

Lachlan evaporation reduction calculation

Fact Sheet

This fact sheet will assist in understanding the evaporation reduction calculation method used for general security licences in the water sharing plan (WSP) for Lachlan Regulated River Water Source 2016.

Overview

In January 2024, WaterNSW introduced a new way to determine how carryover evaporation deductions would be calculated for customers in the WSP for **Lachlan Regulated River Water Source 2016**. Carryover evaporation deductions **only apply to general security** licences.

Responding to feedback and changes to the WSP made in early October 2024, WaterNSW has made further system amendments to allow a new simplified method of calculation. The new calculation only applies once a year, around 30 days after the water year closes on **30 June**.

The percentage reduction is based on the net evaporation rate which is estimated by calculating the difference between evaporation and rainfall as shown:

Net evaporation = Evap – RF

RF = Observed rainfall at storage (i.e. Wyangala Dam)

Evap = Observed evaporation from storage

- The net evaporation rate is calculated once a quarter and the cumulative value of the four observed rates is applied to the final balance of your account as of 30 June.
 - The quarterly percentage is published on [WaterInsights](#).
- For example, if the following four rates were calculated for each quarter:

Quarter 1 (Jul-Sep) = 0.5%	Quarter 2 (Oct-Dec) = 1%	Quarter 3 (Jan-Mar) = 1.5%	Quarter 4 (Apr-Jun) = 1%
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Therefore, the cumulative reduction rate = 4% for the water year.

- Using the example above, a reduction of 4% would be debited from your final balance as of 30 June.

Understanding the evaporation reduction

The reduction rate is calculated quarterly. The intent of the evaporation reduction is to:

1. Reduce the volume of inactive water held in storage over time, and
2. return this volume to active users via available water determinations (AWDs), which
3. would be exempt from evaporative losses during the current water year.

Due to the unique accounting rules in the Lachlan Valley, the evaporation reduction percentage will be calculated based on total (valley-wide) balances at the end of each quarter and applied proportionally to each individual general security licence at the end of each water year.

The way forward

At the end of each water year, WaterNSW will use the new calculation method to debit your account for evaporation reduction. As the WSP rules changed in October 2024, the calculation for quarter one was made using the previous method, therefore only the percentages for quarter 2, 3 and 4 will be applied to your final balance for water year 24/25.

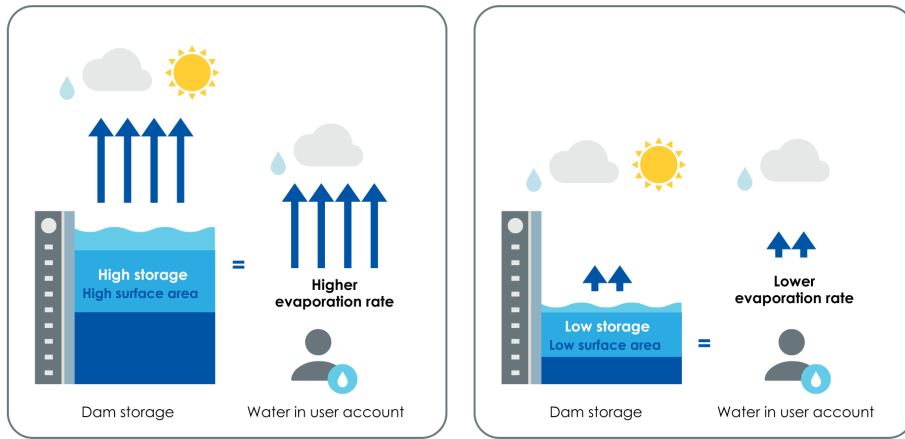
From 1 July 2025, the calculation will use all four quarters of the water year.

The calculation of the evaporation debit that will appear on the water account statement will be rounded up or down to 1 decimal point.

The evaporation debit will be applied to the volume of water in the 'hold' account first. If there is no water in the 'hold' account, it will then be applied to the volume of water in the 'take' account.

The evaporation reduction rate is calculated around 30 days after the end of each water year to allow for all water orders and other adjustments to be reconciled. Once calculated, the evaporation debit will be applied to the water account on the last day of the previous water year. At the same time, the evaporation reduction rate used will be uploaded to our publicly accessible [WaterInsights](#) platform along with how the evaporation reduction rate has been calculated. You can also view historic rates.

