



Australian Government



# Prerequisite policy measures assessment:

Victoria

June 2019

Published by the Murray–Darling Basin Authority  
 MDBA publication no: 0  
 ISBN (online): ISBN generated by communications  
 ISBN (print): ISBN generated by communications

 GPO Box 1801, Canberra ACT 2601	 1800 230 067
	

© Murray–Darling Basin Authority 2019

**Ownership of intellectual property rights**



With the exception of the Commonwealth Coat of Arms, the MDBA logo, trademarks and any exempt photographs and graphics (these are identified), this publication is provided under a *Creative Commons Attribution 4.0* licence. (<https://creativecommons.org/licenses/by/4.0>)

The Australian Government acting through the Murray–Darling Basin Authority has exercised due care and skill in preparing and compiling the information and data in this publication. Notwithstanding, the Murray–Darling Basin Authority, its employees and advisers disclaim all liability, including liability for negligence and for any loss, damage, injury, expense or cost incurred by any person as a result of accessing, using or relying upon any of the information or data in this publication to the maximum extent permitted by law.

The Murray–Darling Basin Authority’s preference is that you attribute this publication (and any Murray–Darling Basin Authority material sourced from it) using the following wording within your work:

**Cataloguing data**

**Title:** Prerequisite policy measures assessment:, Murray–Darling Basin Authority Canberra, 2019. CC BY 4.0

**Accessibility**

The Murray–Darling Basin Authority makes its documents and information available in accessible formats. On some occasions the highly technical nature of the document means that we cannot make some sections fully accessible. If you encounter accessibility problems or the document is in a format that you cannot access, please contact us.

**Acknowledgement of the Traditional Owners of the Murray–Darling Basin**

The Murray–Darling Basin Authority pays respect to the Traditional Owners and their Nations of the Murray–Darling Basin. We acknowledge their deep cultural, social, environmental, spiritual and economic connection to their lands and waters.

The guidance and support received from the Murray Lower Darling Rivers Indigenous Nations, the Northern Basin Aboriginal Nations and our many Traditional Owner friends and colleagues is very much valued and appreciated.

Aboriginal people should be aware that this publication may contain images, names or quotations of deceased persons.

<b>Version control</b>			
<b>Version</b>	<b>Revision date</b>	<b>Author/modifier</b>	<b>Distributed to</b>
v.1	22 May 2019	Yvette Bettini	Chris Pulkkinen
v.2	25 May 2019	Chris Pulkkinen	IRORG
v.3	18 June 2019	Yvette Bettini	IRORG
v.4	19 June 2019	Yvette Bettini	MDBA

# Contents

Introduction.....	1
Assessment approach.....	1
Background.....	3
Documents Assessed.....	3
Summary assessment statement .....	4
Prerequisite policy measure assessment .....	5
Criterion 1: Securing and enduring arrangements.....	5
Criterion 2: Fully operable arrangements .....	8
Criterion 3: Transparent arrangements .....	11

# Introduction

This report sets out the Murray-Darling Basin Authority's (MDBA) assessment of whether Prerequisite Policy Measures (PPMs) were in effect in Victoria by 30 June 2019, in accordance with section 7.15 of the Basin Plan. The two PPMs in section 7.15 are:

- **PPM1** - credit environmental return flows for downstream environmental use; and
- **PPM 2** - allow the call of held environmental water from storage during unregulated flow events.

The Authority must establish whether the PPMs are in effect by this date in order to retain these policy settings when calculating the SDL reconciliation for the Basin Plan SDL Adjustment Mechanism.

The implementation of PPMs is an important mechanism to enable the environmental outcomes in the Basin Plan to be met with the water identified for recovery, as was anticipated in the benchmark SDL modelling. Without the PPMs in place, more environmental water is needed to achieve the outcomes.

The PPMs are one mechanism set out in the Basin Plan to ensure that environmental outcomes are achieved. Other mechanisms include the protection of planned environmental water and environmental watering requirements through water resource plans, ensuring compliance with the SDL to protect environmental water from extraction, and providing for an adaptive management approach to the use of environmental water through reporting, evaluation and risk management.

While these other mechanisms will support the operation of PPMs, the MDBA has considered the issues specific to the PPMs in the assessment of whether the measures are in effect by 30 June 2019. The full implementation of the Basin Plan and associated compliance and adaptive management will ensure the other mechanisms, along with further refinement of the PPMs, enable the efficient and effective use of environmental water to achieve the Basin Plan environmental outcomes.

