

15 April 2020

## Murrumbidgee Valley

### Water allocation update

**General security** allocations in the Murrumbidgee regulated river system remain **unchanged at six per cent of entitlement**.

Recent rainfall has resulted in a minor increase of water availability in the Murrumbidgee Valley. This small improvement has been used to secure next year's high priority commitments, including full access to carryover and opening allocations to conveyance entitlements. Assurance of next year's high priority commitments is contingent upon minimum inflows for the remainder of the year.

This statement provides an updated outlook for 2020-21 further below.

2019-20	High Security	General Security	Average Carryover	Drought Stage
Murrumbidgee	95%	6%	8%	 Stage 1

### Drought stage

The **Murrumbidgee Valley** regulated river water source is in Stage 1 drought criticality, meaning all allocated water can be delivered under normal regulated river operations. Despite some promising signs in the weather, resources remain low; therefore, conditions are being monitored and assessed closely to ensure that high priority needs remain fully deliverable in 2020-21.

Further information on critical valleys in drought can be found at:

[www.industry.nsw.gov.au/water/allocations-availability/droughts-floods/drought-update/critical-valleys-in-drought](http://www.industry.nsw.gov.au/water/allocations-availability/droughts-floods/drought-update/critical-valleys-in-drought)

#### Storage levels (as at 13 April 2020)

- Blowering Dam is 45 per cent full – steady – holding 745,000 megalitres (ML).
- Burrinjuck Dam is 37 per cent full – steady – holding 386,000 ML.

### Climatic outlook

The Bureau of Meteorology's seasonal outlook for May to July indicates that conditions are likely to be wetter than average across the catchment. Temperatures are likely to be average to warmer than average.

The Bureau indicates that the El Niño-Southern Oscillation (ENSO) and the Indian Ocean Dipole (IOD) are neutral and will likely remain neutral into winter.

For further details: [www.bom.gov.au/climate/outlooks/#/overview/summary](http://www.bom.gov.au/climate/outlooks/#/overview/summary)

## Trade

Trade **out, into and within** the Murrumbidgee Valley is open (as of 9 April 2020). Water users are encouraged to monitor the WaterNSW website ([www.waternsw.com.au](http://www.waternsw.com.au)) for information about trade opportunities and processes, and particularly the upcoming seasonal closing dates for trade.

## Next announcement

The next water allocation statement will be published on **Friday 1 May 2020**. It will be an abbreviated statement to confirm conditions and keep water users updated.

The **final water allocation statement for the water year will be issued on Friday 15 May 2020**. It will provide the best estimates of expected opening year (1 July 2020) water availability and allocations, and the likelihood of improvement under different inflow scenarios.

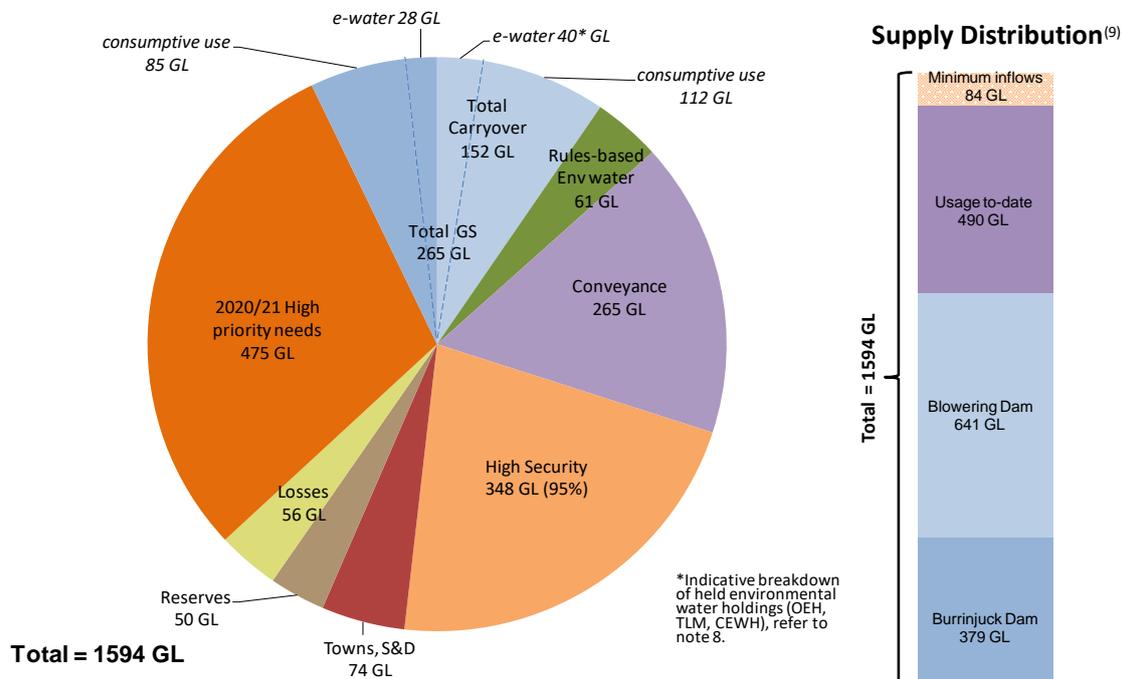
The availability outlook for next year aims to help water users with their end of year water management decisions. Forecast conditions are best estimates only and not guaranteed water availability. They should be used with caution, particularly when projecting many months ahead.

