

New South Wales and Victorian
Operating Rules for the Barmah-Millewa
Forest Environmental Water Allocation

2021

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INTRODUCTION

This document represents an arrangement between New South Wales (NSW) and Victoria, and contains operating rules for the Barmah-Millewa Forest Environmental Water Allocation (BMFEWA). It reflects the long-standing commitment for provision of water to the Barmah-Millewa Forest and replaces MDBC Technical Report 2006/13, *Revised Operating Rules for the Barmah-Millewa Forest Environmental Water Allocation (B-MF EWA)* (MDBC, 2006f), under clause 10(b) of that document. A history of these rules is provided in *Appendix B*, which includes a revision history of this document.

State Ministers, in agreeing to this document, have made a commitment to pursue any amendments required to State instruments to be consistent with this document.

For clauses in the rules that need additional explanation, explanatory notes are provided in *Appendix A*.

DEFINITIONS

Basin Plan – means the *Basin Plan 2012* (Cth).

BMFEWA – Barmah-Millewa Forest Environmental Water Allocation. Note that each State has its own individual BMFEWA account.

General Security – a category of access licence referred to under section 57 of the *Water Management Act 2000* (NSW).

High Reliability Water Share – a class of Victorian water share defined by how often full seasonal allocation is expected to be available. Allocations are made to High Reliability Water Shares before Low Reliability Water Shares.

Manager of the BMFEWA – the State department or agency whose responsibility it is to manage licensed environmental water that is held by that State (that is, the NSW Department of Planning, Industry and Environment – Environment, Energy and Science; and the Victorian Environmental Water Holder).

MDB Agreement – the Murray-Darling Basin Agreement, as amended from time to time in accordance with that agreement and as set out in Schedule 1 to the *Water Act 2007* (Cth).

Objectives and Outcomes document – the document *Objectives and outcomes for river operations in the River Murray System*, as approved by the Basin Officials Committee in accordance with clause 31 of the MDB Agreement, which sets out the objectives and outcomes for operating the River Murray System.

Operator – operator of the River Murray System (that is, the Murray-Darling Basin Authority – River Operations).

State – either the State of New South Wales (NSW) or Victoria.

Water Resource Manager – the State department or agency who is responsible for determining state water allocations in the Murray System (that is, Goulburn-Murray Water in Victoria, and the NSW Department of Planning, Industry and Environment – Water).

water year – any period of 12 calendar months beginning on 1 July in any year and ending on 30 June in the following year.

BMFEWA OPERATING RULES

1. Allocation

1.1 Credit of allocation to the BMFEWA

Annual allocations credited to the BMFEWA are supplied *half each* by New South Wales and Victoria. The total annual maximum allocation creditable consists of two components:

- (a) a 100 GL high-security allocation; and
- (b) a 50 GL lower-security allocation.

1.2 High-security allocation

The BMFEWA account for each State is credited 0.5 GL for each 1 per cent increase in the seasonal determination of High Reliability Water Shares in the Victorian Murray System, up to a maximum credit of 50 GL to each State's BMFEWA.

1.3 Lower-security allocation

Lower-security allocations are made according to the triggers shown in *Table 1* below. The triggers refer to the total natural inflow to Hume Reservoir calculated over the preceding period specified in the table for each assessment date. The lower-security water allocation is credited to the BMFEWA account in its entirety when a trigger is exceeded (apart from 1 July, which is preliminary only – *see sub-clause 1.4*). The credit is shared equally between NSW and Victoria, resulting in a credit of 25 GL to each State's BMFEWA account (*see explanatory note 1.3*).

Table 1: Exogenous triggers for lower-security allocation

Assessment date	Period preceding assessment date (months)	Trigger (GL)
1 July*	30	8,650
1 August	31	8,988
1 September	32	9,243
1 October	33	9,253
1 November	34	9,267
1 December	35	9,280

*Preliminary only (*see sub-clause 1.4*)

1.4 Timing of lower-security allocation

Allocations are made at the start of the month based on inflows for the preceding months as prescribed in *Table 1*. Any lower-security allocation made in July is preliminary only and is made to ensure that sufficient resources are reserved for a subsequent formal allocation. If the trigger is exceeded only in July, then no lower-security allocation is made. However, if the trigger is exceeded in any of the months from 1 August to 1 December, the allocation is made even if the trigger is exceeded in only one month.