## Assessment approach

To establish whether the PPMs are in effect, the MDBA has developed criteria and assessment questions using principles set out in guidelines<sup>1</sup> developed by the MDBA in 2015. These guidelines were developed to assist states to implement PPMs. The criteria and assessment question are designed to test whether the PPMs are in effect according to these principles, and are set out in Table 1, with the key principles in bold.

---

<sup>1</sup> MDBA, 2015. Pre-requisite Policy Measures: Assessment Guidelines. April 2015.

**Table 1: PPM Assessment criteria**

Criteria	Assessment questions
1. Are PPMs enabled in a <b>secure and enduring</b> arrangement?	<p><i>How are PPMs enabled through legislative/statutory instruments? What other mechanisms are used to implement PPMs?</i></p> <p><i>What is required to change mechanisms that enable or implement PPMs?</i></p> <p><i>Given the above assessment findings, will the proposed arrangements enable PPMs in a way that ensure they will remain in effect from 30 June 2019?</i></p>
2. Can PPMs be <b>fully operated</b> from 1 July 2019?	<p><i>Are there sufficient obligations to implement PPMs?</i></p> <p><i>How is environmental water called from storage during unregulated flow events?</i></p> <p><i>How is environmental water accounted for?</i></p> <p><i>Given the above, are PPMs given effect through appropriate mechanism(s) within the relevant water management framework?</i></p>
3. Are operational arrangements sufficiently detailed and <b>transparent</b> ?	<p><i>Do operational arrangements include:</i></p> <ul style="list-style-type: none"> <li>• <i>A process for ordering and delivering environmental releases that:</i> <ul style="list-style-type: none"> <li>– <i>Enables all environmental water holders to target the use of their entitlements, within operational requirements</i></li> <li>– <i>Includes processes for advising environmental managers of the estimated environmental releases and providing other information needed for event planning</i></li> <li>– <i>Requires proposed flow descriptions (rates, volumes, timing, locations, intended targets etc.)</i></li> <li>– <i>Describes accounting arrangements, including inter-valley accounting, where applicable</i></li> <li>– <i>Requires disclosure of explanations for refusing or altering orders</i></li> <li>– <i>Includes a process for resolving disputes</i></li> </ul> </li> <li>• <i>A process for accounting environmental water that:</i> <ul style="list-style-type: none"> <li>– <i>Clarifies roles and responsibilities for estimating releases, losses and credits</i></li> <li>– <i>Requires disclosure of the assumptions/information used in the estimations</i></li> <li>– <i>Includes processes for adjusting the estimation during and post-event, where applicable</i></li> <li>– <i>Applies the principle of incremental losses</i></li> <li>– <i>Improves estimates as knowledge improves</i></li> <li>– <i>Considers detrimental and beneficial impacts of environmental releases when considering potential third party risks</i></li> </ul> </li> </ul> <p><i>Given the above, do the operational arrangements provide for a process enabling PPM operation?</i></p>

# Background

This report assesses how PPMs have been given effect within Victoria's water management legislation. For PPMs on the River Murray, provisions in the Murray-Darling Basin Agreement enable PPMs. The assessment of how PPMs are enabled in the River Murray system are considered in a separate assessment report. However, in conducting this assessment, the MDBA Assessment panel has considered how the arrangements enabling PPMs in the Murray-Darling Basin Agreement and under Victorian state legislation interact.

## Documents Assessed

The following documentation has been provided by Victoria for assessment:

- Overview of PPMs in Victoria
- Bulk Entitlement (Loddon River – Environment Reserve)
- Environmental Entitlement (Campaspe River –Living Murray Initiative)
- Environmental Entitlement (Goulburn System – Living Murray)
- Instruments of Appointment (Goulburn-Murray Water)
- Northern Victorian Environmental Metering Program
- Draft Operating Arrangements: For the Environmental Water Holdings of the Campaspe System, June 2019

This assessment of whether the PPMs were in effect in Victoria by 30 June 2019 was based on consideration of the above documents.

During the assessment of this documentation, a number of questions were raised by the Assessment panel. These were provided to Victoria for a response in a Questions log. The information provided by Victoria in this log also informed the assessment.