## Murrumbidgee resource assessment data sheet

Resource Distribution (15 April) for 2019-20	Volume (GL)
Total Available Resource <sup>(1)</sup>	1,594
<b>less</b>	
Carryover (GS and Conveyance) <sup>(8)</sup>	152
Rules based Environmental Water <sup>(2)</sup>	61
Towns, Stock, Domestic	74 (100%)
Reserves <sup>(3)</sup>	50
Conveyance <sup>(4)</sup>	265
Announced High Security	348 (95%)
Losses (transmission, evaporation, operational) <sup>(5)</sup>	56
Late Season Inflows <sup>(6)</sup>	0
Announced General Security <sup>(8)</sup>	113 (6%)
Future (2020/21) high priority needs <sup>(7)</sup>	475

**\*See notes below.**

### Murrumbidgee resource distribution 2019-20 – 15 April 2020



#### Data sheet notes

- 1) Total available resource – total active storage volume (Blowering & Burrinjuck Dams, excluding any Snowy flex) at the day of assessment plus any usable flows in transit plus drought inflows for 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 net Jounama Release for this year (2019-20) is estimated to be about 880GL (includes montane release).
- 2) Rules-based environmental water – water required to be set aside under water sharing plans to provide for riverine environments. Includes end-of-system flow requirements (currently 30 GL) and environmental water allowances (EWA1 = 0 GL, EWA2 = 31 GL, EWA3 = 0 GL). Excludes ‘licence-based’ environmental water also known as held environmental water (HEW). This total volume typically reduces as water is used during the year.
- 3) Reserves – required primarily under statutory plans, and mainly used for emergency purposes and critical needs. Includes 25GL per dam as an operational reserve, and Provisional Storage Volumes (PSV1 = nil, PSV2 = nil).
- 4) 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 plans and is a function of high and general security allocations. Conveyance licences in the Murrumbidgee valley can also carryover 30% of their entitlement.
- 5) Losses – is the best estimate of the volume required to run the river under dry conditions to meet demands for the remainder of the water year. This includes storage evaporation, transmission losses and operational loss. This estimate is updated monthly.
- 6) Late Season Inflows – is the estimated inflow volume that will arrive into storage late in the year, after the peak irrigation demand season (usually post-February). This water cannot be allocated to water users at the start of the water-year, as it can create an expectation that the water is available for delivery before it is captured in storage.
- 7) Future high priority needs – it is required to look ahead to next water year (2020/21) to ensure there is enough resource available to meet high priority commitments on 1 July 2020. This volume is estimated to be about 475 GL. This value changes from month to month based on the complex interaction of climatic factors, projected historical inflow sequence including Snowy Hydro Required Annual Releases forecast, usage/potential carryover, and actual transmission and operational losses as the water year unfolds.
- 8) Held environmental water (HEW) – licenced 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 the total credited to accounts (not usage) and is estimated to be 28GL of GS, 15 GL of HS, 43 GL of conveyance allocation and 40 GL of GS carryover. These entitlements are held and/or managed either singly or jointly by various environmental holder groups, including the NSW Office of Environment and Heritage (OEH), The Living Murray (TLM) and the Commonwealth Environmental Water Holder (CEWH). Details on e-water holdings can be found on individual agency websites.
- 9) Supply Distribution – the distribution of supply includes volumes at the time of the assessment for the following categories: active volumes in the dams, indicative usage to-date (may be estimates prior to reconciliation with hydrographic updates) and assumed minimum future inflows (includes Snowy Hydro’s guaranteed inflows for the water year, and late season inflows).

