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# Prerequisite policy measures assessment:

## New South Wales

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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.

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# Introduction

This report sets out the Murray-Darling Basin Authority's (MDBA) assessment of whether Prerequisite Policy Measures (PPMs) were in effect in New South Wales Murray-Darling Basin (the Murrumbidgee and Murray Lower Darling systems) 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.

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<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> <ol style="list-style-type: none"> <li><i>1. 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>2. 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> </ol> <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 New South Wales' water management legislation for the NSW Murray-Darling Basin (Murrumbidgee and Murray Lower Darling systems). PPMs in the River Murray system are enabled through provisions in the Murray-Darling Basin Agreement. 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 New South Wales state legislation and policy interact.

## Documents Assessed

A number of documents have been provided by New South Wales for assessment. These are listed in Table 2, with shortened titles, which are used for referencing the documents throughout this report. The assessment of whether the PPMs were in effect in the NSW Murray-Darling Basin by 30 June 2019 was based on consideration of these documents.

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

The Assessment panel has also relied on publically available documents to support their assessment conclusions, and these are also listed in Table 2.

**Table 2: Documentation provided for assessment and shortened titles.**

Document	Shortened title
Murrumbidgee PPM Procedures Manual	Procedures manual
Murray Lower Darling PPM Procedures Manual	Procedures manual
Draft amendments to the Murrumbidgee Regulated River Water Sharing Plan	Murrumbidgee WSP
Draft conditions for WaterNSW Murrumbidgee water supply work approval	Draft Works approval
Draft amendments to the Murray Lower Darling Water Sharing Plan	Murray Lower Darling WSP
Draft amendments to WaterNSW Murray Lower Darling water supply work approval	Draft Works approval
Addressing MDBA PPM Guidelines criteria – NSW Report	Overview report
Letter to MDBA (13 June 2019): Demonstration that Pre-requisite Policy Measures will be implemented in NSW by 30 June 2019.	Letter to MDBA

<a href="#">Lower-Darling Operations Plan</a> , November 2018. (WaterNSW)	Lower-Darling Operations Plan
<a href="#">NSW Extreme Events Policy: Policy framework for the management of NSW Murray-Darling Basin water resources during extreme events</a> , October 2018. (NSW Department of Industry)	Extreme events policy

# Summary assessment statement

## **Has New South Wales demonstrated that the PPMs are in effect in the Murrumbidgee and Murray Lower Darling systems by 30 June 2019?**

The evidence provided by NSW demonstrates that PPMs are enabled and codified in policy by the Procedures Manuals. The relevant NSW agencies have committed to continue to implement the Manuals from the 1 July 2019, and the arrangements will be further embedded in NSW legislative framework when gazettal of WSPs occurs in early 2020. The Assessment panel consider that these arrangements are secure and enduring within the NSW water management legislative framework.

The Assessment panel considers that the Procedures manuals set out clear arrangements that enable the PPMs to be operable within New South Wales' water management framework.

The Procedures manuals establish a transparent framework with detailed processes for further development and refinement of the arrangements to implement PPMs at the asset scale. The Panel also notes that the Procedures manuals include the establishment of a PPM Working Group comprising of key stakeholders including the Commonwealth Environmental Water Holder (CEWH) the NSW Office of Environmental Heritage (OEH), WaterNSW and the MDBA. The Panel considers that this evidence demonstrates a commitment to increasing the transparency of arrangements for the delivery of environmental water in the Murrumbidgee and Murray Lower Darling systems.

The Assessment panel notes that NSW have committed to further developing and refining the arrangements for implementing PPMs through the review and codification process under the Procedures manuals, and have reaffirmed this commitment in the letter provided to the MDBA and signed by all relevant New South Wales agency heads.

**The Assessment panel considers that the information provided demonstrates that PPMs are in effect in the Murrumbidgee and Murray Lower Darling systems.**

# Prerequisite policy measures 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?**

Procedures Manuals are the main policy instrument for giving effect to PPMs, as they codify the operational process for delivering PPMs. The Procedures Manuals for the Murrumbidgee and Murray Lower Darling set out:

- environmental sites for water delivery
- delivery pathways and actions for environmental watering events
- risks and mitigation strategies for PPM implementation and
- a review mechanism for refinement of the manual.

The Procedures manuals are established under provisions in the relevant Water Sharing Plans (WSPs). The Water Sharing Plans are the main statutory mechanisms enabling PPM implementation in New South Wales, and as well as establishing the Procedures manuals, the plans contain rules that specify how water is shared between the environment and water users in a water source. (see Table 2).