# Summary assessment statement

## ***Has Victoria demonstrated that the PPMs are in effect by 30 June 2019?***

Victoria have clearly documented how PPMs are given effect within the state's water entitlement and system operations frameworks. Legal protection of PPMs is provided under the *Water Act 1989* (Vic). Amendments to bulk and environmental entitlements have enabled water to be called from storage during unregulated events, and accounting arrangements are in place to recognize return flows. These instruments, along with the detailed Operating Arrangements (OAs) being developed, ensure that arrangements giving effect to PPMs are secure and enduring.

While the OAs for relevant tributaries are not finalized, the Assessment panel are satisfied that Victoria has provided sufficient evidence to demonstrate that there is a clear pathway for these remaining operational arrangements to be finalized. The MDBA is confident that Victoria has demonstrated a commitment to implementing PPMs in full, which includes ongoing refinement of any enabling and operational instruments.

The ability to piggyback is included in the rules of the Victorian Environmental Water Holder's (VEWH) relevant water entitlements. Goulburn-Murray Water (GMW) are required to operate storages and river systems in accordance with these entitlement rules under their source bulk entitlements and instruments of appointment as storage and resource manager. Operating arrangements that set out the processes and methods for accounting for return flows must also be agreed between VEWH and GMW, as required under the bulk and environmental entitlements.

The documentation includes the detail of day-to-day river operations conducted in accordance with the water entitlements and other instruments, and describes how PPMs are fully operable within these water management arrangements. The documentation also includes examples of PPM events that have been run in the past, providing the Assessment panel with confidence that the PPMs are operable within Victoria.

Many of the instruments that give effect to PPMs in Victoria are publically available on the Victorian Water Register. For documents that are not appropriate for general publication, such as the detailed operating arrangements, the Assessment panel is satisfied that relevant stakeholders, including other environmental water holders such as the Commonwealth Environmental Water Holder (CEWH) and The Living Murray (TLM) entitlement holders, have been consulted and have access to the relevant information. As such, Victoria's water planning and delivery arrangements are documented and transparent, so as to enable environmental water holders to plan and use their holdings, utilizing the PPMs where appropriate.

**The Assessment panel considers that the information provided demonstrates that the PPMs are in effect in Victoria.**

# Prerequisite policy measure assessment

## Criterion 1: Securing and enduring arrangements

### **1.1. How are PPMs enabled through legislative/statutory instruments? What other mechanisms are used to implement PPMs?**

Prerequisite policy measures are enabled in Victoria through the state water entitlement framework legislated under the *Water Act 1989 (Vic)*, primarily through the Victorian Environmental Water Holder's (VEWH) bulk and environmental entitlements in the Goulburn, Murray, Campaspe and Loddon regulated systems (listed in Table 2). While there are no environmental water entitlements in the Broken or Ovens systems due to their small volume capacity, water shares for the environment are available in these systems.

In Victoria, environmental entitlements can only be held by the VEWH, and must be used to improve the environmental values and health of water ecosystems. Other environmental water holders such as the Commonwealth Environmental Water Holder (CEWH) and The Living Murray (TLM) hold water shares under Victoria's entitlement framework. Water shares, while allowing the taking of water which has been allocated to that share, does not enable the entitlement holder to deliver or apply that water to land. Hence, the CEWH has an agreement to trade their allocation to the VEWH for delivery. Likewise, TLM also trades its water to VEWH for delivery in accordance with decisions of the Southern Connected Basin Environmental Watering Committee (SCBEWC).

Victoria's bulk and environmental entitlements require that operating arrangements be agreed between the VEWH and Goulburn-Murray Water (GMW) to supply the environmental water. These agreements outline planning, ordering and delivery, accounting, reporting, risk management, review and dispute resolution processes for managing environmental water. Each entitlement includes a clause which sets out what these arrangements must cover and the criteria they must meet. On the basis of this regulatory requirement, and the evidence provided in draft operating arrangement for the Campaspe River system, the Assessment panel is satisfied that these operating arrangements are a secure and enduring mechanism for PPM implementation, whilst also allowing for adaptive management.

Goulburn-Murray Water is obliged to meet VEWH's environmental water orders (subject to operational constraints) under their Instruments of Appointment as resource and storage managers, and relevant source bulk entitlements (listed in Table 3).

The *Overview of PPMs in Victoria* report outlines the processes for environmental water planning and delivery, through the development of seasonal watering plans and seasonal watering statements, which are required under the *Water Act 1989 (Vic)*. These documents are developed having regard to relevant Victorian local statutory management plans, and the MDBA's annual watering priorities and the CEWH's portfolio management priorities.