1.5 Allocation limit

Any allocation increase to a State's individual BMFEWA account is limited to the volume that will bring each State's share of the BMFEWA account to 350 GL (*see explanatory note 1.5*).

2. Carryover

Subject to the limit in *sub-clause 1.5*, the unused water in the BMFEWA account will be carried over from one water year to the next.

3. Overdraw

The BMFEWA can be overdrawn by up to 100 GL (50 GL from each State) to ensure adequate water is available for forest watering, provided a State has sufficient reserves. A State may overdraw independently. An overdraw will forfeit credits to the BMFEWA that occur in the water years following the water year in which the overdraw occurs until the volume of forfeited credits reaches the overdraw amount (*see explanatory note 3*).

4. Evaporation loss

The BMFEWA is reduced by evaporation. The evaporation loss to be applied to the BMFEWA is determined as a fraction of the total loss from the Hume and Dartmouth Reservoirs. The fraction of the evaporation loss to be attributed to the BMFEWA is calculated as the non-borrowed, carried-over component of the BMFEWA divided by the total storage in the two reservoirs. BMFEWA evaporation losses will be shared pro-rata between each State's share of the non-borrowed, carried-over components of the BMFEWA. If applying an evaporation loss to a State's share of the BMFEWA account will result in it going negative, the account will be reduced to nil (*see explanatory note 4*).

5. Borrow and payback

5.1 Borrow and payback triggers

Each State's share of the BMFEWA can be borrowed for consumptive use by that State, subject to the following rules:

- (a) each State can borrow that volume of water necessary to increase its allocation to its target allocation; and
- (b) water borrowed is paid back when it is no longer required to supply the target allocation (*see sub-clause 5.2*); and
- (c) an amount of up to 10 GL each year that may be required by the Victorian Environmental Water Holder for low-level watering is not available for borrowing.

(*See explanatory note 5.1*)

5.2 Target allocation

The target allocation for Victoria is 100 per cent of Victorian Murray High Reliability Water Share. The target allocation for New South Wales is normally 30 per cent of NSW Murray General Security allocation but this can be increased to 50 per cent under exceptional circumstances (*see sub-clause 5.3*).

5.3 NSW exceptional circumstances

In NSW, exceptional circumstances is defined to arise when the average NSW Murray General Security end of November allocation (including carryover) for the

four years up to and including the current water year would otherwise have been less than 50 per cent. However, exceptional circumstances cannot be declared in consecutive years (*see explanatory note 5.3*).

5.4 Forest watering while borrowing

The non-borrowed component of the BMFEWA can be released for delivery even if there is a component of the BMFEWA which remains borrowed.

5.5 Borrowing in the fifth year of drought

Each State will consider, consult and give reasons before making a decision to borrow water in the fifth year of drought when a release might be made under *sub-clause 8.2* of these rules (*see explanatory note 5.5*).

5.6 Borrowing for other environmental purposes

If the relevant Water Resource Manager agrees, a State may borrow from their respective share of the BMFEWA for other environmental purposes provided that:

- (a) the required water has not already been borrowed for consumptive use;
- (b) the Operator is notified and given the necessary information and time to assess the proposal and to make representations to the Water Resource Managers before the decision to borrow proceeds;
- (c) water is not required in that year by the Barmah-Millewa Forest, as determined by the Managers of the BMFEWA; and
- (d) the required water can be repaid at the start of the following water year (*see explanatory note 5.6*).

6. Spillage

6.1 Priority of spills

When Hume Reservoir *physically* spills, water will first spill from South Australia's storage right, then from other spillable accounts in accordance with State arrangements (*see explanatory note 6.1*).

