



*BASIN PLAN IMPLEMENTATION*

No net reduction in planned environmental water

**SW8 NSW Murray and Lower Darling Surface Water Resource  
Plan Area**

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# 1. Introduction

Section 10.28 of the Basin Plan states: “A water resource plan must ensure that there is no net reduction in the protection of planned environmental water from the protection provided for under state water management law immediately before the commencement of the Basin Plan”.

For the purpose of accreditation of a water resource plan (WRP), planned environmental water (PEW) has the meaning set out in section 6 of the Commonwealth *Water Act 2007* and is committed by a NSW water sharing plan (WSP) or any other instrument made under a NSW law to achieve environmental outcomes or for other environmental purposes that are specified in the WSP or law, and cannot, to the extent to which it is committed by that instrument to that purpose or those purposes, be taken or used for any other purpose.

The environmental outcomes of the Basin Plan are based on modelling that incorporates the PEW rules that existed as at 23 November 2012 (the commencement of the Basin Plan). Any change to PEW rules could potentially change the environmental outcomes that the Basin Plan is seeking to achieve. The Basin Plan requirement (s10.28) for no net reduction in the protection of PEW ensures this does not occur.

However, improved information (from monitoring and system operation) and changes to water policy and governance since the establishment of these rules could provide the opportunity to improve the effectiveness of PEW and enhance environmental outcomes.

NSW has used the WRP development process to review specific water sharing rules for the regulated river water sources to provide better outcomes for licence holders and/or the environment.

Changes to PEW rules have been developed in close consultation with the Department of Planning, Industry and Environment – Biodiversity and Conservation Division (DPIE BCD, formerly the Office of Environment and Heritage (OEH)) and NSW Department of Primary Industries— Fisheries. They are consistent with WSP objectives and, where appropriate, consider the environmental water requirements (EWR) in the long term water plans (LTWP) to ensure the best environmental outcomes.

In order to demonstrate there has been no net reduction in the protection of PEW, this document establishes the level of protection of PEW in place prior to the commencement of the Basin Plan in November 2012, and compares this baseline with the changes made to water sharing rules that protect, manage or maintain PEW. These rules have been incorporated into the WRP and included in the relevant WSPs to ensure no net reduction in the protection of PEW.

This report demonstrates that the changes to the WSP rules meet the requirements of s10.28 by addressing:

- legal protection of PEW, under NSW state water management law
- estimated quantity of water protected, and
- effective use of the water to achieve environmental outcomes.

WSPs are a complex set of inter-dependent rules to ensure water is shared sustainably between the environment and consumptive users, and between classes of water users. Indirectly, all rules in a WSP may therefore have an effect on the environment. It is not feasible to determine the indirect effects of water sharing rules that do not have the purpose of achieving environmental outcomes. The PEW rules in this WRP are therefore the water management rules that have the purpose of committing and preserving PEW for environmental outcomes.

Consistent with MDBA’s position statement 3A, WSP rules that set out technical provisions and details for the purpose of managing allocations for consumptive users, storage operations, accounting etc. are not included as PEW rules. Although such rules may have an indirect effect on the environment, they do not operate to commit or preserve water for the purpose of achieving environmental outcomes.

## 2. No net reduction in the protection of PEW

This report demonstrates there is no reduction in the legal protection, volumes protected, or effective use of PEW under the rule changes incorporated into the WRP. As such, the WRP will ensure there is no net reduction in the protection of PEW provided for under state water management law immediately prior to the commencement of the Basin Plan.

The proposed changes to the WSPs strengthen the overall protection of PEW. Broadly, the rule changes concern the following:

- *Retaining baseline protection:* Some plan rules in WSPs were incomplete or ambiguous in providing for protection of PEW. The changes to rules ensure that the baseline protection is clearly stated, including for operational and compliance/enforcement purposes. The proposed changes therefore represent a strengthening of PEW protection.
- *Flexibility:* Changes to PEW rules in the regulated system have provided more flexibility for environmental water managers to decide if and when PEW is diverted during wet periods. The increased flexibility will allow consideration of additional assets and targets identified in the LTWP for the regulated and unregulated water sources.
- *Decision-making:* The decision to divert PEW now sits with the NSW Environmental Water Manager. Previously this decision was made by Water NSW or the NSW Minister for Water.

Therefore, there has been no reduction in the overall volume of PEW within the NSW Murray and Lower Darling WRP Area as a result of changes made since the Basin Plan commenced in 2012. The changes are outlined in detail in sections 2.1 – 2.4 and additional background information is provided in sections 3 and 4.

