

17 September 2018

Murrumbidgee Valley

Water allocation update

Murrumbidgee general security allocation **has increased by 1 per cent to 7 per cent of entitlement**. This means, with carryover, overall general security water availability is 29 per cent in the valley. Intermittent rain in the upper catchment has triggered some inflows into storages, with downstream tributaries contributing below Wagga Wagga. However, system flows into the valley are still well below the long term average for this time of year.

In the last 18 months (March 2017 to August 2018) the Murrumbidgee system has experienced extremely low inflows - in the lowest four per cent on record.

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

Storage levels (as at 14 September 2018)

- Blowering Dam is 74 per cent full – decreasing – holding 1,223,000 megalitres (ML).
- Burrinjuck Dam is 42 per cent full – increasing – holding 432,000 ML.

Climatic outlook

The Bureau of Meteorology outlook for October to December indicates conditions for the region are likely to remain dry with very much above average temperatures.

The main climate drivers of El Niño-Southern Oscillation (ENSO) and the Indian Ocean Dipole (IOD) remain neutral, though most international models show El Niño likely to develop by the end of spring. El Niño during spring typically results in below average rainfall for northern and eastern Australia. In summer, its drying influence is mainly focused on tropical regions of Australia, although the possibility of high temperatures elsewhere remains high.

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

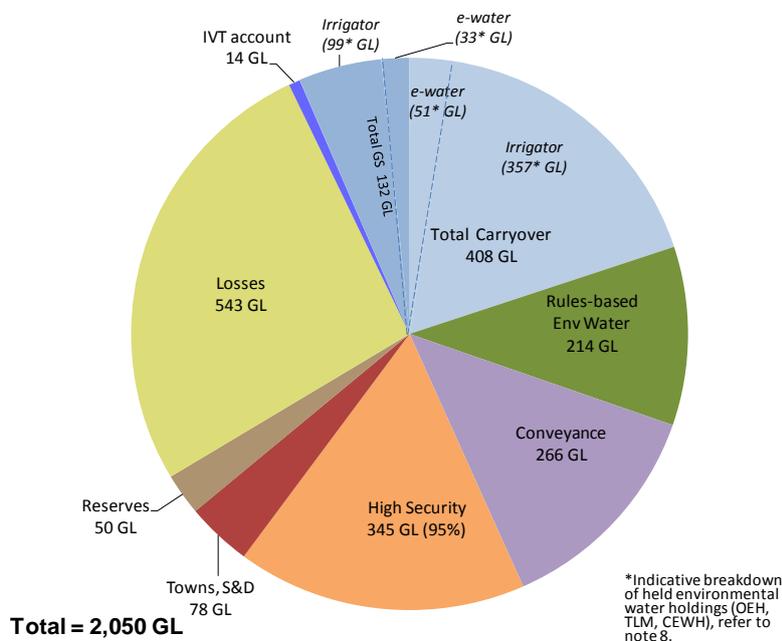
The next water allocation statement for the regulated Murrumbidgee Valley will be issued on **Monday 1 October 2018**. The forecast improvements under various inflow scenarios, including the rocket diagram will be included in the mid-October water allocation statement.

Murrumbidgee Resource Assessment Data Sheet

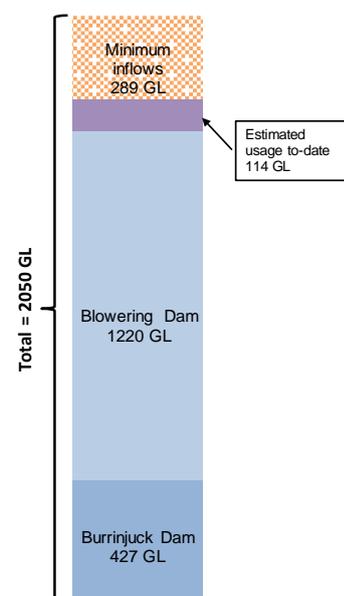
Resource Distribution 2018-19 (at 17 September 2018)	
	Volume (GL)
Total Available Resource ⁽¹⁾	2,050
less	
Carryover (GS and Conveyance)	408
Rules based Environmental Water ⁽²⁾	214
Towns, Stock, Domestic	78 (100%)
Reserves ⁽³⁾	50
Conveyance ⁽⁴⁾	266
Announced High Security	345 (95%)
Losses (transmission, evaporation, operational) ⁽⁵⁾	543
Murrumbidgee IVT account (carryover as of 1 July) ⁽⁶⁾	14
Late Season Inflows ⁽⁷⁾	0
Announced General Security	132 (7%)

*See notes below.

Resource Distribution 2018-19 – 17 September 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 699 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 142GL) and environmental water allowances (EWA1 = 50GL, EWA2 = 22GL, 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.
- 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) 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.
- 9) 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). Towards the latter half of the water year, it will also include any estimated shortfall in meeting the following next year's high priority needs.

Murrumbidgee Resource Assessment – Comparison with this time last year

Item		Mid Sep 2017 (GL)	Mid Sep 2018 (GL)	Comments
Storage* Volume (GL)	Burrinjuck	616	430	Inflows into storage are very low since May
	Blowering	1,354	1,244	Reduced tributary inflows
	Total	1,970	1,674	Overall 15% lower storage volume compared to last year
Losses (transmission, evaporation, operations)**		571	543	Similar
1 July IVT carryover balance		100	-14	Reflects market pressures
Late Season Inflows		0	0	Similar
GS Available		33%	7%	Reduced overall water availability
Average GS Carryover		27%	22%	Lower this year

* Storage volumes at time of the resource assessment.

