

16 August 2021

NSW Murray and Lower Darling

Water allocation update

There is a 4% increase to general security water allocations in the NSW Murray regulated river water source. This brings the total cumulative allocation to general security licences in the NSW Murray to 30% of entitlement for this water year. All **Lower Darling** regulated river entitlements, including general security, received their full allocation (100%) for this water year on 1 July 2021.

Wet conditions in July have increased the NSW Murray resources by approximately 190,000 megalitres (ML) since the last assessment. Hume Dam is near full capacity, with small precautionary pre-releases having to be made for airspace ahead of forecast rainfall. Further resource improvements will need to come from other parts of the system or from Hume once regulated releases provide airspace to capture new inflows.

Although Lake Victoria is re-regulating as much water as possible, high inflows from tributaries continue to provide unregulated flow conditions in the Murray. This means that Supplementary access continues to be available for NSW Murray water users. Details of when and where supplementary access applies can be found at: waterinsights.waternsw.com.au/

The Barmah Millewa Environmental Water Allowance (BMEWA) was fully borrowed on 1 July 2021 in accordance with the water sharing plan. Since general security allocation has now reached 30% of entitlement, repayment of the borrowed water has commenced. Further resource improvements will now be used to pay back the BMEWA borrow until it is fully repaid after which allocation to general security entitlements can resume. Currently, 113 gegalitres (GL) of the BMEWA 350 GL borrow has repaid, therefore 237 GL remains borrowed.

It should be noted that some of the BMEWA is spillable commensurate with physical spill or pre-release from Hume Dam. It means that the full repayment of 350 GL may not be necessary. Payback details will be provided in the next statement once the August spill volumes are known.

Inflows into the Menindee Lakes system continue to accrue, with the current combined storage around 1,270,000 ML (as of 13 August 2021). It is estimated that there is enough upstream flow to effectively fill the Menindee Lakes System before summer. As the storage increases, and resource availability improves, Additional Dilution Flow releases, some 3,000 ML/day, will be required in accordance with the Murray Darling Basin Agreement.

2021-22	High Security	General Security	Average Carryover
Murray	97%	30%	43%
Lower Darling	100%	100%#	2%

Availability of allocation on individual licences is subject to account limits as per the rules in the water sharing plan

Murray storage levels (as at 13 August 2021)*

- Dartmouth Dam is 72% full – rising – holding 2,770,000 ML.
- Hume Dam is 90% full – rising – holding 2,710,000 ML.
- Lake Victoria is 89% full – rising – holding 605,000 ML.

* The NSW share of this water is approximately 35%, 49% and 32% for these storages respectively, or 41% in total (averaged across all three storages).

State sharing of the Murray resource

The bulk accounts assessment indicates that 7,550 gigalitres (GL) of total shared Murray resource is available in the extreme dry (99th percentile) case, of which about 2,690 GL is needed to run the system (incorporating South Australia's 'operational' [dilution and loss] entitlement and any shared resource which cannot be regulated).

The NSW share of the regulated resource is 2,130 GL, based on rules in the Murray-Darling Basin Agreement. Following adjustments including South Australia's non-dilution entitlement, trade, tributary inflows and usage to date, the assessment results in a volume of **Murray resource for NSW to allocate of 1,900 GL**.

The bulk resource assessed by the MDBA includes supplementary and uncontrolled flow diversions in the NSW usage. Therefore, the assessed share of the Murray resource must be reduced by this unregulated use to account for water used from unregulated water sources. The unregulated water usage does not adversely impact regulated allocations. In this assessment, the notional resource of 1,910 GL has been adjusted down to an actual resource of 1,900 GL.

Climatic outlook

The Bureau of Meteorology's seasonal outlook for September to November indicates that rainfall is highly likely to be above average across the catchment. Temperatures are likely to be near average or warmer than average.

The Bureau's El Niño-Southern Oscillation indicator remains inactive. Models indicate that negative Indian Ocean Dipole conditions have developed, which increases the chances of above average rainfall in winter-spring.

For further details at: www.bom.gov.au/climate/outlooks/#/overview/summary

Trade

In the Murray, trade across the Barmah choke remains restricted to '**no net trade downstream**'. Downstream trade opens to the extent of the volume of any upstream trade. Water users are advised to monitor the Murray-Darling Basin Authority (MDBA) website (www.mdba.gov.au) for information about the trade balance and status of trade across the Barmah choke.

