Water Allocation Statement

3 December 2018

NSW Murray and Lower Darling

Water allocation update

There has been a small improvement in NSW Murray regulated river resources which has been allocated to the Conveyance licence category, in accordance with the water sharing plan. **Allocations for all other entitlements remain unchanged**.

November inflows to date have tracked in the lowest 10 percent of historical record and the dry conditions experienced this year continue to persist. Though rainfall in the upper Murray catchment for November has been around average, due to the very dry catchment and depleted soil moisture stores, high initial losses have supressed runoff.

The deficit in allocation to Conveyance entitlements has now been met. The remaining shortfall is to River Murray Increased Flows (RMIF) in the volume of 30,000 megalitres (ML). Once the RMIF shortfall is met, improvements will then accrue to general security entitlements, provided high priority commitments on 1 July 2019 can first be met.

The full volume required to run the Wakool system will not be needed this year as extraordinary bulk water transfers using Murray system water have assisted, meaning that the 30,000 ML shortfall from NSW share of resource is retired.

Consideration of high priority commitments in 2019/20 must also be applied to resource improvements. Therefore the outlook for NSW Murray general security allocations is that they are likely to remain low in 2018/19.

This statement includes below a special update on the need for the high bulk water transfer rates being observed in recent months in the Murray system.

Allocations in the Lower Darling remain unchanged. The Menindee Lakes system is at 5.7 per cent of full supply capacity (holding about 99,000 ML) and is critically low. Of this volume, about 20,700 ML is stored in Lake Wetherell, 55,300 ML in Lake Pamamaroo and 11,200 ML in Copi Hollow. The balance is inaccessible in Lakes Cawndilla and Tandure.

WaterNSW continues to fill temporary block banks in the Lower Darling as part of drought contingency measures to extend access for high priority uses as long as possible. In addition to block banks at Jamesville and Ashvale, a block bank at Karoola has been constructed and construction is near completion for a block bank at Court Nareen. Flows in the Lower Darling will aim to provide maximum water to the pools behind these banks.

In the past, as water availability deteriorated and cease to flow conditions commenced, water restrictions have been used to restrict the take of water from available pools to the highest priority uses including town water supply, domestic, stock, and permanent plantings. With supplies continuing to reduce and the heat of summer near, the current need for restrictions is being constantly monitored, and restrictions are likely to be issued in early December 2018.

Water Allocation Statement

Operational updates for the Lower Darling regulated system including water storage volumes and relevant drought measures can be found in WaterNSW's state-wide weekly water availability reports (https://www.waternsw.com.au/supply/regional-nsw/availability).

	High Security	General Security	Average Carryover
Murray	97%	0%	31%
Lower Darling	100%	0%	15%

Murray storage levels (as at 30 November 2018)*

- Dartmouth Dam is 75 per cent full – falling – holding 2,885,000 megalitres (ML).
- Hume Dam is 43 per cent full – falling – holding 1,295,000 ML.
- Lake Victoria is 82 per cent full – rising – holding 554,000 ML.

*** NSW share of this water is approximately 28%, 39% and 37% for these storages respectively.**

State sharing of the Murray resource

The monthly forecast accounts to the end of October indicate 5,250 GL of total Murray resource is available in the very dry (99 percentile) case, of which about 1,580 GL is needed to run the system and therefore 3,670 GL is distributed to NSW and Victoria based on rules in the Murray-Darling Basin Agreement.

The NSW share of this is about 1,210 GL from which commitments to South Australia's entitlement flow and trade adjustments are deducted to leave NSW with 1,045 GL of resource to distribute (99 percentile). This represents an increase of 10 GL from the last assessment.

Special operational update

Due to a combination of hot, dry and windy conditions and the lack of system inflows from tributaries, bulk water transfers from upstream (Hume) to downstream storages (particularly Lake Victoria) were necessary.

The decision to transfer is normally deferred for as late as possible because any tributary inflows will reduce or even negate the need to transfer and thereby improve water availability which was crucial given the water shortage situation.

When tributary inflows failed, transfers commenced at bank full rates, but early season demand for water and high transmission losses meant that storage at Lake Victoria could not adequately respond. The difficult decision was taken to increase Hume releases, slightly above bank full, thereby incurring additional losses. The decision was difficult given the water availability conditions, but crucial to avoid summer system shortfalls and the need to transfer at higher rates in the heat of summer, losing significantly more water.