## Outlook for 2020-21

### Key information

- This outlook for 1 July 2020 water allocation is conservatively based on assumed extreme dry (99%) inflows for the remainder of this water year and similarly through 2020/21. Indicative forecast general security allocations for September and November 2020 under a range of possible inflow scenarios are provided to assist water users to manage risk and plan.
- For context, the Murrumbidgee Valley has experienced about 95<sup>th</sup> percentile conditions this year, that is, five years out of every 100 years of historical record experience drier conditions.
- The forecast information is not guaranteed and should be used at one's own risk. It will be updated in the mid-May water allocation statement.
- Although extreme dry conditions are assumed to continue, heavy rainfall and significant inflows can occur at any time and allocations will be promptly adjusted accordingly.
- It is difficult to reliably predict end-of-year carryover, as it is highly dependent on weather conditions and individual decisions by water users. Nevertheless, it is estimated that the Murrumbidgee valley carryover will be around 8 per cent of entitlement (some 150 GL).
- In the Murrumbidgee water source, general security and conveyance licences can carry over water up to a maximum of 30 per cent of entitlement and the account limit (allocation plus carryover) is 100 per cent of entitlement.
- Access to inter-valley trade in 2020-21 is dependent on the balance of the IVT account. The 30 June 2020 balance will carry forward unchanged to 1 July 2020.
- Once the commencing allocations are announced on 1 July 2020, regular assessments will be undertaken and allocation announcements made fortnightly on the 1<sup>st</sup> and 15<sup>th</sup> of each month, or next working day following, until full allocations are achieved.

### Indicative allocations on 1 July 2020

- Full (100 per cent) allocation can be expected for **towns, domestic and stock** access licences, and sub-category high security entitlements.
- **Supplementary (including Lowbidgee)** access licence holders can expect to receive a full allocation, which is available subject to announced periods of supplementary flows and access.
- It is forecast that **high security** allocation should receive 95 per cent of entitlement in accordance with the water sharing plan, and opening **conveyance** allocation and **carryover** commitments are also expected to be met on 1 July 2020.
- **General security** allocations are likely to start low or zero (0) per cent if inflow conditions remain very dry.
- Water can be expected to be set aside for environmental requirements in accordance with the rules of the Murrumbidgee regulated rivers water sharing plan.

## Chances of improvement

The chances of improved general security allocations after 1 July 2020, 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 reasonable given the current seasonal outlook and gives a better outlook than using just the driest years on record (dry tercile).

Historically, droughts have a higher likelihood of breaking in the winter/spring seasons than any other season, and therefore there is a possibility that the current very dry conditions may break or ease in the coming months. However, if this does not occur, the forecasting will change from using all available data to using the driest third of all years (dry tercile) early in 2020-21.

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 user behaviour and river operations. This means that water users should use this information with caution and at their own risk, as it projects many months ahead.

### Forecast general security allocations (per cent)

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

Repeat of historical inflow conditions	1 Sept 2020	1 Nov 2020
99 chances in 100 (extreme) (99%)*	0%	0%
9 chances in 10 (very dry) (90%)**	7%	9%
3 chances in 4 (dry) (75%)**	16%	29%
1 chance in 2 (mean) (50%)**	38%	60%

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

Note 2: Storage behaviour modelling using all years and General Security carryover of 8%.

\* The extreme dry (99%) inflow conditions assumes 99% through the remainder of 2019/20, and through 2020/21, with the design drought restarting on 1 July 2020.

\*\* Scenarios assume dry (75%) inflows for the remainder of the current year, followed by the respective inflow scenario design drought for 2020/21.

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