Temporary trade between the Lower Darling and the Murray is now open and will likely remain open until the system next falls below 480 GL. Trade within the Lower Darling regulated river water source remains open.

The normal operating range for the Murrumbidgee IVT account is between 0 GL and 100 GL. Trade **out** of the Murrumbidgee is **closed**, while trade **into** the Murrumbidgee Valley is **open** (as of 13 August 2021). Water users should monitor the WaterNSW website (www.waternsw.com.au) for daily information about the IVT account balance, the status of trade, and other information. The IVT account balance at the end of the previous water year has carried forward into this water year.

Next announcement

The next water allocation statement will be published on **Wednesday 1 September 2021**. It will be a short statement, updating any improvements in resource and allocations.

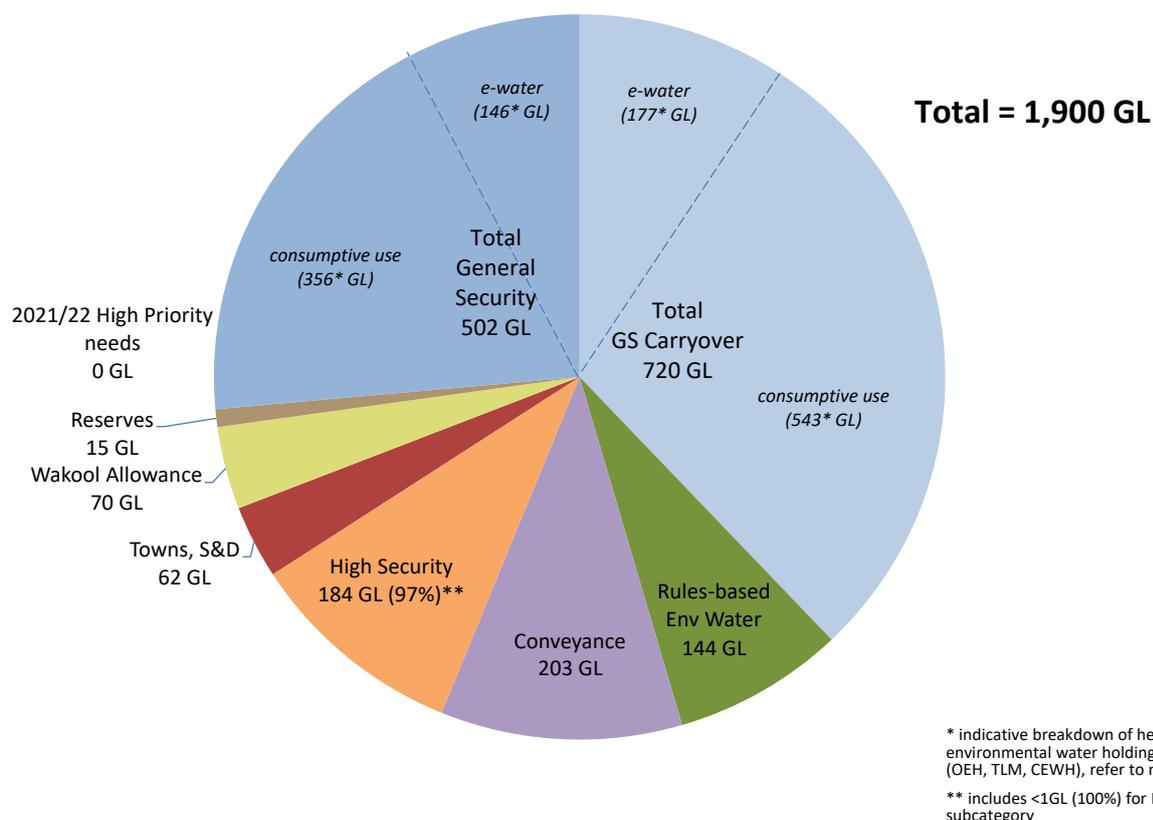
The next comprehensive statement, including likely improvements in general security allocations under various inflow scenarios, will be published on Wednesday 15 September 2021.