6.2 Spillage limit

A State's share of the BMFEWA cannot spill below 100 GL plus an additional volume if water was borrowed by the State in the previous year. This additional volume is equal to the maximum borrowed by that State in the previous year excluding water borrowed under *sub-clause 5.6* and is limited to 100 GL for each State (*see explanatory note 6.2*).

6.3 Account imbalances

If the States' shares of the BMFEWA are unequal when the account spills, water spills first from the State with the bigger account until the States' accounts are in balance. Spillage for each individual State's BMFEWA account continues until each individual State's spillage limit is reached.

7. Internal spills

Each State's share of the BMFEWA is stored on their respective sides of the storages. The States' shares of the BMFEWA will not be affected by internal spills in Hume or Dartmouth.

8. Release triggers

8.1 Trigger flows

- (a) Subject to *clause 10*, releases are made from the BMFEWA under the trigger flow conditions specified in *sub-clauses 8.2 to 8.5*.
- (b) The trigger flows are the monthly flows in the River Murray downstream of the Yarrowonga Weir in the preceding months. In interpreting these triggers, the *usable component* of the BMFEWA is defined as the total allocation credited to the BMFEWA, less twice the volume borrowed by the State with the highest borrow. A *four-month flood* is defined as four consecutive months in the period June to December (inclusive) where the monthly flow downstream of Yarrowonga is at least:
- 500 GL/month for June, July, August, September, October and November; and
 - 400 GL/month for December.

8.2 October release for a five-year drought

Releases are triggered in October if the four previous years, as well as the current year, have passed with no release under *clause 8* or without a *four-month flood*.

8.3 October release following a September flow

Releases are triggered in October if the September flow exceeded 500 GL/month, the *usable component* of the account is ≥ 400 GL, and a *four-month flood* has not already occurred in the current year.

8.4 November release following an October flow

Releases are triggered in November if the October flow exceeded 500 GL/month, the *usable component* of the account is ≥ 400 GL, and a *four-month flood* has not already occurred in the current year.

8.5 December release

Releases are triggered in December if the flow exceeded 500 GL/month for both October and November, and a *four-month flood* has not already occurred in the current year.

9. Release targets

9.1 Target flows

Subject to *clause 10*, releases for the Barmah-Millewa Forest will attempt to achieve the target flows downstream of the Yarrowonga Weir specified in *sub-clauses 9.2 and 9.3*.

9.2 Normal target flows

The normal target flows downstream of the Yarrowonga Weir are 500 GL/month for October and November, and 400 GL/month for December.

9.3 Special target flows

Except for releases triggered under *sub-clause* 8.2, if three years pass with no flow of ≥ 660 GL/month in any one month from August to November, then the target flow is increased from 500 GL/month to 660 GL/month at Yarrawonga:

- (a) for October if a release starts in October; or
- (b) for November if a release starts in November (*see explanatory note 9.3*).

9.4 Reduction of target flows for fifth year drought

The targets for releases triggered under *sub-clause* 8.2 must be reduced if the flow in either October or November is less than 300 GL/month.

10. Amendment of release triggers and targets

These operating practices for making releases (*clauses* 8 and 9) can be varied from time to time to improve environmental outcomes:

- (a) in a given year by agreement between the Managers of the BMFEWA in consultation with Water Resource Managers in the States, and in consultation with the Operator, or
- (b) as a permanent change to a rule agreed between the States that is consistent with the Basin Plan and MDB Agreement. Any such permanent change will be subject to each States' legislative amendment process (*see explanatory note 10*).

11. Accounting for releases

11.1 Accounting for releases from the BMFEWA

Releases from the BMFEWA are calculated as the difference between the releases from Hume Dam to meet the target flows required under *clause* 9 and the releases that would have been made to meet all other requirements (*see explanatory note 11.1*).

11.2 Sharing of releases between the States

Until one State's ability to release is exhausted, releases are shared between the States in amounts which tend most to equalise the States' remaining Barmah-Millewa Forest environmental water accounts (including water that has been borrowed). When one State's ability to release is exhausted, water can continue to be released from the other State's account.