NSW has taken the opportunity to update the way WSPs are drafted and worded to provide clarity around decision making and to improve readability. For example, the word 'shall' is no longer used as it can cause confusion as to whether the requirement is mandatory or discretionary. These changes have been made to improve the legal robustness of provisions by clearly stating where there is an obligation, and where there is some discretion.

Changes to the objectives of the NSW Murray and Lower Darling regulated and unregulated WSPs will lead to a consistent expression of objectives across NSW WSPs in the Murray-Darling Basin, which will help to improve the inferential strength of data analysis, evaluation and predictive modelling. The revised objectives, strategies and performance indicators cover a similar scope to those in the pre-Basin Plan WSPs, but are now more strongly connected and provide a clearer line of sight to environmental outcomes. These changes do not present any material change to PEW rules.

At the valley scale, the new rules do not reduce the net protection of PEW. Rules have been refined to improve environmental outcomes or improve implementation and compliance. As such, the WRP will ensure there is no net reduction in the protection of PEW to that provided under state water management law immediately prior to the commencement of the Basin Plan.

### 2.1. Legal protection of PEW

The effect of rules within Part 4 of each of the WSPs which commit, identify and establish PEW have remained unchanged since the Basin Plan 2012. Note that in the 2003 regulated rivers WSP that was in force in November 2012, the equivalent Part is 3.

PEW is now clearly identified as water in excess of the Long Term Average Annual Extraction Limit (LTAAEL). This was not explicitly stated in the WSPs in place prior to the Basin Plan.

The changes to PEW rules (as defined in the *Water Act 2007* (Cth)) in the NSW Murray and Lower Darling regulated WSP are in Part 8 Division 2 and Part 10 Divisions 1 and 2. These will improve

operational clarity and provide additional flexibility to environmental managers during significant flow events. These changes are summarised in Table 1.

Changes have been made to remove alluvial groundwater sources and all rules relating to these groundwater sources from the Murray unregulated WSP and the Lower Murray-Darling unregulated WSP. The Murray alluvial groundwater sources have been incorporated into the *Water Sharing Plan for the Murray Alluvial Groundwater Sources 2020* and the arrangements for the protection of PEW in those alluvial groundwater sources are covered by that WSP. This aligns the Murray alluvial WSP area with the Murray Alluvium Water Resource Plan Area (GW8), as defined in the *Basin Plan 2012*.

Similarly, the Darling alluvial groundwater sources have been incorporated into the *Water Sharing Plan for the Darling Alluvial Groundwater Sources 2020* and the arrangements for the protection of PEW in those alluvial groundwater sources are covered by that WSP. This aligns the Darling alluvial WSP area with the Darling Alluvium Water Resource Plan Area (GW7), as defined in the *Basin Plan 2012*. There is no change to the legal protection of PEW as a result of these changes.

There have been no changes to PEW rules in the Murray and the Lower Murray-Darling unregulated WSPs.

As outlined in section 2.4, significant improvements have been made to NSW’s metering and compliance framework and this will further strengthen the legal protection of PEW.

**Table 1. Legal protection of PEW under the NSW Murray and Lower Darling regulated WSP.**

WSP PEW Provisions	Protection under operation of the pre-Basin Plan WSP (23 November 2012)	Protection under WSP and WRP
River Murray Increased Flows (RMIF)	Not mentioned in the 2003 and 2016 WSPs.	<p>River Murray increased flows (RMIF) represents a volume of water recovered by NSW and VIC in 2011 and since managed under temporary arrangements.</p> <p>At clause 63 of the new 2020 WSP, NSW’s share of this water is permanently recognised as a new PEW account in the (NSW) Murray regulated water source. There is enhanced legal protection and this change represents an increase in PEW in the system.</p> <p>A SDLAM project concerning this water will, once complete, result in improvements in the ability to use this water for environmental benefit.</p>
Releases from the Barmah-Millewa Allowance (B-M EWA)	The crediting and operating rules for this allowance are detailed at clause 15 of the 2003 WSP.	<p>The crediting and operating rules for the B-M EWA in the 2003, 2016 and redrafted 2020 WSPs are the same.</p> <p>At clauses 57 – 60 (Division 1 of Part 10, Environmental water rules in the Murray Water Source), the 2020 WSP makes explicit reference to the detailed Operating rules for the B-M EWA (2006), which are outside of the WSP.</p> <p>This change implements NSW requirements under a relevant SDL adjustment measure project, by better integrating use of the B-M EWA with the use of environmental entitlements.</p> <p>The SDLAM project formalises what is already occurring and no other change is proposed.</p>