**Table 2: Entitlements held by VEWH under the Act to enable PPM implementation**

Environmental entitlement	Bulk entitlement
Environmental Entitlement (River Murray - NVIRP Stage 1) 2012	Bulk Entitlement (River Murray - Flora and Fauna) Conversion Order 1999
Goulburn River Environmental Entitlement 2010	Bulk Entitlement (Loddon River - Environmental Reserve) Order 2005
Environmental Entitlement (Goulburn System - NVIRP Stage 1) 2012	
Environmental Entitlement (Goulburn System - Living Murray) 2007	
Campaspe River Environmental Entitlement 2013	
Environmental Entitlement (Campaspe River - Living Murray Initiative) 2007	

**Table 3: Entitlements and instruments of appointment which obligate GMW as the PPM delivery agent**

Bulk entitlement	Instrument of appointment
Bulk Entitlement (Eildon - Goulburn Weir) Conversion Order 1995	Appointment of Goulburn-Murray Rural Water Authority as Resource Manager for Bulk Entitlements in the Campaspe Basin
Bulk Entitlement (Campaspe System - Goulburn-Murray Water) Conversion Order 2000	Appointment of Goulburn-Murray Rural Water Corporation as Resource Manager for the River Murray
Bulk Entitlement (Loddon System - Goulburn-Murray Water) Conversion Order 2005	Appointment of Goulburn-Murray Rural Water Corporation as Resource Manager for the Goulburn basin
	Appointment of Goulburn-Murray Rural Water Corporation as Resource Manager for the Loddon basin
	Appointment of Goulburn-Murray Rural Water Corporation as Storage Manager for the Goulburn System
	Appointment of Goulburn-Murray Water as storage operator for bulk entitlements in the Loddon Headworks System
	Appointment of Goulburn-Murray Rural Water Corporation as storage operator for bulk entitlements in the Lake Eppalock Headworks System

### **1.2. What is required to change mechanisms that enable or implement PPMs?**

The documentation includes a summary of the process to amend entitlements, established under section 48K of the *Water Act 1989* (Vic). The clear administrative process required to amend an entitlement ensures that the mechanisms that implement PPMs are subject to a robust process unlikely to facilitate unreasonable change. This process includes appropriate public notice, and allows for Ministerial discretion regarding the nature of consultation, the invitation of submissions and investigation of effects (modelling and environmental assessments). While this is a significant degree of discretion, the *Water Act 1989* (Vic) requires that amendments are not requested unless

the water holder considers that the amendment would benefit the Environment Water Reserve<sup>2</sup>. This provides confidence that amendments will not be made that impair PPM implementation. Amendments are published in the Victoria government gazette and are available on the Victorian Water Register. This publically available register includes all entitlement orders and accounts, and will soon contain the Instruments of Appointment.

The VEWH and GMW may vary the agreed operating arrangements at any time, which provides important flexibility for adaptive management. There are a number of conditions which may trigger a review of the operating arrangements, including a request from the Minister or water delivery party (GMW, VEWH and relevant CMAs), entitlement amendments, or in response to significant operational changes. Formal review that includes consultation with other delivery partners (including the MDBA, CEWO and Parks Victoria) is required at least every five years.

**1.3. Given the above assessment findings, will the proposed arrangements enable PPMs in a way that ensure they will remain in effect from 30 June 2019?**

The evidence provided by Victoria demonstrates that PPMs are enabled through Victoria's water entitlement framework. Legal protection of PPMs is provided under the *Water Management Act 1989* (Vic), and the processes outlined in the documentation provide confidence that the implementation mechanisms will not be subject to unreasonable change.

---

<sup>2</sup> The Environmental Water Reserve is defined in the *Water Act 1989* as water that is set aside for the environment.

## Criterion 2: Fully operable arrangements

### **2.1. Are there sufficient obligations to implement PPMs?**

The Resource Manager Instruments of Appointment obligate GMW to undertake duties and carry out functions as specified in the relevant bulk entitlements.

While there are sufficient obligations to implement PPMs in Victoria (through the operational agreements that develop standing arrangements for environmental water delivery), calculation methods including volume, timing and location of return flows need to be agreed by the storage/resource manager. Goulburn-Murray Water has the authority to determine the 'reasonable limits' through which PPM implementation (water delivery) occurs, including assessing the impact of operating constraints (e.g. third party impacts), crediting return flows, and balancing other system requirements (such as consumptive water orders).