A State's ability to release water is exhausted if:

- (a) all its remaining account has been borrowed; or
- (b) its account is empty and its overdraw limit (being the maximum permitted volume for overdraw, as specified in *clause* 3) has been reached (*see explanatory note 11.2*).

11.3 Use of returning flows

BMFEWA water, leaving the forest and returning to the upper River Murray, is not protected as it passes downstream and can be used by NSW and Victoria according to the MDB Agreement.

12. Barmah-Millewa Forest EWA and special accounting

For the purposes of special accounting under the MDB Agreement, the BMFEWA will be treated in accordance with the Objectives and Outcomes document.

REFERENCES

MDBC (2006a), *Review of the Interim Operating Rules for the Barmah-Millewa Forest Environmental Water Allocation – Part 1*, Murray Darling Basin Commission Technical Report 2006/4, January 2006.

MDBC (2006b), *Review of the Interim Operating Rules for the Barmah-Millewa Forest Environmental Water Allocation – Part 2*, Murray Darling Basin Commission Technical Report 2006/7, April 2006.

MDBC (2006c), *Review of the Interim Operating Rules for the Barmah-Millewa Forest Environmental Water Allocation – Part 3.1*, Murray Darling Basin Commission Technical Report 2006/8, May 2006.

MDBC (2006d), *Review of the Interim Operating Rules for the Barmah-Millewa Forest Environmental Water Allocation – Part 4.1*, Murray Darling Basin Commission Technical Report 2006/10, June 2006.

MDBC (2006e), *Review of the Interim Operating Rules for the Barmah-Millewa Forest Environmental Water Allocation – Part 5.1*, Murray Darling Basin Commission Technical Report 2006/12, July 2006.

MDBC (2006f), *Revised Operating Rules for the Barmah-Millewa Forest Environmental Water Allocation (B-MF EWA)*, Murray Darling Basin Commission Technical Report 2006/13, July 2006.

DELWP (2015), *Business Case for operating rule change to the use of the Barmah-Millewa Forest Environmental Water Allocation – A Sustainable Diversion Limit Adjustment Measure*, Joint proposal prepared by the Department of Environment, Land, Water and Planning (Victoria) and the Office of Water (NSW)

DELWP (2017), *Addendum: Enhanced Barmah-Millewa Forest Environmental Water Allocation SDL Adjustment Proposal*, Addendum to the Business Case for operating rule change to the use of the Barmah-Millewa Forest Environmental Water Allocation – A Sustainable Diversion Limit Adjustment Measure

Appendix A – Explanatory Notes

Additional information required for some clauses of the BMFEWA Operating Rules is provided below as explanatory notes.

1.3 Lower-security allocation

Hume natural inflows are the inflow that would have occurred to Hume Reservoir but for the influence of the Dartmouth Dam and the Snowy Scheme, inflows to the Hume Reservoir are calculated by water balance and are adjusted for the net impact of the Snowy Scheme and the impoundments and losses in Dartmouth.

If the cumulative Hume natural inflows for the past 31 months at 1 August exceed 8988 GL, then a lower-security allocation of 50 GL is made. If the inflow is less than this trigger volume, then no allocation is made this month but it may be made in subsequent months if inflows increase and the corresponding trigger in those months is exceeded.

1.5 Allocation limit

The BMFEWA can contain a maximum of 700 GL at any time. This limits each State's share of the account to a maximum of 350 GL. When any new allocation is added to the account, the credited volume is limited to the volume that will bring each State's share of the account to 350 GL. Once an allocation has been made, water not credited because of the 350 GL limit is not available for topping up the BMFEWA later in the season.

3. Overdraw

Each State can independently overdraw a maximum of 50 GL irrespective of whether the other State is overdrawing. Provision of overdraw allows each State to bring their next year's allocation forward on the basis of a pro-rata share of reserve so that the BMFEWA can be released in the current year. For this to occur, a State must have sufficient water in reserve (excluding the BMFEWA and the mandatory reserve) for the BMFEWA to be overdrawn without affecting the current year's or next year's allocation for other users.