WSP PEW Provisions	Protection under operation of the pre-Basin Plan WSP (23 November 2012)	Protection under WSP and WRP
Lower Darling EWA	The operation of this EWA is specified at subclauses 15(17-19) of the 2003 WSP.	The protection of this EWA under the rules of the 2003 and 2020 WSP, at clause 64, is unchanged. The only change is to broaden the permissible uses for this EWA from its current use, solely for the mitigation of blue green algae, to use in all matters concerning water quality in the Lower Darling. This will result in better outcomes in low flow periods.
Crediting of the Murray additional Allowance	Crediting of this EWA is detailed at subclause 15(22) of the 2003 WSP, which states the allowance shall be credited with a volume equivalent to 0.03 ML multiplied by the total number of unit shares of Murray regulated river (high security) access licences when the sum of available water determinations has reached 0.97 ML per unit share.	There is no change to the crediting rules in the 2003 and 2020 WSPs. The 2020 WSP makes it explicit that the calculation for crediting this EWA excludes the special purpose high security subcategory licences, which receive an AWD of 100%. The new detail merely confirms operational practice that has been in place since the start of the first WSP in July 2004.
EWA release	<p>The WSP specified the purpose for which the EWA may be released, however the rules were silent on who ultimately makes the decision to release this water.</p> <p>Where EWA rules do not explicitly specify when releases are to be made (i.e. based on a flow trigger) the decision to release EWA water has, since the commencement of the WSPs, been made by the operator based on negotiations with the NSW Environmental Water Manager.</p>	<p>Clause 68(2) states the operator is to make releases from the EWAs in accordance with an order made by the NSW Environmental Water Manager and any procedures established by the Minister responsible for Water with the concurrence of the Minister responsible for the Environment.</p> <p>The proposed new release provisions for EWAs seeks to provide greater transparency and certainty. The NSW Environmental Water Manager will be able to place orders for water to be released, and whilst the operator will have the ability to refuse these orders, this will only be in the circumstances specified in protocols established by the Minister responsible for Water. The establishment of these protocols will require the approval of the Minister responsible for the Environment. These arrangements improve the legal protection of PEW by clearly identifying when requests can be refused, providing greater certainty for the NSW Environmental Water Manager.</p>

## 2.2. No reduction in the quantity of PEW

### 2.2.1. General

At the valley scale, the annual quantity of PEW available for environmental purposes over the long term does not change. Under NSW water management law, PEW is defined under section 8 of the *Water Management Act 2000* (WMA 2000). Under s.8, a WSP is to commit water as PEW in at least two of the following ways (whether by two separate ways or a combination of two ways):

- a) by reference to the commitment of the physical presence of water in the water source,

- b) by reference to the long-term average annual commitment of water as planned environmental water,
- c) by reference to the water that is not committed after the commitments to basic landholder rights and for sharing and extraction under any other rights have been met.

In each of the regulated and unregulated water sources in the NSW Murray and Lower Darling WRPA, PEW is described as the long-term average annual volume of water in excess of the LTAAEL for each water source; thus satisfying (b) above. There has been no change to the LTAAELs for the WSPs of the NSW Murray and Lower Darling Surface WRP area. Maintaining the existing LTAAELs in both the regulated and unregulated water sources ensures there is no reduction in the overall quantity of this form of PEW provided for in the plans. The WSP rules that maintain PEW, by limiting extraction to the LTAAEL, are reflected in the WRP to meet the requirements of s10.11 of the Basin Plan. As such, the WRP will ensure the same quantity of this form of PEW is provided for as that provided under the WSPs in place prior to the commencement of the Basin Plan.

### 2.2.2. NSW Murray and Lower Darling regulated rivers

There are no changes to rules in the regulated rivers WSP that reduce the quantity of PEW established in the WRPA.

The recognition of River Murray Increased Flows as a new PEW account, at clause 63 of the 2020 WSP, represents an increase in the quantity of PEW in the NSW Murray regulated water source.

As detailed in Table 1 and section 3.2, new reference in the WSP to the separate *Operating rules for the Barmah-Millewa EWA (2007)* does not constitute a change in the operation of the Barmah-Millewa Allowance or the Barmah-Millewa Overdraw. There is no change to the 2007 Operating rules, nor the triggers and other operating rules in the WSP.

### 2.2.3. Unregulated rivers

There are no changes to rules in the two unregulated river WSPs that reduce the quantity of PEW established in the WRPA.