NSW Murray resource assessment data sheet

Resource Distribution* (16 August) for 2021-22	Volume (GL)
Total Available Resource ⁽¹⁾	1,900
<i>less</i>	
Carryover ^{(2), (8)}	720
Rules based Environmental Water ⁽³⁾	144
Towns, Stock, Domestic ⁽⁴⁾	62 (100%)
Announced High Security subcategory ⁽⁴⁾	<1 (100%)
Announced High Security ⁽⁴⁾	184 (97%)
Conveyance ⁽⁵⁾	203 (62%)
Wakool Allowance ⁽⁶⁾	70
Reserves ⁽⁷⁾	15
Announced General Security ⁽⁸⁾	502 (30%)
Year 2 (2022-23) high priority needs ⁽⁹⁾	0

*See notes below

NSW Murray resource distribution 2021-22 – 16 August 2021



Data sheet notes

- (1) Total available resource - NSW's state share of active storage volume (Hume, Dartmouth, Menindee and Lake Victoria) as assessed and accounted for under the Murray-Darling Basin Agreement at the time of the assessment plus any usable flows in transit plus assumed (99%ile) inflows for the rest of the year plus Snowy Hydro's assured Required Annual Release (RAR) (including any flex (pre-release) from the prior year), as well as estimated usage to date. Snowy Hydro's M1 releases to date for this water year (2021-22) is estimated to be about 410 GL. NSW is in Special Accounting with South Australia (SA) as of 1 August 2021. The details of Special Accounting can be found in the MDB Agreement clauses 123-129. Special Accounting is triggered when forecasts indicate that NSW will have an end of year reserve of less than 1,250 GL.
- (2) Carryover – NSW Murray General Security water users can carryover a maximum account balance of 50% of their entitlement into the following water year. The account limit is 110% of entitlement, meaning that account credits from allocation and/or carryover cannot exceed 110% of entitlement in any water year. The limit does not include allocation trade.
- (3) Primarily rules-based planned environmental water (PEW) – water required to be set aside to provide for riverine environments, as per the Water Sharing Plan and other inter-jurisdictional agreements. In the NSW Murray this includes the Murray Additional Allowance (MAA) (about 6GL) and the Barmah-Millewa Allowance (B-MA) (113 GL – has been partially paid back since GS allocations have reached 30%, borrowed balance is 237 GL). It also includes River Murray Increased Flows (RMIF) in Hume, accrued as part of the Snowy Water Initiative (currently 25 GL). The total commitments to B-MA and RMIF will decrease over the water year as they are released from Hume for use. Excludes 'licence-based' environmental water, known as held environmental water (HEW).
- (4) The *Water Sharing Plan for the New South Wales Murray and Lower Darling Regulated Rivers Water Sources 2016* has subcategories of High Security licences in the Murray Water Source. High Security subcategory licences under *Part 7 Division 2 Clause 46(2)* that are present in the Murray include community and education, research, and town water supply. At the commencement of each water year, these licences are to receive 100% allocation, while remaining High Security licences are to receive 97% allocation. For the purposes of this water allocation statement, the High Security town water supply allocation volume has been grouped as "Towns, S&D".
- (5) Conveyance entitlement – a category of access licence originally issued to Irrigation Corporations to facilitate delivery of water through their channel systems. Allocation to this category is prescribed in the Water Sharing Plan