For NSW to have sufficient reserves, it must have made a General Security allocation of 100 per cent. For Victoria to have sufficient reserves for maximum overdraw, it must have made an allocation greater than 100 per cent of High Reliability Water Share.

Decisions to overdraw will be made by the relevant State member of Basin Officials Committee, informed by advice from the relevant State Managers of the BMFEWA and Water Resource Managers.

4. Evaporation loss

Evaporation losses from BMFEWA are calculated on the basis of pro-rata losses from the volume of the Hume and Dartmouth reservoirs at the end of the month.

The loss adjustment in any month will be the total net evaporation from the Hume and Dartmouth reservoirs divided by the total storage volume in Hume and Dartmouth and multiplied by "the water volume of the BMFEWA less the water borrowed less the water credited to the account in the current year".

For example, for a given month if Hume storage = 1600 GL, Dartmouth storage = 2200 GL, Hume evaporation loss = 18 GL, Dartmouth evaporation loss = 12 GL, BMFEWA = 550 GL (NSW = 240 GL, Victoria = 310 GL), Borrow from the BMFEWA = 20 GL (NSW = 13 GL,

Victoria = 7 GL) and the current year's allocation to the BMFEWA = 150 GL (75 GL from each State), then the BMFEWA losses for that month = $(550-20-150) \times (18+12) / (1600+2200) = 3$ GL.

This is calculated as follows:

$$BM_{Loss} = \frac{(Hume_{Loss} + Dartmouth_{Loss}) \times \text{Max}(0, BM_{EWA} - BM_{Borrow} - BM_{CurrentYearAllocation})}{(Hume_{Storage} + Dartmouth_{Storage})}$$

Evaporation losses are shared pro-rata between each State's share of the non-borrowed, carried-over components of the BMFEWA except when a State's share of the account is negative. A State's share of evaporation becomes nil when a State's share of the account is negative. For each State, pro-rata loss is calculated as follows:

$$BM_{Loss}(VIC) = BM_{Loss} \times \frac{(VIC_{EWA} - VIC_{Borrow} - VIC_{CurrentYearAllocation})}{\text{Max}(0.001, BM_{EWA} - BM_{Borrow} - BM_{CurrentYearAllocation})}$$

$$BM_{Loss}(NSW) = BM_{Loss} \times \frac{(NSW_{EWA} - NSW_{Borrow} - NSW_{CurrentYearAllocation})}{\text{Max}(0.001, BM_{EWA} - BM_{Borrow} - BM_{CurrentYearAllocation})}$$

In the above example, evaporation loss for NSW's share of the account would be $3 \times (240-13-75) / (550-20-150) = 3 \times 0.40 = 1.20$ GL and for Victorian share of the account would be $3 \times (310-7-75) / (550-20-150) = 3 \times 0.60 = 1.80$ GL.

5.1 Borrow and payback triggers

Decisions to borrow under this clause are expected to be made by the relevant State Water Resource Manager.

5.3 NSW exceptional circumstances

For the purpose of defining *NSW exceptional circumstances*, the four-year average November allocation for NSW is calculated as the sum of the November General Security allocation and the November carryover (expressed as a percentage) for the last three years plus the carryover for current year (expressed as a percentage) and projected General Security allocation in November for the current year, all divided by four. This can be mathematically expressed as follows:

$$\frac{\left[\sum_{i=1}^3 (\text{Carryover}_{Nov, year i} + \text{GenSecAllocation}_{Nov, year i}) + \text{Carryover}_{current year} + \text{ProjectedGenSecAllocation}_{Nov, current year} \right]}{4}$$

If this four-year average November allocation is less than 50 per cent, NSW is considered to be under exceptional circumstances for the purpose of managing the BMFEWA.

5.5 Borrowing in the fifth year of a drought

Prior to making a decision to borrow in the fifth year of a drought, the States must consult with each other and document why they decided to borrow or not borrow. The decision remains an individual State decision and is subject to any State specified obligations. For NSW, such State specified obligations are the Barmah-Millewa Allowance provisions in the relevant water sharing plan.

