

15 May 2019

Murrumbidgee Valley

Water allocation update

Water allocations in the Murrumbidgee regulated river water source **remain unchanged**.

Despite dry conditions, there has been a 25,000 megalitres (ML) improvement in resources. This was primarily due to minor system inflows and better than budgeted system losses following some rainfall earlier this month. However, this gain has been offset by about 50,000 ML decrease in estimated inflows from the Snowy Hydro scheme for 2019-20. Therefore, the current shortfall to assure meeting all high priority commitments on 1 July 2019, including opening conveyance volumes, is about 100,000 ML.

An updated outlook for 2019-20 opening allocations is provided below.

| 2018-19 | High Security | General Security | Average Carryover | Drought Stage |
|--------------|---------------|------------------|-------------------|--|
| Murrumbidgee | 95% | 7% | 22% |  Stage 2 |

Storage levels (as at 14 May 2019)

- Blowering Dam is 27 per cent full – rising – holding 463,000 ML.
- Burrinjuck Dam is 29 per cent full – steady – holding 310,000 ML.

Climatic outlook

The Bureau of Meteorology outlook for May to July, issued on 26 April 2019, shows an even chance of median rainfall conditions for most of the catchment; however, May is likely to remain dry. Temperatures over this period are very likely to be above average.

As of 30 April 2019, the Bureau indicates that main climate drivers remain neutral. However, modelling suggests there is a chance that El Niño will develop in the coming months, with the Bureau's El Niño-Southern Oscillation (ENSO) Outlook at El Niño ALERT level. If El Niño does develop, it would increase the chances of drier conditions in the south and eastern Australia.

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

Drought stage

The Murrumbidgee Valley has moved to Stage 2 drought criticality, meaning drought operational planning has commenced in preparation if extreme dry conditions continue through 2019-20. Accordingly a Critical Water Advisory Panel will soon be formed for southern valleys to advise on drought management options.

While the highest priority needs are estimated to be met for 1 July 2019, including full opening high security and full deliverability of carryover, opening conveyance allocations may be low and would need to build as a priority in 2019-20.

Further information on the policy and related drought stages can be found at:
www.industry.nsw.gov.au/water/allocations-availability/droughts-floods/extreme-events

Trade

Water allocation can currently be traded **within** and **out** of the Murrumbidgee Valley, but trade **into** the Murrumbidgee Valley remains closed. Water users are encouraged to monitor the website for information about trade opportunities and processes, and particularly the upcoming seasonal closing dates for trade: www.waternsw.com.au/customer-service/trading

Next announcement

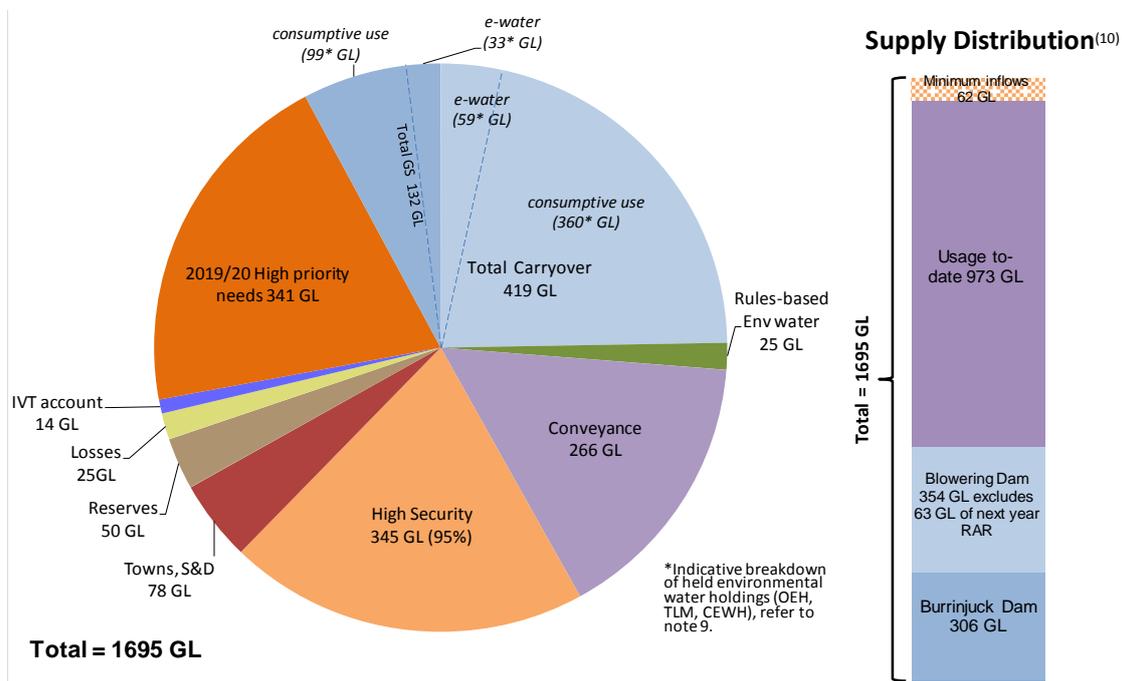
This is the final water allocation statement for the 2018-19 water year. Opening state-wide water allocations will be made on **Monday 1 July 2019**, with the subsequent water allocation statement for the Murrumbidgee Valley to be issued on Monday 15 July 2019.