## 2.3. No reduction in the effectiveness of PEW

### 2.3.1. NSW Murray and Lower Darling regulated rivers

Changes to how the PEW rules are written in the NSW Murray regulated river and the Lower Darling regulated river will provide environmental water managers with more discretion over how PEW is managed. Decisions on how PEW is managed will be made on an annual or event-by-event basis and will focus on achieving the best environmental outcomes consistent with the WSP objectives, as well as the objectives and targets of the NSW Murray and Lower Darling LTWP and the valley-specific annual environmental watering plan. While providing greater discretion, these changes are expected to improve environmental outcomes under some climatic conditions because they provide increased flexibility to meet some of the additional environmental water requirements (EWRs) that are specified in the LTWP.

### 2.3.2. Unregulated rivers

The PEW rules in the unregulated water sources remain unchanged from those in place at the start of the Basin Plan on 23 November 2012.

## 2.4. State-wide improvements to compliance and metering

The NSW Natural Resources Access Regulator (NRAR) has been established as an independent, transparent and effective regulator with total carriage of the compliance and enforcement of water management legislation in NSW. The principal objectives of the NRAR are:

- to ensure effective, efficient, transparent and accountable compliance and enforcement measures for the natural resources management legislation
- to maintain public confidence in the enforcement of the natural resources management legislation.

This increased level of compliance monitoring also serves to significantly strengthen the legal protection of PEW across NSW, as increased scrutiny will lead to reduced non-compliance by water users. Further information on NRAR can be found at <https://www.industry.nsw.gov.au/natural-resources-access-regulator>.

The *Water Management (General) Regulation 2018* and associated metering policies and practices serve to significantly strengthen the protection of PEW in NSW. More accurate metering, and the introduction of metering in some unregulated systems, will be significant improvements to ensure that only the allowable volume of water is taken. Consequently, the volume of PEW stipulated by the WSPs will be better protected.

The *Water Management (General) Regulation 2018* and associated metering policies require that:

- all authorised works (including open channels and closed pipes), except pumps less than 100 mm, have a meter that is pattern-approved and installed in accordance with Australian Standard 4747 by December 2021;
- from April 2019, all new and replacement meters are pattern-approved and installed and validated by a duly-qualified person in accordance with the requirements of Australian Standard 4747;
- users with works that meet the infrastructure size or multiple works thresholds who wish to keep their existing meters will need to demonstrate, by the specified dates, that the meter is pattern-approved and validated, or accurate. Meters will also need installed a data logger and tamper-evident seal, if not already in place.

The new metering requirements will be implemented in a staged manner. The staged introduction takes a risk-based approach and aims to ensure the largest water users in NSW are metered and telemetered in the first year of the new metering regime. This approach will allow time for the market to adjust to meet the demand for pattern-approved meters and certified meter installers.

The roll-out dates are:

- Stage 1: Surface water users with pumps of 500 mm or larger must comply by 1 December 2020.
- Stage 2: Remaining users in northern inland regions must comply by 1 December 2021.
- Stage 3: Remaining users in southern inland regions must comply by 1 December 2022.

## 3. Background to changes proposed to PEW rules in the NSW Murray and Lower Darling regulated rivers WSP

### 3.1. River Murray Increased flows (RMIF)

Soon before commencement of the Basin Plan, the NSW, Victorian and Commonwealth Governments, through the project 'Water for Rivers', recovered up to 70 GL/yr for environmental needs in the Murray, called River Murray Increased Flows (RMIF). RMIF is stored in the Snowy Mountains Hydro-electric Scheme and released by Snowy Hydro Ltd in accordance with the Snowy Water Licence.

A SDLAM supply project now underway is based on changes to the Snowy Water Licence in 2011. These allow NSW and Victorian water managers to call RMIF out from the Snowy Scheme. Previously, RMIF was released by Snowy Hydro at its discretion. Due to this, RMIF would only coincidentally be available to provide environmental benefits downstream.

The SDLAM project will permanently recognise the callable entitlement by amending the intergovernmental RMIF Strategy and creating state-based water accounts or licences.

At clause 63 of the *Water Sharing Plan for the NSW Murray and Lower Darling Regulated Rivers Water Sources 2020*, a new PEW account, the River Murray Increased Flows Account, is detailed. This account permanently recognises NSW's share of RMIF water. Since 2011, RMIF has been managed under temporary arrangements. The new rules in the WSP for RMIF management provide for flexibility and mitigate risks to other water users. There is no reduction in the volume, protection or other characteristics of RMIF water.