5.6 Borrowing for other environmental purposes

Prior to any borrowing for other environmental purposes, Managers of the BMFEWA must agree to the terms of the borrow and payback with the relevant State Water Resource Manager.

6.1 Priority of spills

Victoria and NSW have different entitlements that can be debited for physical spills from Hume Dam. Consequently, the priority order of spilling will differ slightly in each State. Each State's order of priority for physical spills may be specified in State instruments, however, these are expected to reflect previous commitments that eligible BMFEWA spills after any eligible River Murray Increased Flows and before any consumptive water eligible for spilling.

Based on current State arrangements, when Hume Reservoir physically spills, and after debits are made to any volumes of South Australia's Storage Right in accordance with the Agreement, the applicable State accounts will be debited for spills in the following order:

Priority of debits when Hume Reservoir spills	Applicable to	
	VIC	NSW
1. Any River Murray Increased Flows eligible for spill	Y	Y
2. NSW Murray Additional Allowance carried over from the previous year	N	Y
3. BMFEWA carried over from the previous year	Y	Y
4. In equal proportions, credits made in the current year to NSW Murray Additional Allowance and BMFEWA subject to the volume of BMFEWA being no less than the sum of 100 GL and any volumes borrowed for consumptive purposes in the previous year	Y*	Y
5. Any remaining water in either the NSW Murray Additional Allowance and BMFEWA subject to the volume of BMFEWA being no less than the sum of 100 GL and any volumes borrowed for consumptive purposes in the previous year	Y*	Y
6. Victorian accounts that are subject to spill	Y	N

**The NSW Murray Additional Allowance applies only to NSW, so for Victoria these spills are debited exclusively from the BMFEWA.*

6.2 Spillage limit

When BMFEWA spills following the Hume spills, a State's share of the BMFEWA spills down to a limit of 100 GL if that State has not borrowed any water in the previous year. If a State has borrowed in the previous year, the spillage limit for that State is increased by its maximum borrow until it reaches 200 GL.

For example, if a State has borrowed more than 100 GL in the previous year, this State's BMFEWA account spills down to 200 GL rather than 100 GL. If the other State did not borrow in the previous year, its share of the account will spill down to 100 GL.

9.3 Special target flows

Special target flow of 660 GL applies for one month only. The special target flow is not tried in November if an attempt was already made in October to achieve the special target, irrespective of the success or failure. However, if the flood is initiated in November, the special target is attempted in November.

In the fifth year of drought, special targets are often not met because of limited water resource availability due to a long dry spell. For this reason, the special target flow of 660 GL is not attempted during the fifth-year flooding.

10. Amendment of release triggers and targets

A permanent change to the release triggers and/or targets should involve a review of the long-term impacts, taking into account clause 10.28 of the Basin Plan ('No net reduction in the protection of planned environmental water') and clause 49 of the MDB Agreement ('Authority to be Informed of New Proposals'). All relevant Water Resource Plans need to be updated as per clause 10.09 of the Basin Plan ('Identification of planned environmental water and register of held environmental water').

It is acknowledged that any proposal for permanent change could not be implemented in Victoria unless it was able to be reflected in Bulk Entitlement instruments for which change is subject to a regulated process under the *Water Act 1989*.

Permanent changes should be incorporated into this document, and details of the changes added to the revision history in *Table 3, Appendix B*.

11.1 Accounting for releases from the BMFEWA

The following example illustrates how releases from the BMFEWA and other Directed Releases from Hume Dam are accounted, however more detailed information is included in the RMS Environmental Watering Manual and the Objectives and Outcomes document for the River Murray System.

Assume that a total volume of 300 GL was released from Hume Reservoir to meet the target flows at Yarrawonga for Barmah-Millewa flooding. If a release of 200 GL was required to meet the downstream requirements for irrigators, other environmental sites and SA supply, then releases from the BMFEWA (or another appropriate environmental account) would be $300\text{ GL} - 200\text{ GL} = 100\text{ GL}$. This is because the downstream demand of 200 GL would have been released anyway even if Forest flooding had not been initiated.

