and protecting the interests of all the Southern Basin States positions the MDBA to be an active contributor to the review.

There is significant complexity and tradeoffs that Victoria will have to manage in undertaking the review. The MDBA looks forward to working with Victoria to explore options with the aim of achieving better environmental, social and economic outcomes for the Goulburn River and the Southern Connected Murray-Darling Basin.