Water Sharing Plans are regulations made under the NSW *Water Management Act 2000*. Given that WSP are legal instruments with a ten year term, they are an appropriate mechanism to ensure the PPM implementation arrangements are secure and enduring.

The Assessment panel note that the gazettal of the provisions which give statutory support for PPMs are being progressed by New South Wales. New South Wales have indicated in the *Letter to the MDBA* that these changes will be made in early 2020. However, this letter commits all the relevant New South Wales agencies (as co-signatories) to implement the Procedures manuals from the 1 July 2019. The Assessment panel also note that PPM events can and have already been delivered in New South Wales under the arrangements described under Section 2 of the Procedures manuals.

Given this, the Assessment panel is satisfied that the PPMs are enabled under the Procedures manual and existing water delivery and accounting arrangements in New South Wales, and the amendments to the WSPs will increase the secure and enduring nature of the existing arrangements under New South Wales legislation.

Proposed amendments to the conditions on WaterNSW Works Approvals will also confer certain responsibilities on WaterNSW to support the implementation of PPMs in accordance with the rules established in the WSP and Procedures manuals. Amendments to Works Approvals are therefore an important mechanism for ensuring that the role of river operators in delivering PPMs is secure and enduring in NSW.

The Assessment panel note from the letter to MDBA that the Works Approvals cannot impose these obligations until the relevant rules in the WSP have been adopted. However, as WaterNSW are a signatory to this letter, which commits the signatories to implementing the Procedures manuals from 1 July 2019, the Assessment panel is satisfied that the PPMs are enabled within New South Wales' river operation arrangements, and this will be further embedded when the Works Approval conditions are imposed at the appropriate time.

The Procedures Manual for the Murray Lower Darling system relies on the river operations framework for the shared resources of the River Murray System, as set out in the Murray-Darling Basin Agreement (MDB agreement). This agreement is legislatively enabled under the *Water Act 2007* (Cwlth), and the river operations arrangements are detailed in the Objectives and Outcomes for River Operations in the River Murray System (O&Os document). The O&Os document is required under the MDB agreement and is approved by the Basin Officials Committee (BOC). The way PPMs are given effect under the arrangements for the River Murray System are assessed in the *MDBA PPM assessment report: River Murray*. However in conducting the assessment of the NSW arrangements for giving effect to PPMs, the Assessment panel has also considered how the arrangements enabling PPMs in the Murray-Darling Basin Agreement and under New South Wales state legislation and policy interact.

**Table 3: PPM implementation mechanisms in NSW**

Statutory instrument	Relevance to PPM implementation
<b>Water Sharing Plans (WSPs) enabling provision amendments</b>	Includes a series of rules that enable PPM implementation, including: <ul style="list-style-type: none"> <li>• the ability to call Held Environmental Water (HEW) from storage under Murrumbidgee WSP cl. 48A(3), Lower Murray Darling WSP cl.47A(3)</li> <li>• the ability to re-credit environmental return flows through water allocation account debiting rules under Murrumbidgee WSP cl.68(10) and Lower Murray Darling WSP cl.52(9)</li> <li>• requirement to develop valley-specific Procedures Manuals under Murrumbidgee WSP cl. 48A(1), Lower Murray Darling WSP cl.47A(1)</li> <li>• requirement to manage the water supply system in accordance with the piggybacking and environmental flow reuse rules under Murrumbidgee WSP cl. 48A(5), Lower Murray Darling WSP cl.47A(5).</li> </ul>
<b>Amendments to WaterNSW Water Supply Works Approvals</b>	The works approvals outline conditions which determine how the river operator (WaterNSW) develops operating arrangements for the delivery of environmental water including: <ul style="list-style-type: none"> <li>• operating PPMs in accordance with the Procedures manuals</li> <li>• providing advice and data on environmental water orders and actions</li> <li>• producing assumed use statements</li> <li>• accounting and reporting.</li> </ul>

<b>PPM Procedures Manuals</b>	Codify the operational processes for PPMs, including environmental water ordering processes, valley-specific watering actions and accounting methods, and review and adaptive management processes.
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### **1.2. What is required to change mechanisms that enable or implement PPMs?**

Amendments to WSPs require public gazettal prior to Ministerial approval, with concurrence from the NSW Ministers for Environment and Water (see Section 1.3 of Procedures manual).