The discretion afforded to GMW as the river operator is appropriate to enable them to balance the multiple water needs within system requirements. The documentation provided demonstrates that there are clear liaison and communications expectations of GMW to guide VEWH in relation to system constraints and delivery requirements. This provides an adequate degree of confidence that GMW has a distinct mandate to work collaboratively with VEWH to implement PPMs.

Furthermore, there is a robust conflict resolution mechanism outlined in the operating arrangements to address disputes relating to the interpretation and application of entitlements. This is outlined in detail in the assessment against question 3.1.

### **2.2. How is environmental water called from storage during unregulated flow events?**

The Victorian documentation describes how PPMs have been implemented in Victoria, covering the water supply systems of northern Victoria. It aligns with the documentation prepared by the MDBA regarding implementation in the River Murray System on behalf of Victoria, which has been assessed separately in the *Prerequisite Policy Measures Assessment report: River Murray*.

Environmental water can be called from storage by the GMW as the storage manager, in accordance with the rules in the bulk and environmental entitlements. Goulburn-Murray Water receives water orders from VEWH (as the bulk and environmental entitlement water holder) and actions them by making releases from storage, following the detailed operational arrangements agreed between GMW and the VEWH. Note that such releases may be made during both regulated and unregulated flow conditions.

The VEWH is able to authorize a target flow downstream of a headwater storage during delivery of other system demands, including during unregulated flow events, under their entitlements. These orders are subject to agreement from GMW on matters such as the rates of release, accounting arrangements, and risk mitigations measures. Arrangements are in place for all environmental water holders to operate through VEWH, as described in the response to Criterion 1.

The Assessment panel is aware that PPM releases from Victorian headwater storages have been trialed every year since 2011-12. Information on an example of these types of releases is provided in Figure 1 of the *Overview of PPMs in Victoria* report. This information indicates that in 2017-18, 351 GL of environmental water was released from Eildon Reservoir and 30 GL was released from Lake

Eppalock. The data in Figure 1 on release volumes, return flow use and re-credits indicates that arrangements are fully operable.

### **2.3. How is environmental water accounted for?**

The volume of directed releases of environmental water are accounted for in Victoria by determining the difference between releases made with the order for environmental water and the estimated releases that would have been made without that order. The releases that would have been made without environmental water include allowance for tributary inflows, diversions, minimum flow requirements, and system transfers. This ‘with/without’ accounting principle has been applied to all directed releases of environmental water in northern Victoria since commencement in 2011-12.

Victoria has made a specific policy commitment (see boxed text regarding Policy 4.8 in *Overview of PPMs in Victoria* report) to allow return flows to be used at downstream sites or traded by entitlement holders. The Assessment panel also note that a Trade Adjustments Project has been endorsed by BOC to facilitate the use of return flows from New South Wales on Victorian sites in the River Murray (and vice versa), and existing provisions under clause 113 of the MDB agreement can facilitate these actions.

The volume of return flows is either measured by a meter or calculated by a method that has been agreed with GMW. The calculation methods used in northern Victoria have adopted rules described in Section 6.3 of the *Overview of PPMs in Victoria* report. These rules are:

- The volume debited for releases from storage for in-stream delivery is calculated as the difference between releases made with environmental water orders, and the releases that would have been made without environmental orders (to ensure the environmental water holder is only debited for the water delivered in addition to all other water in the river).
- The volume eligible for return flow re-credit is the volume debited for the release minus the deemed loss, adjusted for travel time (to ensure all water that is eligible for return flows can be credited for downstream use).
- The assumed loss is determined as an incremental loss that is associated with that part of the environmental water delivery that is in excess of normal rates of delivery prior to environmental water recovery (to ensure the environmental water holder is only debited for losses associated with their delivery). This means that at low flow rates, all losses are covered by system resources.
- Adjustments to the above calculations are made in real-time to avoid over- or under-debiting, e.g. if actual flows are different to forecast flows.

These calculation methods have been trialed over many years and the specific methods are documented in the operating arrangements agreed between GMW and VEWH. A draft example of these comprehensive operating arrangements has been provided for the Campaspe River system, and includes detailed environmental accounting methodology in Appendix 4. The Assessment panel is satisfied that by adopting the accounting rules outlined above and continuing to document the detailed methodologies in the agreed operating arrangements as required under the relevant bulk and environmental entitlements, provides a fair and transparent process is in place for accounting of environmental water.

