

15 November 2018

Murrumbidgee Valley

Water allocation update

Scattered intermittent rainfall during early November provided only minor system inflows which were offset by high transmission losses. The Murrumbidgee regulated river general security allocation therefore **remains unchanged at seven per cent of entitlement**.

As we now move into summer, any resource improvements must first be used to underpin next year's high priority commitments before further allocating to general security users this year. The estimated commitment for 2019/20 is complex and varies with each assessment depending on water usage, operational requirements and actual inflows. Currently about 250 gegalitres (GL) are needed of which 72 GL is currently available.

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

Storage levels (as at 14 November 2018)

- Blowering Dam is 53 per cent full – decreasing – holding 870,000 megalitres (ML).
- Burrinjuck Dam is 42 per cent full – steady – holding 430,000 ML.

Climatic outlook

The Bureau of Meteorology seasonal outlook for November to January issued on 25 October 2018 indicates generally that less than median rainfall conditions are likely. Above average temperatures experienced so far in 2018 are likely to continue into early 2019.

The Bureau's El Niño-Southern Oscillation (ENSO) Outlook remains at El Niño ALERT, with El Niño likely to develop before January 2019. A positive Indian Ocean Dipole (IOD) event is underway, but may dissipate through November. When combined, an El Niño and positive IOD event increase the chances of dry and warm conditions, particularly during spring.

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.watnsw.com.au) for information about the Murrumbidgee inter-valley trade (IVT) account balance and status of trade.

Sufficient trade from the Murrumbidgee to the NSW Murray has occurred to raise the Murrumbidgee inter-valley trade (IVT) account balance above zero, meaning there is no longer an impact on Murrumbidgee water users from net trade being into the valley.

Next announcement

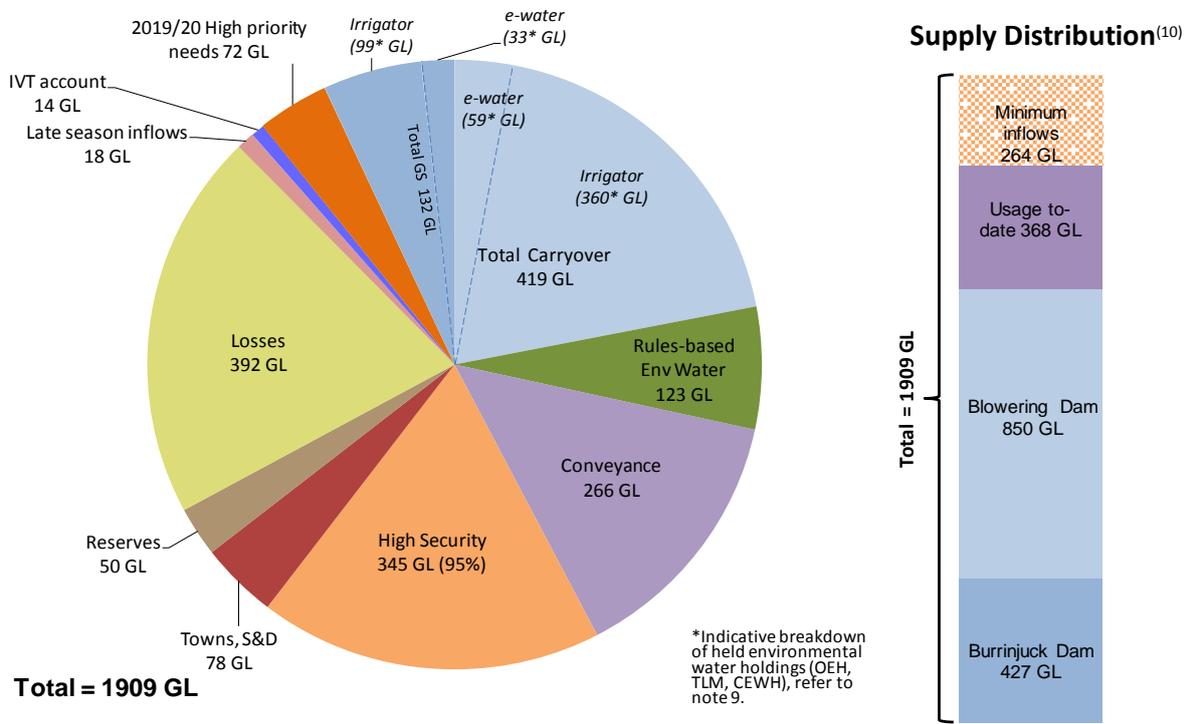
The next water allocation statement for the regulated Murrumbidgee Valley will be issued on **Monday 3 December 2018**. Forecast improvements under various inflow scenarios, including the rocket diagram, will be included in mid-December water allocation statement.

Murrumbidgee resource assessment data sheet

Resource Distribution 2018-19 (at 15 November 2018)	
	Volume (GL)
Total Available Resource ⁽¹⁾	1,909
less	
Carryover (GS and Conveyance)	419
Rules based Environmental Water ⁽²⁾	123
Towns, Stock, Domestic	78 (100%)
Reserves ⁽³⁾	50
Conveyance ⁽⁴⁾	266
Announced High Security	345 (95%)
Losses (transmission, evaporation, operational) ⁽⁵⁾	392
Murrumbidgee IVT account (carryover as of 1 July) ⁽⁶⁾	14
Late Season Inflows ⁽⁷⁾	18
Announced General Security	132 (7%)
Future (including 2019/20) high priority needs ⁽⁸⁾	72

**See notes below.*

Murrumbidgee resource distribution 2018-19 – 15 November 2018



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 estimated to be about 680 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 74 GL) and environmental water allowances (EWA1 = 50GL, EWA2 = 0GL, 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 on 1 July 2018, meaning Murray water was 'owed' to the Murrumbidgee that could not be delivered, this volume of 14GL was set aside from allocation in the Murrumbidgee. As the IVT balance at the time of the assessment has increased to a positive value of 1.7 GL, it means that about 16 GL has been traded out of Murrumbidgee valley since the beginning of the water year negating the adverse impact on Murrumbidgee water users. Effectively the impact on all Murrumbidgee water users has been resolved by those choosing to trade out of the valley thereby eliminating the negative IVT balance.
- 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 –at this time of year, we look ahead to next water year (2019/20) to ensure there is sufficient resource set aside to meet high priority commitments on 1 July. This volume is currently estimated to be about 250 GL of which 72 GL has been met. This value changes from month to month based on the complex interaction of climatic factors, projected historical inflow sequence, usage/potential carryover, and actual transmission and operational losses as the water year unfolds.
- 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 and 8 GL conveyance 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 Nov 2017 (GL)	Mid Nov 2018 (GL)	Comments
Storage Volume (GL)	Burrinjuck	620	430	Inflows into storage are very low this year
	Blowering	1,012	874	
	Total	1,632	1,304	Overall 20% lower storage volume compared to last year
Losses (transmission, evaporation, operations)*		485	392	Low due to low allocation
Late Season Inflows		0	18	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. Remember, these are based statistically on the historical record. In reality, rainfall and inflows can occur at any time and allocations will be made on actual conditions.

The table shows that allocations are likely to remain at current values under most scenarios and reflects that significant inflows are statistically less likely to occur over summer and that 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	10

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

[^] October conditions were 96% AEP, with July to October conditions about 95% AEP.