The Procedures Manuals are intended to act as a 'living' document, which can be updated using the annual review mechanism. The review will be guided by NSW's implementation principles and consider the outcomes of PPM watering actions (see Section 2.3.5 of the Procedures manual). These outcomes are captured in the WaterNSW Annual Compliance report, the annual Environmental Release River Operations report and the annual Environmental Watering Statement to be prepared by the environmental water manager (OEH) (see Section 5.1 of the Procedures manual). These reports are important new accountability tools to monitor PPM implementation post June 30 2019. They will be the main pieces of evidence to inform the annual review and support any proposals brought forward by the river operator (WaterNSW) or environmental water holders to change PPM operations.

The annual review of the PPMs will also consider recommendations by the PPM Working Group, established under the PPM Procedures Manual with membership from key stakeholders including DoI Water, WaterNSW, OEH, CEWH and MDBA. The PPM Working Group provides a forum for relevant NSW and Commonwealth agencies to consider the operation, implementation and review of PPMs. The group will be able to submit recommendations on the ongoing refinement of PPMs through the annual review mechanism conducted by DoI Water or an independent body. This review is an important mechanism to ensure that non-NSW agencies have capacity to evaluate and advise NSW on their PPM operations.

### **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 NSW demonstrates that PPMs are enabled and codified in policy by the Procedures manuals. The relevant NSW agencies have committed to continue to implement the manuals from 1 July 2019, and the arrangements will be further embedded in NSW's legislative framework when gazettal of WSPs occurs in early 2020. The Assessment panel consider that these arrangements are secure and enduring within the NSW water management legislative framework.

The Assessment panel notes that progress to fully embed the arrangements within WSPs and Works approvals will be reported as part of the SDL Adjustment Mechanism Annual Report.

## Criterion 2: Fully operable arrangements

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

The MDBA considers that the *Letter to MDBA* committing all relevant state agencies to implement Procedures manuals obligates New South Wales to implement PPMs from 1 July 2019, until such time as these obligations are fully codified in WSP provisions and conditions on WaterNSW Works approvals.

The amendments to WSPs require Procedures manuals to be developed and require the water supply systems to be managed in accordance with environmental flow re-use and piggybacking rules included in the WSP. The amendments also set out enabling provisions for accounting for return flows (see Table 3 for relevant clauses).

Under the *Water NSW Act 2014*, WaterNSW is the storage manager and river operator for the Murrumbidgee and Murray-Lower Darling catchments (clause 7). WaterNSW operates under a license (Works approval) granted by the Independent Pricing and Regulatory Tribunal, and this license confers certain functions of the Minister administering the *Water Management Act 2000* on WaterNSW. This includes the requirement for WaterNSW to operate in accordance with WSPs and deliver water to consumptive and environmental water users in accordance with the Works approvals.

The amendments to the Works Approvals include new obligations for engagement and information provision to environmental water holders when developing water orders that use PPMs. This includes notifying the environmental water holder in writing of any matters that will affect the order.

In addition, the Works Approvals establish a new statutory reporting requirement for WaterNSW, which involves the preparation of an annual compliance report and annual Environmental River Operations Report (see Section 5.1 of the Procedures manuals). Importantly, this report will document any orders that are refused or rejected by WaterNSW with supporting explanations and rationale for the refusal.

The Assessment panel also note that OEHL, as the environmental water manager, are responsible for placing water orders with WaterNSW (water orders are discussed against assessment question 2.2). The information provided in the Question log notes that CEWO and OEHL have a Partnership Agreement for coordinating environmental watering undertaken by the two agencies, including an agreed process for planning and managing the transfer, delivery and monitoring of Commonwealth environmental water in New South Wales. The Partnership Agreement provides for watering schedules which outline the purpose, conditions and arrangements for environmental watering events in New South Wales that use Commonwealth environmental water. These arrangements provide assurance that OEHL, as the environmental water manager, have obligations to support the delivery of PPMs on behalf of the CEWO.

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

#### *Murrumbidgee system*

For the Murrumbidgee River, WaterNSW is able to release environmental water from storage during unregulated flow events, after receiving and approving a water order from OEHL. Water orders may specifically request that the order be met from a headwater storage. The process to develop a water

order is described below in response to assessment question 3.1. When approving a water order, WaterNSW considers operational risks and the mitigation measures. The water order may require protocols for within–event decision making. WaterNSW, as the river operator, is required to meet system orders subject to the operating constraints of the system.