11.2 Sharing of releases between States

Examples given in *Table 2* illustrate the sharing of the BMFEWA releases between States.

Table 2: Examples of sharing of BMFEWA releases between States

	NSW (GL)	Victoria (GL)
Initial Account	300	200
Borrowed Water	100	0
Available Overdraw	0	50
Example 1: Sharing a release of 100 GL		
Releases	100	0
Final account	200	200
Example 2: Sharing a release of 300 GL		
Releases	200	100
Final account	100	100
Example 3: Sharing a release of 400 GL		
Releases	200	200
Final account	100	0
<i>Note: Borrowed water can not be released</i>		
Example 4: Sharing a release of 450 GL		
Releases	200	250
Final account	100	-50
<i>Note: States may have different overdraws</i>		

Note: Final account = Initial account - Releases

Appendix B – History of BMFEWA Operating Rules

2001 Interim Operating Rules

The 2001 interim operating rules are documented in Attachment A of MDBC (2006f). These rules were initially approved by Council meeting 30 (30 March 2001) for management of the Barmah-Millewa Forest Environmental Water Allocation (BMFEWA), then extended by Council meeting 40 (19 May 2006) until 30 June 2007.

2006 Operating Rules

Foreshadowed changes to Victoria's Sales Allocation required revised rules to be developed prior to expiration of the 2001 interim rules. To develop the 2006 rules, an inter-jurisdictional steering committee was set up to supervise substantial hydrological modelling work.

The 2006 rules are documented in MDBC (2006f), which also provides a summary of the modelling work undertaken. A more detailed description of the modelling can be found in MDBC (2006a), MDBC (2006b), MDBC (2006c), MDBC (2006d) and MDBC (2006e).

The main aim of revising the interim rules in 2006 was to preserve the rights of both the forest and water users while removing reference to Victoria's sales allocation and fully defining the exceptional circumstances under which NSW would have an improved water availability and reliability, especially during long drought periods.

Following are major changes that were incorporated into the 2006 rules:

- (a) exogenous trigger for allocation of lower security entitlement to BMFEWA,
- (b) definition of the exceptional circumstances under which the NSW General Security allocation limit for borrowing can be lifted from 30% to 50%,
- (c) applying evaporation losses only to carried over component of BMFEWA as a proportion of total loss in Hume and Dartmouth storages,
- (d) not restricting use of BMFEWA when some water has been borrowed,
- (e) independent State accounts of BMFEWA with rules to balance these accounts whenever possible (BMFEWA releases and spills no longer shared equally),
- (f) allowing each State to overdraw independently whenever it has sufficient reserve,
- (g) protection from spill of BMFEWA water borrowed by States in previous years, and
- (h) creation of new TLM reference condition and refinement of various other rules.

The revised rules were notionally endorsed by the inter-jurisdictional steering committee on 12 July 2006 and approved by the Murray-Darling Basin Ministerial Council on 25 May 2007.

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This revision to the operating rules was driven by the need to incorporate the sustainable diversion limit (SDL) adjustment measure operating rule change to the use of the Barmah-Millewa Forest Environment (DELWP, 2015), including enhancement to original proposal, as documented in the business case addendum (DELWP, 2017). In addition to this, the 2006 rules required further revision, as they did not reflect the 2013 Ministerial Council decision (meeting 9, agenda item 16, 15/11/13) to enable permanent changes to the BMFEWA release triggers and targets by agreement between NSW and Victoria (previously approval from the MDBC was required).

Given the extent of the changes required, this new document *New South Wales and Victorian Operating Rules for the Barmah-Millewa Forest Environmental Water Allocation 2021* was jointly prepared by the Victorian Department of Environment, Land, Water and Planning (DELWP) and NSW Department of Planning, Industry and Environment (DPIE), with input from the Murray-Darling Basin Authority (MDBA), Goulburn-Murray Water, the Victorian Environmental Water Holder (VEWH), Goulburn Broken Catchment Management Authority, and NSW Department of Planning, Industry and Environment – Environment, Energy and Science.