River operators have used all reasonable options to maximise transfers and minimise losses including directing water around the Barmah choke along the most efficient flow paths, including those previously wetted in the forest from environmental watering actions.

The practice of transferring water through the forest is not new and becomes necessary when tributary inflows fail and particularly when the Menindee system is off-line. Similar circumstances occurred in 1994 and 2002 when overbank transfers entered a dry forest.

Flows have been above Barmah Choke capacity (about 10,000 ML/day as measured at downstream of Yarrawonga) since early September 2018, and about 15,000 ML/day since about mid-October 2018.

Lake Victoria has responded to the transfers and the risk of system shortfall over summer has significantly reduced. Operational releases for bulk transfers are now being replaced by releases for water orders including those for environmental watering.

Climatic outlook

The Bureau of Meteorology seasonal outlook for December to February shows no clear indication of drier or wetter conditions for the catchment. Daytime and overnight temperatures are very likely to be above average.

The Bureau's El Niño-Southern Oscillation (ENSO) Outlook (issued 20 November 2018) remains at El Niño ALERT and a positive Indian Ocean Dipole (IOD) event persists. El Niño conditions continue to develop and are expected to remain through the summer months while the current positive IOD will decay by early summer. El Niño conditions are likely to bring warmer than average temperatures for large parts of the continent while a positive IOD typically has very little influence on Australia from December to April.

Trade

In the Murray, trade across the Barmah choke remains restricted to '**no net trade downstream'**. Downstream trade opens to the extent of the volume of any upstream trade. The trade restriction helps to protect existing downstream entitlement holders from an increased risk of delivery shortfall due to the limited physical capacity of the Barmah choke. Water users are encouraged to monitor the Murray-Darling Basin Authority (MDBA) website (www.mdba.gov.au) for information about the trade balance and status of trade.

The Menindee Lakes system is below 480 GL, the threshold at which the Lower Darling becomes administratively separated from the Murray. Temporary trade with the Murray is therefore closed. Trade typically remains closed until the system recovers to above 640GL. Trade within the Lower Darling water source remains unaffected.

Trade **out** and **within** the Murrumbidgee Valley is open, but trade **into** the Murrumbidgee Valley is closed. Trade into the Murrumbidgee Valley will re-open when the Murrumbidgee inter-valley trade (IVT) account balance climbs to 15 GL. Water users are encouraged to monitor the WaterNSW website (www.waternsw.com.au) for daily information about the IVT account balance and status of trade.

Next announcement

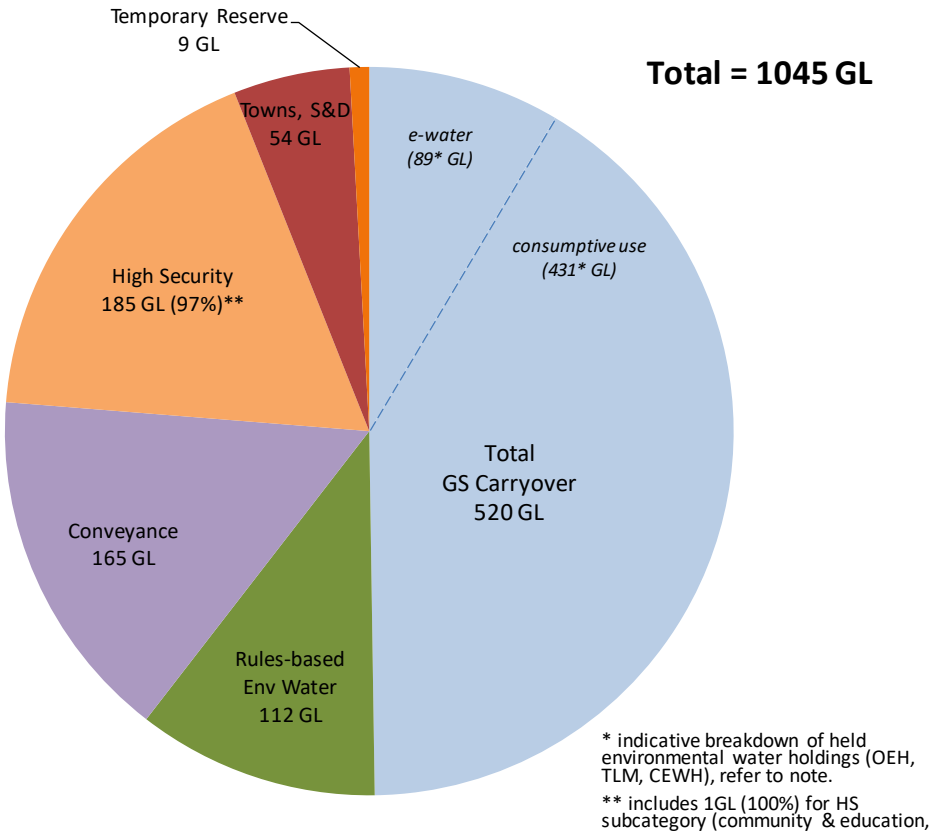
The next water allocation statement for the NSW Murray and Lower Darling valleys will be issued on **Monday 17 December 2018** and will include forecast improvements under different inflow scenarios, including the rocket diagram.