### *Murray Lower Darling system*

For the River Murray system, including the Menindee Lakes when they are a shared resource, OEH works with WaterNSW (and in consultation with the MDBA, when necessary) to develop a water order. WaterNSW approves orders placed by OEH and then directs the MDBA to make the appropriate releases in accordance with the MDB Agreement and the relevant SO&Os. The MDBA, as the river operator, is required to meet these orders subject to the operating constraints of the system. The assessment of how PPMs are operated in the River Murray System is considered in the *MDBA PPM assessment report: River Murray*.

When the Menindee Lakes are under New South Wales control, Table 6 of the Murray Lower Darling Procedures Manual notes that the use of PPMs in the Lower Darling is unlikely. The Assessment panel notes that the arrangements described in Section 2 of the Procedures manual set out how the PPMs can be operated in the Lower Darling system, and is therefore satisfied that PPMs are in effect in this system.

The Panel notes that there are circumstances when under New South Wales control when it may be inappropriate to deliver PPMs, as the lakes are managed under these conditions to extend supplies to meet local and critical water needs. However, the Assessment panel also consider that there will be circumstances when the lakes are controlled by New South Wales when it is still appropriate for PPMs to be delivered. The Assessment panel note that the Lower Darling Operations plan and the Extreme events policy have been developed in part to ‘provide transparency around decisions that are made during periods of water stress...so that, as far as possible, water users, other key stakeholders and the community generally know what to expect,’ (Extreme events policy, page 9).

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

For all valleys, the volume of environmental water called from storage is determined as the difference between releases made with the environmental water order and the releases that would have been made without that order (see Section 2.1 of the Procedures manuals).

In the environmental water order, a delivery pathway (such as those described in Table 5 of the Procedures manuals) will be nominated by the environmental water manager, and can include multiple environmental sites. Hence, environmental water released from a headwater storage could, for example, be used to achieve outcomes within the Murrumbidgee River and the mid-Murrumbidgee wetlands, and then be delivered to the River Murray for use downstream.

The Procedures manuals describe two different categories of site for accounting purposes; Category 1 (Accurate) in which take or use can be metered or accurately measured and Category 2 in which take or use is measured or estimated but requires mitigation methods to address uncertainty (see Table 4 of the Manuals).

Where Category 1 measurement can take place, water is debited from an environmental account as the net take. The net take for an environmental site is the difference between the water leaving the water source minus the amount of water returning to the system.

The Procedures manuals acknowledge that there are currently knowledge gaps in the environmental use calculations and accounting methods. In particular, assumed use methods will be developed by WaterNSW, following the principles and rules in the Procedures manuals (see roles and responsibilities in Table 2). The assumed use methods will be included in the development of watering proposals for each environmental watering event. This process for developing watering proposals will be led by the environmental water manager (OEH) and involve consultation and collaboration with environmental water holders (CEWO and SCBEWC), the river operator (WaterNSW and, as required, MDBA) and for new watering actions, the regulator (DoI-Water).

The Assessment panel are satisfied that the process set out in the Procedures manuals enable PPMs to be operated through development of fit-for-purpose accounting methods, which will be developed according to documented high-level principles in consultation with environmental water holders, codified in the manual, and improved over time according to the adaptive management arrangements described in Section 5. These arrangements include a commitment to work with environmental water holders to improve methods and approaches to environmental water use and accounting over time, using best available information.

The Assessment panel notes that New South Wales' approach to mitigating potential third party impacts is to initially apply conservative methods of assumed use and loss rates that they consider are commensurate to the level of risk and uncertainty (see Section 4.4 of the Procedures manuals). New South Wales states it will consider both the negative and positive impacts of PPM watering actions when considering risks, but notes that there are gaps in the evidence-base of what these negative and positive impacts are. New South Wales state in the Procedures manual with regard to risk mitigation that the level of conservatism applied will be proportional to the confidence in the assumed use and level of risk.

The Assessment panel notes that this is an acceptable approach where there is uncertainty, and that making ongoing improvements to reduce the conservatism in these methods is imperative to ensuring all water entitlement holders are not unduly impacted or discriminated against. The Assessment panel considers this should be a focal area for improvement under the New South Wales adaptive management framework established in the Procedures manuals. The Assessment panel also notes this adaptive management framework includes input from environmental water holders, which will assist in building the body of knowledge in a collaborative and transparent way.

#### *Murrumbidgee, Edward-Wakool and lower Darling systems*

The Assessment panel note that under the Procedures manual, WaterNSW is responsible for providing OEH with regular environmental water use accounting during environmental watering events.