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

Chances of improvement

The chances of improved inflows conditions and increased allocations are given in the table below. They are based on all years of record. If conditions remain dry, consideration will be given to forecasting based on the 'Dry Tercile', meaning that only the driest one-third of years on record will be used in the analysis. This gives a more likely outlook for dry conditions, and reduces the forecast water allocations.

Forecast General Security allocation (per cent)

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

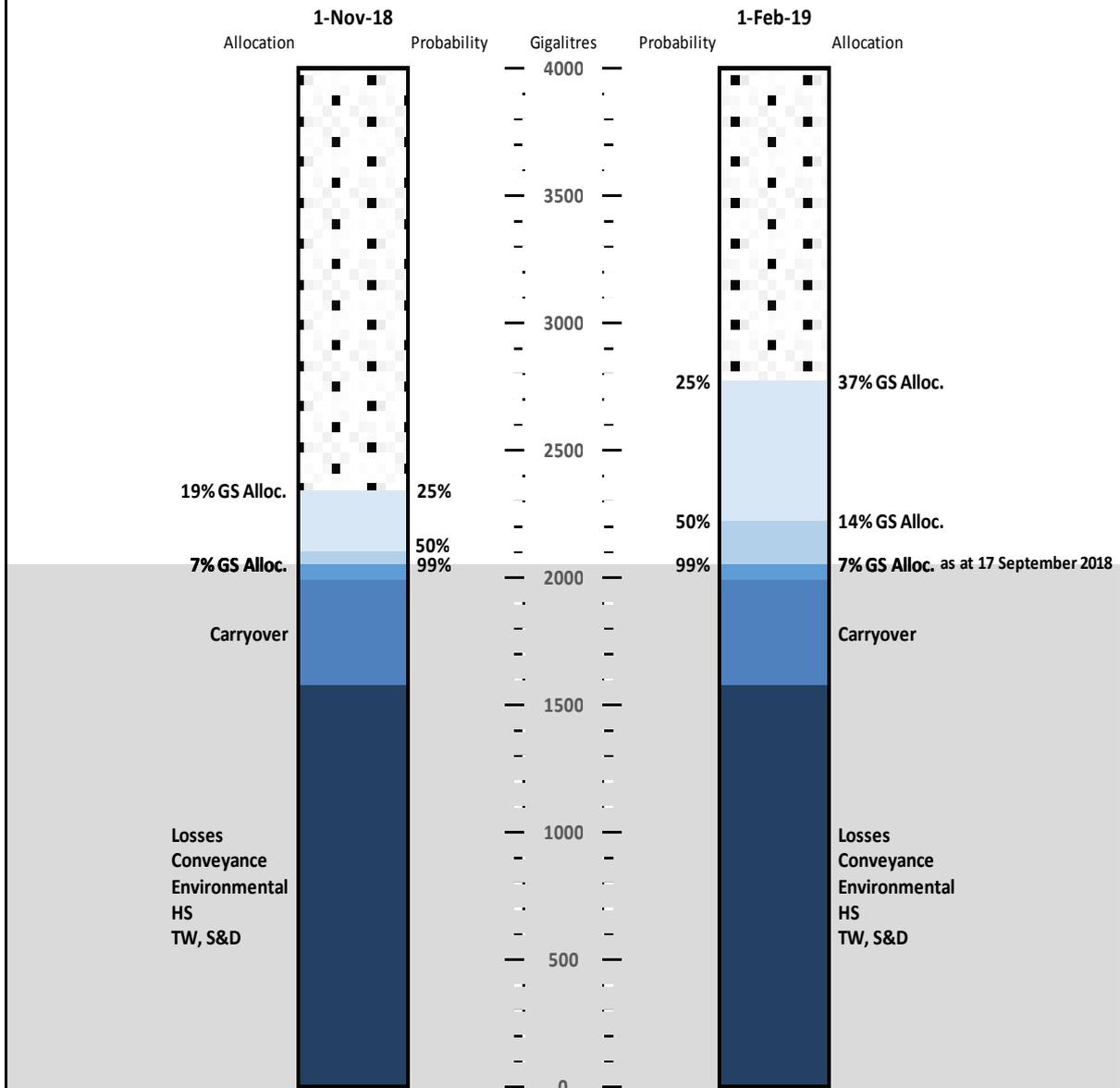
Potential Inflow Conditions	1 Nov 2018 General Security Allocation	1 Feb 2019 General Security Allocation
99 chances in 100 (extreme) (99%)^	7	7
9 chances in 10 (very dry) (90%)^	7	7
3 chances in 4 (dry) (75%)	7	7
1 chance in 2 (mean) (50%)	9	14
1 chance in 4 (wet) (25%)	19	37

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

^ August conditions were 96% AEP.

Murrumbidgee Valley Outlook

as at 17 September 2018



This figure provides indicative improvements in general security allocations for two forecast snapshots, the 1st of November 2018 and 1st of February 2019. The allocation improvements are indicative only, and do not constitute guaranteed allocations. As of 17 September 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.