

15 October 2018

Murrumbidgee Valley

Water allocation update

There is **no increase** in general security allocations in the Murrumbidgee regulated river system at this time.

The dry conditions and outlook, particularly as the likelihood of significant inflows reduces statistically with summer approaching, means that resource improvements must first be considered for high priority commitments on 1 July 2019, before allocating further to general security entitlements in the current water year.

The Murrumbidgee catchments have been experiencing well below average tributary inflows for this time of year, due to well below average rainfall and higher than average temperatures. Streamflow into the headwater storages are forecast likely to be low.

	High Security	General Security	Average Carryover
Murrumbidgee	95%	7%	22%

Storage levels (as at 12 October 2018)

- Blowering Dam is 62 per cent full – decreasing – holding 1,016,000 megalitres (ML).
- Burrinjuck Dam is 42 per cent full – steady – holding 432,000 ML.

Climatic outlook

The Bureau of Meteorology seasonal outlook for November to January indicates mixed rainfall conditions for the valley, with some areas in the upper Murrumbidgee region showing no strong indication whether conditions will be wetter or drier, while other areas show rainfall is likely to be below average. However, November is expected to be dry across the valley. Above average temperatures experienced so far in 2018 are likely to continue into early 2019.

The Bureau's El Niño-Southern Oscillation (ENSO) Outlook has moved to El Niño ALERT as sea surface temperatures move towards El Niño thresholds. Models suggest El Niño will likely develop over the coming month or two. Similarly, signs continue that a positive Indian Ocean Dipole (IOD) is underway. When combined, these two events in spring increase the possibility of a dry and warm end to the year.

Trade

Water allocation can currently be traded **within** and **out** of the Murrumbidgee Valley, but trade **into** the Murrumbidgee Valley is closed. Water users are encouraged to monitor the WaterNSW website (www.watarnsw.com.au) for information about the Murrumbidgee inter-valley trade (IVT) account balance and status of trade.

Next announcement

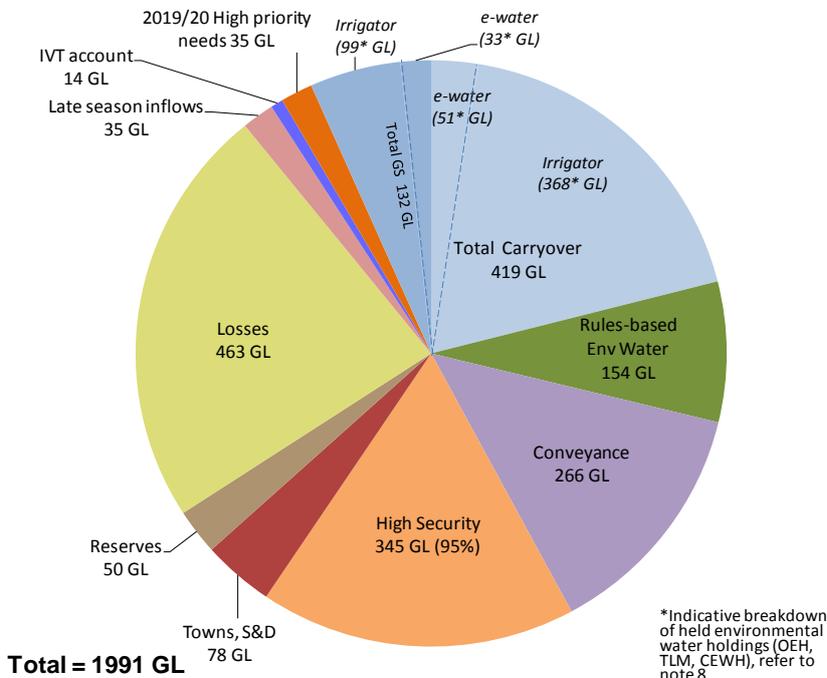
The next water allocation statement for the regulated Murrumbidgee Valley will be issued on **Thursday 1 November 2018**.