WaterNSW is also responsible for preparing an assumed use statement for each environmental watering event that relies on an assumed use method (as detailed in Table 2 and Table 4 of the Procedures manuals). The assumed use statement sets out the calculation of the volumes of water to be debited from accounts, summary information for each element of the assumed use method, the

source of data and summary of calculations used and the volume of held environmental water to be passed into the Murray.

The Assessment panel notes that the amendments to Works approvals will provide clear timeframes for the provision of information and assumed use statements, and recommends that consideration also be given when setting timeframes to the need to facilitate the planning and development of water orders through timely up-to-date use information, so as to enable environmental water holders can use environmental water as efficiently and effectively as possible.

For directed releases from Lake Victoria, the accounting is described in SO&O 9.4 and assessed in the *MDBA PPM assessment report: River Murray*.

The Assessment panel notes that while the Procedures manual does not contain detailed arrangements for the Edward-Wakool river system, the information provided in the Questions log indicates that the process set out in the Manual for developing these arrangements is already underway to enable environmental watering in this system in 2019.

#### *Murray system*

The MDBA is responsible for accounting in accordance with the SO&Os and provides the States, environmental water managers and environmental water holders with environmental water accounts on a monthly basis, and more frequently if requested. The accounting methods are detailed in the River Murray system Prerequisite Policy Measures documents and are assessed in the MDBA PPM assessment report for the River Murray.

When the source of water comes from New South Wales storages, WaterNSW develops water orders which include assumed use and delivery pathways, according to the Procedures manuals, and instructs MDBA to recognise the volume of flows being delivered. During the event, WaterNSW provides daily information on a weekly basis to MDBA river operators to update accounts to recognise the return flows. These arrangements are described in Sections 2.2 and 2.3.3 of the Procedures manuals.

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 (see Section 2.2 of the Procedures manual).

The Procedures Manuals describe how a return flow from an environmental watering event is protected from extractions and re-regulation, including in the downstream systems in Section 2.2. The Manuals also state that flows resulting from water orders using HEW cannot be used to meet other access license water orders, PEW or other general system operational rules (see Section 2.2).

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

The Assessment panel considers that the Procedures manuals set out clear arrangements that enable the PPMs to be operable within New South Wales' water management framework.

## 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 process for undertaking a proposed watering action starts with a planning phase which involves the relevant environmental water holders, the environmental water manager (OEH) and the river operator (WaterNSW and, if relevant, MDBA). Consultation between the environmental water manager and existing forums, such as the environmental water advisory groups (EWAGs), also occurs during the planning process.

The watering proposal requires approval from the regulator (DoI-Water) if it is a new action (see Table 2 in the Procedures manual). The proposal is then refined by OEH, in consultation with the environmental water holders and WaterNSW, to develop a water order. WaterNSW is responsible for approving (or otherwise) the order. The water order is passed onto the relevant river operator (either WaterNSW or MDBA) to deliver the order. If necessary, the river operator may vary the delivery of water for operational reasons.

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

WaterNSW (and MDBA, if relevant) is required to provide advice on any matters that might affect the water delivery. The amendments to the Works Approvals include new obligations for engagement and information provision to environmental water holders when developing water orders that use PPMs. This includes notifying the environmental water holder in writing of any matters that will affect the order.

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

A watering proposal is prepared by OEH which provides general details of the event including the location and delivery pathway, target flows and/or diversion rates, an initial estimate of the volume of water required, licence numbers proposed to be debited, the expected timing and delivery of any return flows and the process to manage any variations.

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

WaterNSW is responsible for initially developing the accounting arrangements, including assumed use methods in the following locations:

- the Murrumbidgee valley, including environmental water returns to the Murray system
- the Edward-Wakool river system
- Koondrook-Perricoota Forest
- the Great Darling Anabranh.

These accounting arrangements are refined with environmental water managers and holders through the process for preparing watering proposals. For each environmental watering event, these accounting arrangements will be confirmed and documented in the water order prepared by OEH for approval by WaterNSW. WaterNSW is responsible for determining volumes of held environmental water used or returned during environmental watering events.

The MDBA applies the accounting arrangements documented in the River Murray System PPMs for the following locations:

- River Murray, including volumes delivered to South Australia, the accounting arrangement
- the lower Darling River, when the Menindee Lakes are a shared resource.

The MDBA determines the volumes of held environmental water used or returned according to the relevant SO&Ss during environmental watering events in these locations.