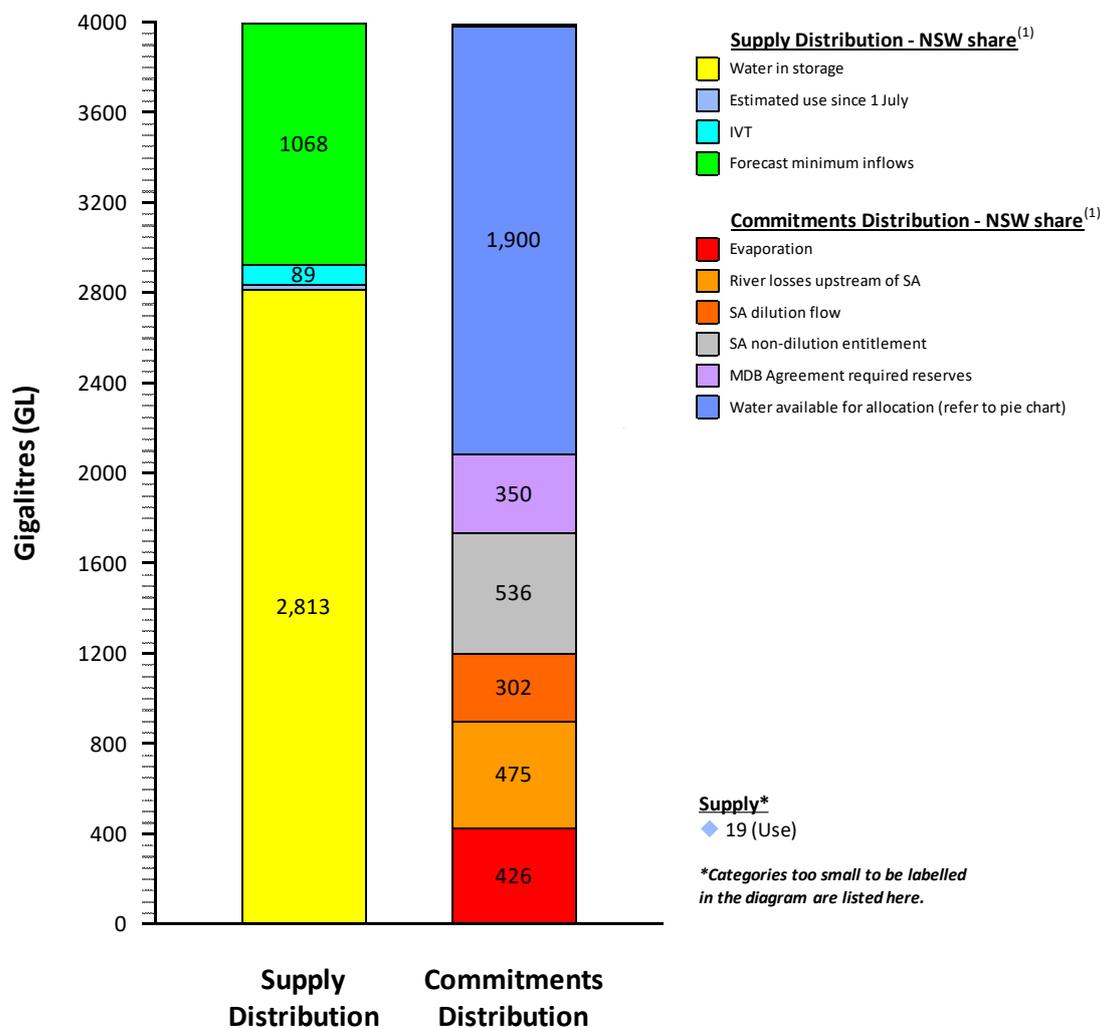
Water Allocation Statement

Water availability and allocation update



- and is a function of current High and General Security allocation.
- (6) Wakool Allowance – a conveyance volume necessary for NSW to operate the Edward-Wakool system. Typically up to 70 GL.
 - (7) Reserves – required primarily under statutory plans, up to 61GL; set aside for critical human needs in accordance with Clause 11.03 of the Basin Plan.
 - (8) Held environmental water (HEW) – water administered by environmental water holders is reported here, with the associated portions of general security allocation and carryover also identified in the above pie chart. This reporting of held environmental water is limited to only NSW entitlements, reporting of credits to accounts (not usage or trade), and estimated to be 146 GL of GS, 24 GL of HS, 31 GL of conveyance allocation and 177 GL of GS carryover. These entitlements are held and/or managed either singly or jointly by various environmental holder groups, including the NSW Department of Planning, Industry and Environment (DPIE), The Living Murray (TLM) and the Commonwealth Environmental Water Holder (CEWH). Details on environmental holdings can be found on individual agency websites.
 - (9) 2022-2023 high priority needs on 1 July 2022 - volume set aside to cover high priority needs on 1 July 2022, for 'Year 2'.