Murrumbidgee resource assessment data sheet

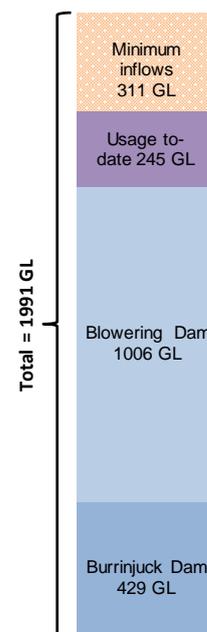
Resource Distribution 2018-19 (at 15 October 2018)	
	Volume (GL)
Total Available Resource ⁽¹⁾	1,991
less	
Carryover (GS and Conveyance)	419
Rules based Environmental Water ⁽²⁾	154
Towns, Stock, Domestic	78 (100%)
Reserves ⁽³⁾	50
Conveyance ⁽⁴⁾	266
Announced High Security	345 (95%)
Losses (transmission, evaporation, operational) ⁽⁵⁾	463
Murrumbidgee IVT account (carryover as of 1 July) ⁽⁶⁾	14
Late Season Inflows ⁽⁷⁾	35
Announced General Security	132 (7%)
Future (including 2019/20) high priority needs ⁽⁸⁾	35

*See notes below.

Murrumbidgee resource distribution 2018-19 – 15 October 2018



Supply Distribution⁽⁹⁾



Notes

- 1) Total available resource – total active storage volume (Blowering & Burrinjuck Dams) 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 (2018-19) to date is 683 GL, and 200GL of flex release was pre-released in 2017-18.
- 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 102GL) and environmental water allowances (EWA1 = 50GL, EWA2 = 1GL, EWA3 = nil). Excludes 'licence-based' environmental water also known as held environmental water (HEW). This total volume typically reduces as commitments are met and 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. (This category of licence in the Murrumbidgee valley, like general security, can carry over up to 30% of 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 regularly updated as the year unfolds.
- 6) IVT account – this represents the carryover value into 2018/19. As the account status was negative, meaning Murray water is 'owed' to the Murrumbidgee that cannot be delivered, this volume of 14GL must be set aside from allocation in the Murrumbidgee. The current IVT balance is around minus 6 GL, meaning that around 8 GL has been traded out of Murrumbidgee valley.
- 7) 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, otherwise there could be an expectation that the water is available for delivery and use before it is captured in storage.
- 8) Future high priority needs – As it has been extremely dry so far this year, and the outlook remains unchanged, consideration must first be given to potential higher-than-budget transmission losses for the remainder of this year and high priority commitments on for next water year (2019/20), before further allocation to general security entitlements. As soon as the risk of shortfall subsides, this water can be allocated. To allocate and then experience a shortfall could prove catastrophic to some water users.
- 9) 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 33GL of GS, 12GL of HS, 37GL of conveyance allocation and 51GL 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 environmental holdings can be found on individual agency websites.
- 10) Supply Distribution – the distribution of supply includes volumes at the time of the assessment for the following categories: active volumes in the dams (excludes early release volumes of next year's Snowy Hydro commitments), 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).

Murrumbidgee resource assessment – comparison with this time last year

Item		Mid Oct 2017 (GL)	Mid Oct 2018 (GL)	Comments
Storage Volume (GL)	Burrinjuck	606	432	Inflows into storage are very low this year
	Blowering	1,189	1,030	Reduced tributary inflows
	Total	1,795	1,462	Overall 18% lower storage volume compared to last year
Losses (transmission, evaporation, operations)*		524	463	Similar
1 July IVT carryover balance		89	-5	Reflects market pressures
Late Season Inflows		0	35	Available after peak demand period this year
GS Available		33%	7%	Reduced overall water availability
Average GS Carryover		27%	22%	Lower this year

* Includes assumed loss from downstream of storages along the entire river length.

Chances of improvement

The chances of improved inflows and increased general security allocations are given in the table below. Allocations are likely to remain at current values under most scenarios, given that significant inflows are statistically less likely over summer and high priority commitments for 1 July 2019 need to be met.