WaterNSW and MDBA advise each other as appropriate of the relevant volumes of environmental water used or available as return flows. The NSW regulator (DoI-Water) will also advise the MDBA, as required, of the appropriate loss factor to apply to these return flows. Both WaterNSW and MDBA advise OEH and other environmental water holders of the operational estimates of environmental water use on a regular basis during events. WaterNSW is responsible for debiting volumes of held environmental water used during environmental watering events from NSW-held water accounts (see roles and responsibilities in Table 2 of the Procedures manual).

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

WaterNSW will document where any water orders were refused or rejected in their annual Environmental Release River Operations Report, including supporting explanations and rationale.

– ***Includes a process for resolving disputes***

Dispute resolution arrangements are implied in Section 2.3.1 of the Procedures Manuals which outlines how issues may be resolved at the planning stage through the EWAGs and the environmental water holders (CEWO and OEH) working together. Section 2.3.2 in the Procedures Manuals covers the water ordering and release stages, where an iterative process may be employed to resolve a complex water order requiring cooperation between the river operator and environmental water manager. The Assessment panel are satisfied that these processes ensure issues are identified through the development of the watering proposal, enabling potential disputes to be resolved proactively and early.

In the event of a disagreement over assumed use rates and mitigation measures, the Procedures Manual identifies that existing dispute resolution mechanisms will be applied. The Assessment panel notes that the details of these procedures are not set out in the Procedures manual, and transparency could be increased by identifying where these procedures are described.

***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 operating arrangements in the Procedure Manuals (Table 2) and the Works Approvals. WaterNSW is required to calculate and report environmental water usage in their allocation accounts, as outlined in the manuals.

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

The requirements for environmental water accounting and reporting are outlined in the Procedures Manuals and Works approvals.

The Assessment panel notes that NSW will develop detailed methods over time under their adaptive management framework, in consultation with environmental water holders.

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

The Procedures Manuals indicate in Tables 6 and 7 where post-event accounting will be used.

The Assessment panel considers that it is important for New South Wales to incorporate post-event account reconciliation to ensure the environmental water use is accurate as possible and based on actual use where available.

– ***Applies the principle of incremental losses***

The environmental water accounting methods outlined in the Procedures Manuals are not based on incremental losses estimation. NSW's documentation for assessment indicates (Procedures Manuals, Section 2.3.3) that they will consider adopting incremental accounting methodology, by conducting reviews as more data becomes available, and may then adopt it where it is potentially deemed appropriate and implementable. In the meantime, New South Wales will continue to use net-loss methods. As detailed in the Procedures Manuals, NSW has deliberately taken that approach as a mitigation measure to protect the reliability of other water licence holders, until such time that NSW further develops its understanding of the benefits and impacts on others arising from environmental water use.

The panel also notes that incremental accounting may not always be appropriate. Where it is not used, transparent details of the rationale applied is essential for environmental water holders to appropriately manage their water portfolios. That is particularly the case where it is significantly different to the methodology applied to other parts of the southern connected Basin. For example, for in-channel environmental flows from Hume Dam to the SA border versus in-channel flows from the Murrumbidgee River at Balranald to SA). The Assessment panel considers that it is important for NSW to progressively incorporate where possible incremental loss estimation methods.

– ***Improves estimates as knowledge improves***

The Procedures manuals outline an annual review process (in Figure 1) for the operation of the PPMs that will inform consideration of changes or new measures that are considered appropriate. The Procedures manuals also describe in the detailed adaptive management framework established through the on-going implementation of the Manual, to evolve and improve arrangements over time.

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

As described in the assessment against question 2.3, New South Wales that there may be benefits stemming from the implementation of PPMs, and that in some instances the benefits may offset any detrimental impacts over the long term, but until these positive and negative impacts can be determined, NSW will continue to implement the PPMs using a conservative approach. The Assessment panel considers this is an acceptable approach where there is uncertainty, and should be a focal area for improvement under the New South Wales adaptive management framework established in the Procedures manuals.

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

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

The Assessment panel notes that the NSW legislative framework and operating arrangements (particularly the Procedures Manuals) clearly establishes the governance arrangements and responsibilities for the use of environmental water by each agency involved. Every phase of water management is outlined including planning, water ordering, water accounting, reporting and review.

The Assessment panel notes that work is required to determine water accounting details appropriate to the different watering sites and different water delivery pathways. However, NSW has identified a process to develop these accounting arrangements in the Manuals, and the *Letter to MDBA* includes a commitment to continue refine and codify these details, including key stakeholders in the inter-agency PPM Working Group to do so.

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