Murrumbidgee resource assessment data sheet

| Resource Distribution 2018-19 (at 15 May 2019) | |
|--|-------------|
| | Volume (GL) |
| Total Available Resource ⁽¹⁾ | 1,695 |
| less | |
| Carryover (GS and Conveyance) | 419 |
| Rules based Environmental Water ⁽²⁾ | 25 |
| Towns, Stock, Domestic | 78 (100%) |
| Reserves ⁽³⁾ | 50 |
| Conveyance ⁽⁴⁾ | 266 |
| Announced High Security | 345 (95%) |
| Losses (transmission, evaporation, operational) ⁽⁵⁾ | 25 |
| Murrumbidgee IVT account (carryover as of 1 July) ⁽⁶⁾ | 14 |
| Late Season Inflows ⁽⁷⁾ | 0 |
| Announced General Security | 132 (7%) |
| Future (2019-20) high priority needs ⁽⁸⁾ | 341 |

*See notes below.

Murrumbidgee resource distribution 2018-19 – 15 May 2019



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) is estimated to be about 759GL, 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 22GL) and environmental water allowances (EWA1 = 0.5 GL, EWA2 = 3, 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. The impact on all Murrumbidgee water users of a negative IVT balance is resolved by those who trade **out** of the valley during the water year, thereby lifting the IVT balance. There is currently a positive balance (13.7GL).
- 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 – it is required to look ahead to next water year (2019-20) to ensure there is sufficient resource available to meet high priority commitments on 1 July. This volume is currently estimated to be about 441GL of which 341GL has been met. 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, 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 8GL 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).

Water availability outlook for 2019-20

Key information

- This outlook for the likely 1 July 2019 water availability is conservatively based on assumed extreme dry (99th percentile) inflows for the remainder of the current 2018-19 water year, and all of 2019-20. Indicative estimates for September and November 2019 allocations under a range of inflow scenarios are provided to help water users to plan.
- This forecast information is not guaranteed and should be used at one's own risk.
- Under these extreme dry conditions, a current shortfall of some 100,000 ML exists in meeting all 1 July 2019 high priority commitments, plus full opening allocations to conveyance entitlements.
- For context, the Murrumbidgee Valley has experienced 'near extreme dry' (96th percentile) inflows this year (July to April), which are the lowest inflows since the Millennium drought ended in 2010. Since January this year inflows have been slightly better with 83rd percentile conditions.
- Snowy Hydro's assessment of potential reduced inflow conditions across the scheme for 2019-20 and 2020-21 is impacting on the Murrumbidgee water availability outlook.
- In the Murrumbidgee regulated river 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 2019-20 is dependent on the balance of the IVT account. The 30 June balance is carried forward unchanged to 1 July 2019. Water users should refer to WaterNSW for IVT account balances and important seasonal trade closure dates.
- Once commencing allocations are announced on 1 July 2019, regular assessments will be undertaken and allocation announcements made fortnightly on the 1st and 15th of each month, or next working day following, until full allocations are achieved.
- Releases from headwater storages are to be managed to maximise water availability and deliverability, including equalising the risk of spill from headwater storages.

Indicative allocations on 1 July 2019

- Supplementary (including Lowbidgee) access licence holders can receive a full allocation; however, diversion will only be allowed during announced supplementary events.
- Full (100 per cent) allocation can be expected for towns, domestic and stock access licences, and sub-category high security entitlements.
- Murrumbidgee high security access licences can receive an initial allocation of 95 per cent of entitlement, consistent with the Murrumbidgee regulated river water sharing plan.
- Private carryover can be fully deliverable. At this stage, it is estimated that the average carryover across the valley will be close to seven (7) per cent of entitlement. This estimate may vary slightly based on usage and trade and will be finalised in late July.
- It is likely that general security entitlements will open at zero allocation if dry inflow conditions remain.
- In the event that extreme dry conditions continue and the estimated shortfall remains through June, the following reduced allocations can be expected:
 - a volume of at least 42,000 ML for Murrumbidgee Irrigation (conveyance) access licences can be available
 - a volume of at least 58,000 ML for Coleambally Irrigation (conveyance) access licences can be available.
- Allocation to these conveyance categories can build from now from resource improvements as a priority, with a view to being on budget as soon as possible.
- In accordance with Clause 42 of the water sharing plan, resource managers must also consider setting aside resource improvement during 2019-20 for opening allocations for the highest priority needs in the following year, 2020-21.
- Water in Environmental Water Allowances (EWA) accounts can be made available and will accrue in accordance with the rules of the water sharing plan.
- Murrumbidgee inter and intra valley trade are expected to continue to operate in accordance with existing procedures, particularly in relation to the inter-valley trade (IVT) account limits.

Chances of improvement

The chance of improved general security allocation in the Murrumbidgee after 1 July 2019, based on a repeat of historical inflows, is provided in the following table.

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

Forecast General Security allocation (per cent)

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

| Historical Inflow Scenario | 1 Sep 2019 | 1 Nov 2019 |
|-----------------------------------|----------------|----------------|
| 99 chances in 100 (extreme) (99%) | 0 | 0 |
| 9 chances in 10 (very dry) (90%) | 0 [^] | 0 [^] |
| 3 chances in 4 (dry) (75%) | 17 | 25 |
| 1 chance in 2 (median) (50%) | 28 | 47 |

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 7%.

Note 3: Currently tracking in 2018-19 about 96th percentile.

[^] Under very dry (90th percentile) inflow conditions, Conveyance allocations are likely to be fully met.

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