Goulburn-Murray Water reports to VEWH and other relevant environmental water holders on the daily volumes of water released, used and returned for downstream use. These reports are provided on a weekly basis. MDBA River Operations is also provided with weekly reports of the daily volumes

of environmental return flows delivered to, and extractions taken from, the River Murray from Victorian sites, to assist with the co-ordination of environmental watering in the Southern Connected Basin.

***2.4. Given the above, are PPMs given effect through appropriate mechanism(s) within the relevant water management framework?***

The Assessment panel is satisfied that Victoria has the legislative and policy arrangements in place for PPMs to be in effect. These arrangements are fully operable as evidenced by a long history of environmental water delivery in Victoria.

## Criterion 3: Transparent arrangements

### **3.1 Do operational arrangements include a process for ordering and delivering environmental releases that:**

- ***Enables all environmental water holders to target the use of their entitlements, within operational requirements***

The Victorian water entitlement framework enables VEWH, CEWH and TLM to use the water available to them. The legislative framework and operating arrangements clearly establish the responsibilities of each agency involved. Every phase of water management is outlined including water use planning, water ordering, water accounting, reporting and review.

Environmental water delivery is planned through the development of the VEWH's seasonal watering plan, which is informed by the MDBA's annual watering priorities and the CEWH's portfolio management priorities. The VEWH issues seasonal watering statements which outline the proposed use of environmental water throughout the coming year, under a range of climatic conditions. These processes enable environmental water holders to plan and target the use of their water. These plans are also coordinated with the activities of other environmental water holders in northern Victoria, NSW and South Australia to achieve environmental outcomes at the southern-connected Murray–Darling Basin scale. Individual watering actions broadly follow the seasonal watering statements, with details determined in consultation with the relevant operational advisory groups which include environmental water holders, Traditional owners, waterway managers, land managers and river operators, as appropriate. GMW delivers the water required for each watering action, subject to operational constraints.

The *Overview of PPMs in Victoria* report also outlines the accounting, reporting, and review requirements. Records of entitlement holders' accounts are kept in the Victorian Water Register and include volumes delivered and returned to assist with the environmental water holders' portfolio management. Review arrangements are outlined, including formal reviews of the operating arrangements (at least on a 5 yearly basis).

- ***Includes processes for advising environmental managers of the estimated environmental releases and providing other information needed for event planning***

Operating arrangements agreed between GMW and the VEWH detail the process for environmental watering planning, ordering, delivery, accounting and reporting. Individual environmental watering actions are developed from the VEWH's seasonal watering plan, depending on the current seasonal conditions. Flow delivery planning is initiated by the relevant land manager (CMAs), in consultation with relevant stakeholders. This planning includes estimates of the volumes of water required for release and an evaluation of risks for consideration by the river operators.

Operational Advisory Groups, consisting of members such as VEWH, GMW, MDBA River Ops, TLM, CEWO, CMAs and, as required, ecologists with local experience, assist with the coordination of environmental water delivery, field reports, reporting on current and forecast environmental water use, and active management.

Planning arrangements and requirements are well understood between water managers, water holders and river operators for routine watering events. More complex watering events are planned and undertaken on a case-by-case basis, following the processes prescribed in the *Water Act 1989*

(Vic), detailed in the operating arrangements, and consistent with the rules set out in bulk and environmental entitlements.

The example operating arrangements provided for the Campaspe River system provide clarity around the processes of planning, ordering, delivery, accounting, reporting, risk management and review.

- ***Requires proposed flow descriptions (rates, volumes, timing, locations, intended targets etc.)***

This is an integral part of flow event planning, as described above. They are detailed in VEWH's seasonal watering plans, which are generally published prior to the commencement of each water year.

- ***Describes accounting arrangements, including inter-valley accounting, where applicable***

Victoria's water accounting arrangements are discussed above under the assessment against Criterion 2. Detailed accounting arrangements will be documented in the operating arrangements for each system, in accordance with the requirement and criteria included in the relevant bulk or environmental entitlement, the accounting rules described in Section 6.3 of the *Overview of PPMs in Victoria* report, and the requirements set out in the *Northern Victorian Environmental Metering Program*. These operating arrangements will include the specific requirements which vary from site to site, such as for the Goulburn River system, the Campaspe River and Hattah Lakes.