In 2019, Department of Planning, Industry and Environment–Water sought whole-of-government support for the permanent recognition of NSW RMIF water and consulted with stakeholders as part of public exhibition of the draft NSW Murray and Lower Darling WRP package. A Minister's note on the proposal appeared at clause 26 of the draft regulated rivers WSP.

The recognition of RMIF as a special PEW account increases the volume of PEW in the system.

### 3.2. River Murray Increased flows (RMIF) Barmah-Millewa Allowance (B-M EWA)

Formerly, there was no reference to the *Operating Rules for the Barmah-Millewa Forest Environmental Water Allocation (B-MF EWA)* (the Operating Rules) in the WSP. Note that in the WSP, the B-MF EWA is referred to as the Barmah-Millewa Allowance. The Operating Rules were written as MDBC Technical Report 2006/13 (July 2006) and approved by the Murray-Darling Basin Ministerial Council in May 2007. The rules are still in effect. For transparency, the WSP has been amended at clauses 57 - 60 to refer to these separate, more detailed, Operating rules, which will also be published on DPIE Water's website.

There is no change to the Operating Rules themselves. A SDLAM project proposes to remove a feature of the official rule set concerning floods, to align with current and historical practice by the formal decision-making body. This option provides better integration of the B-MF EWA with the use of held environmental water. The use of these entitlements has grown considerably since the B-MF EWA was first established in the 1990s.

The Operating rules allow for flexibility through agreement between parties on an as-needs basis and are regularly used by environmental water managers. The 2015 SDLAM Business Case proposed that the rules be given legal force through their inclusion in the relevant NSW Water Sharing Plan. The change has merely formalised what was already occurring.

### 3.3. Lower Darling Environment Water Allowance

This environmental water allowance was established in the first WSP and, with one exception, the rules concerning its characteristics and operation are the same in each of the 2003 (clause 15), 2016 (clause 31) and rewritten 2020 (clause 64) WSPs. The exception is that in the new WSP the permissible uses for this EWA have been broadened. Previously, the allowance could only be used to mitigate the effects of blue-green algae, when a high blue-green algal alert had been announced by the Minister. At clause 64 in the new WSP, it is specified that releases from the EWA may be made for the management of all water quality issues in the Lower Darling Water Source. These water quality issues may include, but are not limited to, high salinity levels, low dissolved oxygen levels and blue-green algae impacts.

It should be noted that this EWA only exists when the system is relatively wet and under MDBA control. It has not been used since the start of the first WSP in July 2004. In future, consideration could be given to different crediting arrangements so the EWA is available in a broader range of circumstances. Such substantial change would require considerable work and consultation.

### 3.4. Crediting the Murray Additional Allowance

There is no change the crediting, operation and characteristics of this environmental water allowance. However, as previously detailed in Table 1 of this report, the redrafted 2020 regulated rivers WSP makes expanded reference to the special-purpose subcategories of regulated river (high security) access licence in the NSW Murray water source. A note at clause 61(1) makes explicit that HS subcategory access licences are excluded from the calculation that credits the Murray Additional Allowance. The new detail merely confirms operational practice that has been in place since the start of the first WSP in July 2004.

## 4. Background to changes proposed to PEW rules in the Murray and Lower Murray-Darling unregulated WSPs

### 4.1. Removal of alluvial groundwater sources

Changes have been made to remove alluvial groundwater sources and all rules relating to these groundwater sources from the Murray unregulated WSP and the Lower Murray-Darling unregulated WSP. The Murray alluvial groundwater sources have been incorporated into the *Water Sharing Plan for the Murray Alluvial Groundwater Sources 2020* and the arrangements for the protection of PEW in those alluvial groundwater sources are covered by that WSP. This aligns the Murray alluvial WSP area with the Murray Alluvium Water Resource Plan Area (GW8), as defined in the *Basin Plan 2012*.

Similarly, the Darling alluvial groundwater sources have been incorporated into the *Water Sharing Plan for the Darling Alluvial Groundwater Sources 2020* and the arrangements for the protection of PEW in those alluvial groundwater sources are covered by that WSP. This aligns the Darling alluvial WSP area with the Darling Alluvium Water Resource Plan Area (GW7), as defined in the *Basin Plan 2012*. There is no change to the legal protection of PEW as a result of these changes.

Assessment of PEW rules for the alluvial groundwater sources should be undertaken as part of the assessments of the Murray Alluvium and the Darling Alluvium Water Resource Plans.