The evaporation reduction will fluctuate depending on the storage level and weather, as shown below:



What factors determine the evaporation volume and potential evaporation rate

Evaporation volume

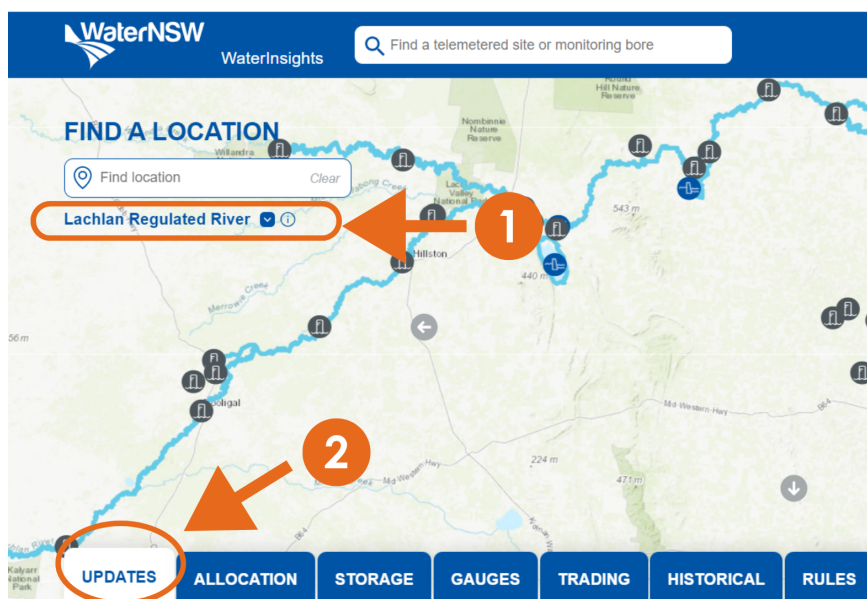
- daily evaporation rate
- storage level and surface area
- rainfall

Evaporation rate

- solar radiation and relative humidity
- wind speed
- vapour pressure
- ambient temperature

How to find information in WaterInsights

1. Select the water source 'Lachlan Regulated River'
2. Click on the 'Updates' tab
3. View information listed below



An example of this calculation and how it will appear in your account

The below image is an example of how the evaporation reduction will be applied and appear in your account. An evaporation transaction note will appear on the statement on the date of deduction, displaying volume of reduction.

This is your **available water**

This your **water account balance** from the previous water year that closed on 30 June

WaterNSW WATER ACCOUNT STATEMENT
Access Licence
 WAL No. [Redacted]
 LACHLAN REGULATED RIVER WATER SOURCE

Primary Holder: [Redacted] Customer Number: [Redacted]
 Address: [Redacted]

License Category: REGULATED RIVER (GENERAL SECURITY) Water Type: Regulated River
 Tenure: Perpetual Licence Status: CURRENT
 Reporting Period: 01-Jul-2024 to 30-Jun-2025 Water Account Status: OPEN
 Share Component: 100.0 unit shares Available Water: 24.0 ML

Account Parameters

A & B sub-account model	Applies	
	ML Per Share	Volume
Account Limit	2.0000	200.0 ML
Take Limit	1.0000	100.0 ML
AWD for Storage Spill		Undefined

Transactions

Date	Transaction Description	Transaction (ML)		Balance (ML)		Account
		Take sub-acc	Hold sub-acc	Take sub-acc	Hold sub-acc	
01-Jul-2024	Provisional Carry forward balance from previous water year			97.5	0.0	97.5
01-Jul-2024	AWD 0.0 ML per Share	0.0	0.0	97.5	0.0	97.5
01-Jul-2024	Assessed Meter Read for at Extraction Site			97.5	0.0	97.5
09-Jul-2024	AWD 0.06 ML per Share	2.5	3.5	100.0	3.5	103.5
23-Aug-2024	Orders for at Extraction Site	-36.5		63.5	3.5	67.0
29-Aug-2024	Allocation Assignment to SWC866850 711 Application No.	-25.0	-3.5	38.5	0.0	38.5
27-Sep-2024	Orders for at Extraction Site	-6.0		32.5	0.0	32.5
28-Sep-2024	Orders for at Extraction Site	-6.0		26.5	0.0	26.5
01-Oct-2024	Meter(s) read for at Extraction Site			26.5	0.0	26.5
01-Dec-2024	Meter(s) read for at Extraction Site			26.5	0.0	26.5
31-Dec-2024	Over-pumping for at Extraction Site	-1.5		25.0	0.0	25.0
01-Jan-2025	Meter(s) read for at Extraction Site			25.0	0.0	25.0
30-Jun-2025	Evaporation Reduction 4.0 %	-1.0	0.0	24.0	0.0	24.0