NSW Murray water balance – 16 August 2021



Water balance notes:

Water Allocation Statement



Water availability and allocation update

- (1) Supply and Commitments Distribution – The volumes in the categories shown are only those relating to NSW's share of the resource, at the end of the preceding month. The categories include the following:
- **Water in storage:** Volumes in the dams at the end of the previous month. (Excludes water in storage unavailable to NSW under the water sharing arrangements of the Murray Darling Basin Agreement).
 - **Estimated use since 1 July:** Estimated NSW usage to-date, reconciled periodically with hydrographic updates (meter readings).
 - **Forecast inflows:** NSW's share of forecast inflows into the River Murray System based on assumed extremely dry future conditions (includes Snowy Hydro's guaranteed inflows for the water year, and Murrumbidgee end of system flows).
 - **VT:** Total tributary system water bought by Murray system users that is yet to be delivered.
 - **Evaporation:** Water set aside for evaporation for the remainder of the year. This reduces as the year progresses.
 - **River losses upstream of SA:** Water budgeted for transmission losses from the River Murray system upstream of the South Australian border for the remainder of the year. Generally reduces as the water year progresses.
 - **SA non-dilution entitlement:** Water to supply South Australia's entitlement flow, as required under the Murray-Darling Basin (MDB) Agreement. Generally reduces as water year progresses.
 - **SA dilution flow:** Water to provide South Australia's dilution and conveyance component of flow, as required under the MDB Agreement. Reduces as the year progresses, unless Additional Dilution Flow (ADF) is triggered.
 - **MDB Agreement required reserves:** Includes conveyance reserve and minimum reserve to be set aside for use in the next water year, as required by the MDB Agreement in clause 102D and 103, respectively.
 - **Water available for allocation:** NSW's bulk share of the resource that can be assigned to NSW Murray entitlement holders based on the Water Sharing Plan. Allocation of this volume is provided in the above table and pie chart.

Comparison with 2020-21

Item	Mid-August 2020 (GL)	Mid-August 2021 (GL)	Comments
NSW Share of total resources	1,020	1,900	Wet conditions are providing a higher resource. There are no shortfalls.
less			
Carryover	350	720	Higher carryover in 21/22 due to higher allocations in 20/21.
Environmental	7	144	113 GL of the BMEWA has been paid back in 2021.
Towns, Stock, Domestic	68	62	Approximately 6 GL of temporary critical conveyance licences are no longer required in 2021/22 due to improved conditions.
Conveyance	175	203	Commensurate with general security allocations.
Wakool Loss	70	70	
High Security	184	184	
General Security	134	502	30% allocation in 2021/22 vs 8% in 2020/21.
Reserves	32	15	Less reserve necessary - favourable climatic outlooks

Chances of improvement

The chances of improved general security allocations, based on a repeat of historical inflows, are provided in the following table under a variety of conditions. The forecast is based on all available historical data, which is appropriate given the seasonal outlook and gives a better outlook than

using just the driest years on record (dry tercile). To be clear, the analysis considers historical data and does not explicitly consider the likely wet conditions in the seasonal rainfall forecast.

It is important to note that these estimates are indicative improvements only and are not guaranteed allocations. Estimates may change based on weather conditions, water management decisions and river operations. This means water users should use this information with caution and at their own risk.

Forecast general security allocations (%)

(Any carryover water can be added to these indicative allocations)

Repeat of historical inflow conditions	1 Oct 2021	1 Feb 2022
99 chances in 100 (extreme) (99%)	30%*	30%*
9 chances in 10 (very dry) (90%)	30%*	30%*
3 chances in 4 (dry) (75%)	30%*	42%#
1 chance in 2 (mean) (50%)	30%*	61%# ^

*Payback of Barmah Millewa EWA commences at 30% GS allocations.

#Payback of Barmah Millewa EWA complete. This is conservatively based on assumed full (350GL) pay back.

^ General security account limits mean that a relatively small improvement above 50% inflow conditions by 1 February is required to reach 100% allocation later in February.

Note 1: Estimated values indicative only, not guaranteed and subject to change based on actual events unfolding.

Note 2: Statistical values reflect NSW share of inflows, not whole of system inflows.

Note 3: Forecast assumes 43% general security carryover.