NSW Murray resource assessment data sheet

Resource Distribution (3 December) for 2018-19	Volume (GL)
Total Available Resource[1]	1,045
less	
Carryover[2], [7]	520
Rules based Environmental Water[3]	112
Towns, Stock, Domestic[4]	54 (100%)
Announced High Security subcategory (education, research)[4]	1 (100%)
Announced High Security[4]	184 (97%)
Conveyance[5]	165 (50%)
Reserves[6]	0
Announced General Security[7]	0 (0%)
Temporary Reserve[8]	9

See notes below.

NSW Murray resource distribution 2018-19 – 3 December 2018



Data sheet notes

(1) Total available resource - NSW's state share of active storage volume (Hume, Dartmouth, Menindee and Lake Victoria) as assessed and accounted for under the Murray-Darling Basin Agreement at the time of the assessment plus any usable flows in transit plus assumed (99%ile) inflows for the 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 M1 releases to date for this water year (2018-19) is estimated to be about 608 GL, and 200 GL of flex was pre-released in 2017-18. NSW remains in Special Accounting with South Australia (SA), details of which can be found in the MDB Agreement clauses 123-129. Special accounting is triggered when NSW is forecast unable to meet the required reserve of 1,250 GL by the end of the water year to supply SA with its entitlement in the following year.

(2) Carryover – NSW Murray general security water users can carryover a maximum account balance of 50 per cent of their entitlement into the following water year. The account limit is 110 per cent of entitlement, meaning that account credits from allocation and/or carryover cannot exceed 110% of entitlement in any water year. The limit does not include allocation trade.

(3) Primarily rules-based planned environmental water – water required to be set aside to provide for riverine environments, as per water sharing plan and other interjurisdictional agreements. In the NSW Murray this includes the Murray Additional Allowance (MAA) (about 6 GL), Wakool system requirements (up to 70 GL, currently 40 GL available), and the Barmah-Millewa Allowance (B-MA) (about 258 GL – currently 100% borrowed). It also includes River Murray Increased Flows (RMIF) in Hume, accrued as part of the Snowy Water Initiative (currently 66 GL available out of a total commitment of about 96 GL). The total commitments to B-MA and RMIF will decrease over the water year as they are released from Hume for use. Excludes 'licence-based' environmental water also known as held environmental water (HEW).

(4) The *Water Sharing Plan for the New South Wales Murray and Lower Darling Regulated Rivers Water Sources 2016* has subcategories of high security licenses in the Murray Water Source. High security subcategory licences under *Part 7 Division 2 Clause 46(2)* that are present in the Murray include community and education, research, and town water supply. At the commencement of each water year, these licences are to receive 100% allocation, while remaining high security licences are to receive 97% allocation. For the purposes of this water allocation statement, the high security town water supply allocation volume has been grouped as "Towns, S&D".

(5) 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 plan and is a function of current high and general security allocation.

(6) Reserves – required primarily under statutory plans, up to 61 GL; set aside for critical human needs in accordance with Clause 11.03 of the Basin Plan.

(7) Held environmental water (HEW) – 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 limited to only NSW entitlements, reporting of credits to accounts (not usage or trade), and estimated to be 0 GL of GS, 24 GL of HS, 25 GL of conveyance allocation and 89 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 environmental holdings can be found on individual agency websites.

(8) Temporary reserve – small reserve introduced to buffer against elevated risk of higher-than-budgeted losses.