Available Water: 24.0 ML

Allocation Totals

AWD Volume	6.0 ML	Use Limits In	N/A
Allocation Assignments In	0.0 ML	Use Limits Out	N/A
Allocation Assignments Out	28.5 ML	Forfeits	1.4 ML
Miscellaneous Transfers In	0.0 ML	Penalties	0.0 ML
Miscellaneous Transfers Out	0.0 ML	Potential Carryover	24.0 ML

WaterNSW WATER ACCOUNT STATEMENT
Access Licence
 WAI No. [Redacted]
 LACHLAN REGULATED RIVER WATER SOURCE

Primary Holder: [Redacted] Customer Number: [Redacted]
 Address: [Redacted]

License Category: REGULATED RIVER (GENERAL SECURITY) Water Type: Regulated River
 Tenure: Perpetual Licence Status: CURRENT
 Reporting Period: 01-Jul-2024 to 30-Jun-2025 Water Account Status: OPEN
 Share Component: 100.0 unit shares Available Water: 32.0 ML

Account Parameters

A & B sub-account model	Applies	
	ML Per Share	Volume
Account Limit	2.0000	200.0 ML
Take Limit	1.0000	100.0 ML
AWD for Storage Spill		Undefined

Transactions

Date	Transaction Description	Transaction (ML)		Balance (ML)		Account
		Take sub-acc	Hold sub-acc	Take sub-acc	Hold sub-acc	
01-Jul-2024	Carry forward balance from previous water year			41.0	0.0	41.0
01-Jul-2024	AWD 0.0 ML per Share	0.0	0.0	41.0	0.0	41.0
08-Jul-2024	AWD 0.06 ML per Share	6.0	0.0	47.0	0.0	47.0
29-Aug-2024	Allocation Assignment from SWC866850 711 Application No.	25.0	3.5	72.0	3.5	75.5
02-Jan-2025	Over-pumping for at Extraction Site	-20.0		52.0	3.5	55.5
03-Jan-2025	Meter(s) read for at Extraction Site			52.0	3.5	55.5
09-Jan-2025	Orders for at Extraction Site	-20.0		32.0	3.5	35.5
30-Jun-2025	Evaporation Reduction 4.0 %	0.0	-1.4	32.0	2.1	34.1

Available Water: 32.0 ML

Allocation Totals

AWD Volume	6.0 ML	Use Limits In	N/A
Allocation Assignments In	28.5 ML	Use Limits Out	N/A
Allocation Assignments Out	0.0 ML	Forfeits	1.4 ML
Miscellaneous Transfers In	0.0 ML	Penalties	0.0 ML
Miscellaneous Transfers Out	0.0 ML	Potential Carryover	34.1 ML

Share Component Totals

Share Component In	0.0 unit shares
Share Component Out	0.0 unit shares

This is the **cumulative reduction rate**

This is your **available water determination (AWD)**

Notes

***Design net evaporation:** This is used in resource assessment indicating possible maximum design net evaporation rate in each month based on observed long term record of data.

****Take and hold accounts:** A general security licence in the Lachlan valley can hold up to 2ML per share or 200%, however the usage for the water year is limited by a 'take limit', which is set by the NSW DCCEEW annually on July 1. To separate what a water user can use within a year, there are two sub-accounts within a general security licence. The 'take' sub-account is the water allocation that may be taken by the licence holder in the current water year. The 'hold' sub-account is the water allocation that is held until 1st July of the following water year.

Need help?

If you need more information, please contact our Customer Service Centre on [1300 662 077](tel:1300662077), Monday to Friday between 8am-5pm or email Customer.Helpdesk@waternsw.com.au