

Imposing restrictions on carryover water in regulated rivers

Carryover is allocated water that is unused during water one year and is available to be taken in the following year. This fact sheet outlines the considerations for restricting water in carryover accounts, and the principles for returning water to accounts when conditions improve.

Resource assessments

Allocations in NSW regulated river systems are calculated assuming some small future inflow. This is normally the lowest recorded cumulative inflows as at the commencement of the first water sharing plan (2004 for most regulated rivers). Allocations are set so that under a repeat of this low inflow sequence, there should be sufficient water in storages during the year to meet high-priority needs.

However, during extremely dry periods there can be a shortfall in available water resources when the assumed inflows do not happen. This means there is not enough water in storage to run the river and meet all commitments. In this case, restrictions on accessing carryover water may be applied.



Figure 1. Example of on-farm storage

Availability of carryover water

Carryover refers to part of a water allocation that remains unused at the end of a water year and is available in the account for use in the following year. Water sharing plans, which set the rules for each water source, define the amount of unused water in accounts that can be carried over. Carryover is typically only available to general security access licences.

The NSW *Water Management Act 2000* specifies that if water allocations have to be diminished, the water allocations of a higher-priority licence are to be diminished at a lesser rate than a lower-priority licence.

We can reduce allocations to higher-priority licences, such as town water, domestic and stock and high security, provided they are reduced less than lower-priority licences such as general security allocations.

Water sharing plans require that allocations made for high-security access licences take into account a range of other requirements, including water remaining in accounts (i.e. carryover).

Under most conditions water users can expect to have access to their full carryover at the beginning of the water year.

Applying restrictions

Any restrictions we place on access to carryover water are very carefully considered.

Allocations are made conservatively, and we operate river systems efficiently to defer the need to restrict access to previously allocated water. If an emerging water shortage (drought stage 2) occurs, we will first consider any available 'operational measures', including grouping deliveries and running the river at lower flows, to improve delivery efficiency.

However, under extremely dry conditions when a water source is experiencing a severe water shortage (drought stage 3) or critical water shortage (drought stage 4), restrictions may be needed to preserve existing supplies for critical needs.

Restrictions in northern inland NSW

Inflows during the period 2017 to 2019 in most of the northern inland NSW valleys were significantly lower than during the previous drought on record. Because of this, we introduced reduced allocations to higher-priority entitlements on 1 July 2019, and access to general security carryover has been temporarily restricted in a number of valleys.

The restrictions on carryover range from full suspension in the Lower Namoi, Macquarie and Lower Darling, to partial suspensions of 50% in the Border Rivers, 43% in the Lachlan and 25% in the Upper Namoi. The restricted proportion depends on the size of the shortfall, physical water delivery considerations, and the amount of carryover in accounts relative to high security entitlements. We also considered the circumstances and views of local stakeholders.

Considerations in southern inland NSW

For many years in the Murray and Murrumbidgee valleys, reliable winter/spring inflows and the annual releases from the Snowy Scheme were sufficient to underwrite delivery of the next year's high-priority needs. However, successive multi-year droughts since the early 2000s have shown that this cannot always be guaranteed.

The resource assessment still adopts the lowest recorded cumulative inflows as at 2004. However, when extremely dry conditions occur, we will need to set aside more water in the current year to meet higher-priority needs in the following year.

Persistent dry conditions since 2017 have meant that restrictions on access to carryover in the NSW Murray and Murrumbidgee regulated river were an emerging risk in the lead-up to the 2018–19 and 2019–20 water years. Restrictions were narrowly avoided following small inflows, including just prior to 1 July 2019.

However, a continuation of dry conditions could see restrictions being considered again in 2020–21. While we will make every effort to avoid restrictions, lack of inflows could result in the need to apportion the impact of any shortfall between entitlements, particularly high security, general security and conveyance access licences.

General principles

There is no set formula for apportioning restrictions to carryover compared to new high security allocations. However, the following general principles apply:

- In all but severe or critical water shortages (stages 3 and 4 under the NSW Extreme Events Policy), all carryover water should be made available.
- If there is insufficient water available to provide full high security allocations, then these will be restricted and access to general security carryover water will be restricted to the same or greater extent.
- Carryover accounts will be fully suspended if restricted high security allocations cannot be met from storage and forecast inflows.
- Suspended carryover water will be preserved in a drought holding account. This water will begin to be returned to active accounts for delivery when inflows improve sufficiently and storage volumes allow.
- Consideration will be made for the delivery losses associated with high-priority licences located within an irrigation district, and this will be reflected in allocations to conveyance licences.

Further information

For further information on carryover restrictions in regulated rivers, contact Brian Graham, Manager Water Allocations at Department of Planning, Industry and Environment on brian.graham@dpi.nsw.gov.au

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