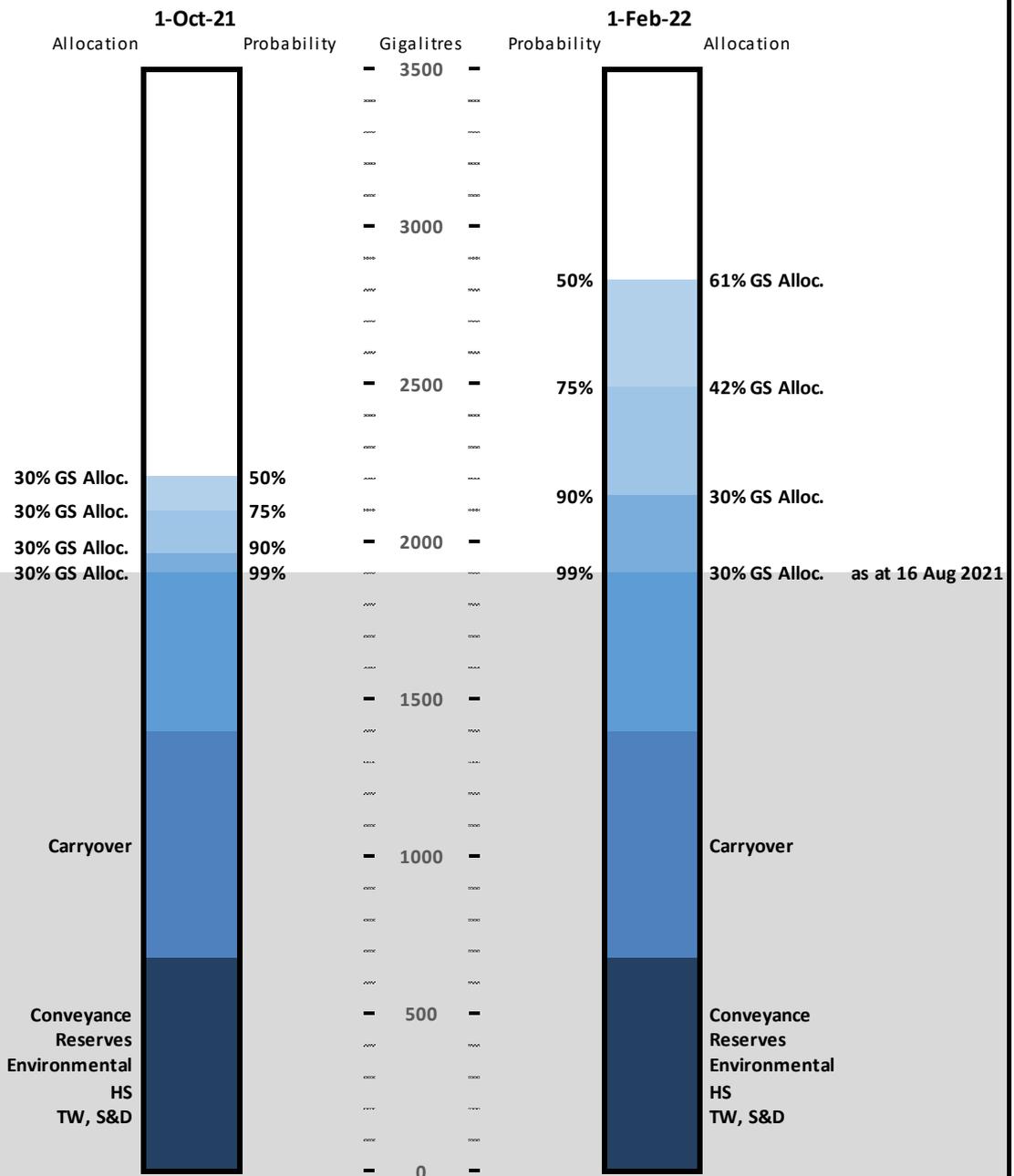
Note 4: Forecast incorporates Murrumbidgee regulated end of system flows.

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NSW Murray Valley Outlook

as at 16 August 2021



This figure provides indicative improvements in general security allocations for two forecast snapshots, 1 October 2021 and 1 February 2022. The allocation improvements are indicative only, and do not constitute guaranteed allocations. As of 16 August 2021, General Security allocation is at 30 per cent, and under 99% inflow conditions, will remain the same for the rest of the water year.