Forecast general security allocation (per cent)

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

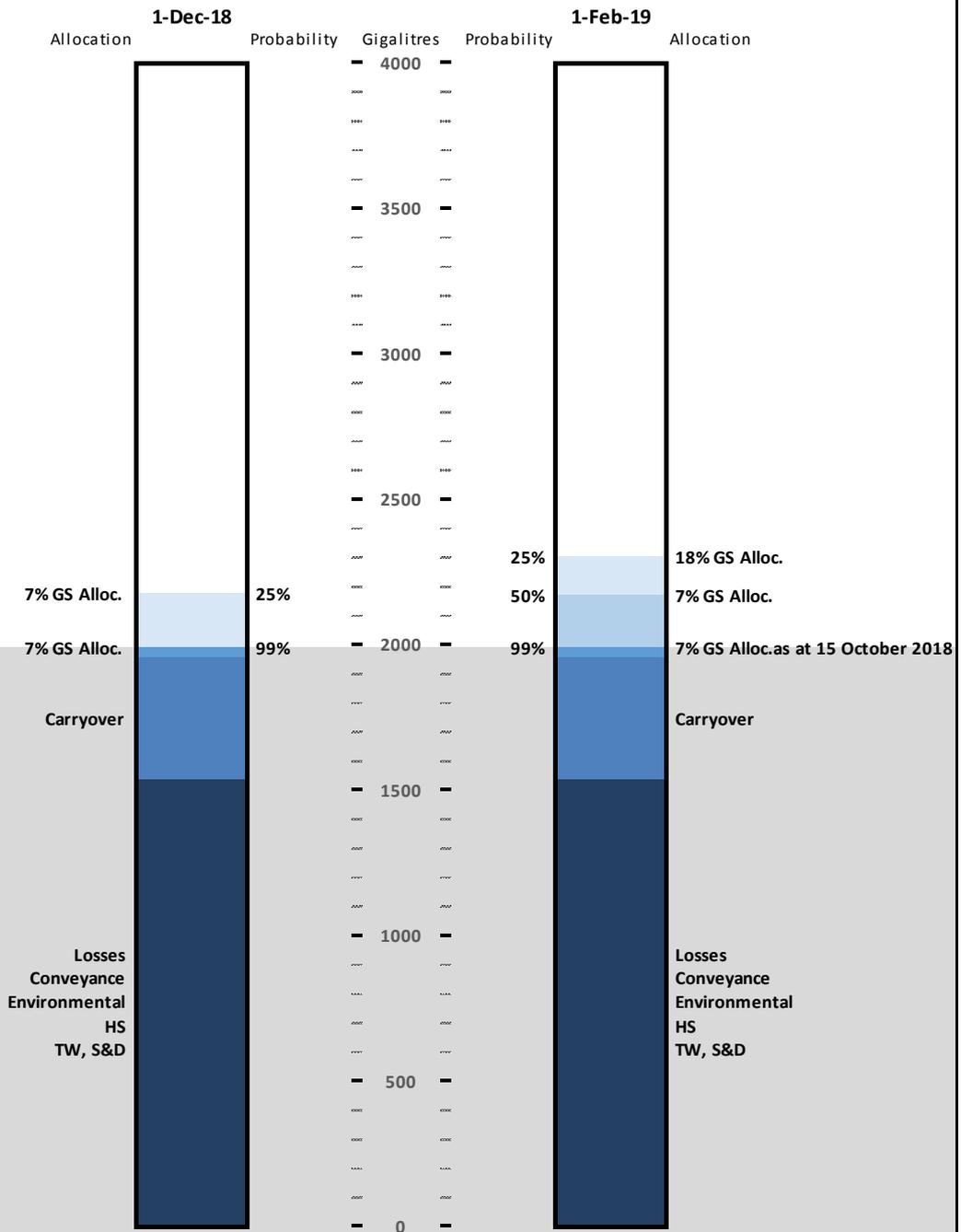
Potential Inflow Conditions	1 Dec 2018 General Security Allocation	1 Feb 2019 General Security Allocation
99 chances in 100 (extreme) (99%)^	7	7
9 chances in 10 (very dry) (90%)^	7	7
3 chances in 4 (dry) (75%)	7	7
1 chance in 2 (mean) (50%)	7	7
1 chance in 4 (wet) (25%)	7	18

Storage behaviour modelling using data for all years of record and average general security carryover of 22%.

^ September conditions were 93% AEP.

Murrumbidgee Valley Outlook

as at 15 October 2018



This figure provides indicative improvements in general security allocations for two forecast snapshots, 01 December 2018 and 01 February 2019. The allocation improvements are indicative only, and do not constitute guaranteed allocations. As of 15 October 2018, General Security allocation is at 7 per cent, and under 99% inflow conditions, will remain the same for the rest of the water year.