- ***Requires disclosure of explanations for refusing or altering orders***

In Victoria, there is a comprehensive planning process prior to ordering water which enables feedback between stakeholders to ensure that the proposed order can be feasibly delivered. Orders are placed by the VEWH and GMW liaises with the VEWH to determine the details. Orders can be adjusted as required depending on the operational circumstances, in consultation with the Operational Advisory Group if possible. Goulburn-Murray Water has discretion, as is appropriate, to change orders at short notice under exceptional circumstances. In this case, GMW would notify VEWH as soon as practical.

- ***Includes a process for resolving disputes***

The agreed operating arrangements outline a three stage process whereby the dispute should be initially attempted to be resolved by operational staff at an officer level. If the matter remains unresolved after 14 days from the date of the dispute being first recognised, a written notice is required from one of the parties outlining that they want the dispute escalated to stage 2. At stage 2, senior staff from the parties attempt to agree on an acceptable solution. If again the matter remains unsolved after 14 days, any party can notify the other parties in writing that they want the dispute escalated to stage 3. At stage 3, the dispute is resolved at the Chief Executive Officer level, and they may call on external advice to assist in the dispute resolution. An interim solution may be used if the issue requires the development of a more comprehensive solution in the next review of the operating arrangements.

This dispute resolution mechanism reinforces the obligation on GMW to implement PPMs when requested in suitable conditions, as their operational decisions require agreement and are subject to negotiation with the VEWH.

### **3.2 Do operational arrangements include a process for estimating environmental releases that:**

– **Clarifies roles and responsibilities for estimating releases, losses and credits**

The roles and responsibilities for environmental water accounting are clearly defined in the agreed operating arrangements, as required under the relevant bulk and environmental entitlements and evidenced in the draft Operating Arrangements provided for the Campaspe River system. Goulburn-Murray Water is required to calculate and report environmental water usage based on the accounting principles described in these operating arrangements.

Goulburn-Murray Water has been undertaking this accounting and reporting role for environmental water usage since 2010-11. Figure 1 in the *Overview of PPMs in Victoria* report clearly demonstrates the release, use of return flows and re-crediting.

– **Requires disclosure of the assumptions/information used in the estimations**

The assumptions and information used for environmental water accounting are clearly stated in the operating arrangements, as evidenced in the draft Operating Arrangements for the Campaspe River system, in particular, Appendix 4.

– **Includes processes for adjusting the estimation during and post-event, where applicable**

Goulburn-Murray Water reports to VEWH, other relevant environmental water holders and MDBA on the daily volumes of water released, used and returned for downstream use. These reports are provided on a weekly basis. As part of this process, minor adjustments to correct estimated volumes with actual volumes delivered are able to be made each month.

– **Applies the principle of incremental losses**

The assumed loss is determined as an incremental loss that is associated with that part of the environmental water delivery that is in excess of “normal rates of delivery prior to environmental water recovery” (to ensure the environmental water holder is only debited for losses associated with their delivery). This means that at low flow rates, all losses are covered by system resources.

– **Improves estimates as knowledge improves**

As stated in the *Overview of PPMs in Victoria* report ‘Continuous improvement of processes is part of business as usual environmental water management in Victoria.’ The VEWH and GMW are expected to ensure the arrangements remain contemporary and effective by updating the arrangements in consultation with delivery partners on an as needs basis.

– **Considers detrimental and beneficial impacts of environmental releases when considering potential third party risks**

The *Overview of PPMs in Victoria* (Section 8) recognises both the detrimental and beneficial impacts of environmental water releases. The following principles balance Victoria’s current procedure of applying a loss only to that component of environmental water delivered above normal rates of delivery:

- Recognising the rights to water delivery of environmental water, without generating material adverse impacts to other water entitlement holders
- Where confidence in the calculation method is low, a factor of safety is applied to mitigate the potential adverse impacts on other water entitlement holders

Based on the long history of environmental water delivery in Victoria, the Assessment panel has confidence that Victoria will continue to appropriately balance the needs of environmental and consumptive water holders, and appropriately manage third party risks.

***3.3 Given the above, do the operational arrangements provide for a process enabling PPM operation?***

The Assessment panel is satisfied that Victoria's operational arrangements provide a process enabling PPM operation.

---

**Office locations**

Adelaide

Albury–Wodonga

Canberra

Goondiwindi

Toowoomba

 [mdba.gov.au](https://mdba.gov.au)

 1800 230 067

 [engagement@mdba.gov.au](mailto:engagement@mdba.gov.au)