Revision history of New South Wales and Victorian Operating Rules for the Barmah-Millewa Forest Environmental Water Allocation

Table 3 provides a summary of revisions to this document. It should be updated with any future permanent changes to the rules, as agreed between NSW and Victoria.

Table 3: Document revision history

Date	Revision notes	Relevant section/clause	Reviewed by
2021	New document, jointly owned by NSW and Victoria	Updated: <ul style="list-style-type: none"> • Introduction • BMFEWA Operating Rules (details of updates below) Added: <ul style="list-style-type: none"> • Definitions • References • Appendix B – History of BMFEWA Operating Rules Removed: <ul style="list-style-type: none"> • Attachment A – Interim Operating Rules and Triggers Renamed: <ul style="list-style-type: none"> • Appendix A – Explanatory Notes (formerly ‘Appendix 1 – Explanatory Notes’) 	Victoria (Department of Environment, Land, Water and Planning, in consultation with the Murray-Darling Basin Authority, Victorian Environmental Water Holder, Goulburn Broken Catchment Management Authority and Goulburn-Murray Water) NSW (Department of Planning, Industry and Environment, in consultation with the Murray-Darling Basin Authority, NSW Department of Planning, Industry and Environment – Environment, Energy and Science)
	Changes to wording and format for clarification of existing rules	1. Allocation (formerly ‘Allocation of Entitlement’) <ul style="list-style-type: none"> 1.1 Credit of allocation to the BMFEWA (formerly ‘Annual allocation’) 1.2 High-security allocation 1.3 Lower-security allocation 1.4 Timing of lower-security allocation 1.5 Allocation limit 2. Carryover 3. Overdraw 4. Evaporation loss 5.2 Target allocation 5.3 NSW exceptional circumstances 5.4 Forest watering while borrowing 5.5 Borrowing in the fifth year of drought 6.3 Account imbalances 9.1 Target flows 11.2 Sharing of releases between the States	

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	Clause (c) added to reflect that 10 GL may be retained by the VEWH each year, as documented in Victoria’s Murray Flora and Fauna Bulk Entitlement	5.1 Borrow and payback triggers	
	Updated to reflect changes to decision-makers, including changes to reflect that rules are by bilateral agreement between NSW and Victoria, following 2013 Ministerial Council decision (meeting 9, agenda item 16, 15/11/13); and/or changes to legislation, including changed references	5.6 Borrowing for other environmental purposes 10. Amendment of release triggers and targets	
	Updated to reflect changes made since original rules were written, including proposed 2021 changes to Objectives and Outcomes (SO&O 4.1)	6.1 Priority of spills Explanatory Note 6.1 Priority of spills 11.1 Accounting for releases from the BMFEWA 11.3 Use of returning flows (new) 12. Barmah-Millewa Forest EWA and special accounting	
	Incorporation of SDL adjustment measure operating rule change project (refer DELWP (2015) and DELWP (2017))	8.1 Trigger flows 8.2 October release for a five-year drought 8.3 October release following a September flow 8.4 November release following an October flow 8.5 December release	
	Text added to explanatory notes to clarify decision makers/process and make reference to other documents for further information	Explanatory Note 3 Overdraw Explanatory Note 5.1 Borrow and payback triggers (new) Explanatory Note 5.5 Borrowing in fifth year of drought (new) Explanatory Note 5.6 Borrowing for other environmental purposes Explanatory Note 11.1 Accounting for releases from the BMFEWA	
	Wording changed to replace 30% assumption with “projected allocation in November”	Explanatory Note 5.3 NSW exceptional circumstances	
	Explanatory note added to reflect Basin Plan and Murray-Darling Basin Agreement requirements, and method for documentation of future permanent changes	Explanatory Note 10 Amendment of release triggers and targets (new)	

