

15 January 2020

NSW Murray and Lower Darling

Water allocation update

General Security allocations in the NSW Murray and Lower Darling regulated river water sources remain unchanged.

Extremely dry conditions continue to persist, with minimal rainfall occurring in December and inflows in the lowest 5 per cent of historical record. Soil moisture is severely depleted and will suppress runoff response from periodic rainfall events. Soaking rainfall is required to improve the catchment runoff response and provide water for allocation.

While inflows have been slightly above assumed minimums, negligible rainfall and heatwave conditions have increased losses and resulted in the NSW resource reducing by 15,000 megalitres (ML). This reduction has been adjusted within the reserves for 2020/21, and therefore has not affected any allocations this year.

The continuing drought conditions and extremely low inflows, combined with record high temperatures, is resulting in low water availability and increasing the losses incurred in running the system. This highlights the stress the system is under and the importance of building reserves from future resource improvements to support high priority needs for 2020/21.

Though good inflows prior to winter/spring are unlikely based on historical patterns, individual storms can bring heavy rainfall and good inflows at any time. Water users are encouraged to plan for the worst and hope for the best. In the meantime, conditions will continue to be closely monitored and water allocation statements updated, ensuring that any water that does become available is safely and promptly allocated in accordance with statutory water sharing plans.

The current bushfires have had no major impacts to river operations. However, fire affected landscape may result in changed runoff behaviour and quality, the nature and extent of which will be evident over time.

The Menindee Lakes system remains critical; below 1 per cent full, holding just 6,700 ML. The widespread cease-to-flow conditions pose significant challenges and risks.

2019-20	High Security	General Security	Average Carryover	Drought Stage
Murray	97%	0%	18%	 Stage 2
Lower Darling	30%	0%	19%	 Stage 4

Drought stage

The **NSW Murray** regulated river water source is in Stage 2 drought criticality. Drought operational planning has commenced so that contingency measures can be readied to protect critical water supplies if conditions deteriorate beyond this year. A Critical Water Advisory Panel has been formed for southern valleys to provide advice on drought management options and will convene as conditions necessitate.

The **Lower Darling** regulated river water source is at maximum Stage 4 drought criticality, and there are no foreseeable inflows. Restrictions limit water usage to critical needs.

The temporary water restrictions are likely to remain until the resource situation improves. Follow this link for further details on the reasons for the temporary restriction:

www.industry.nsw.gov.au/water/allocations-availability/temporary-water-restrictions

Further information on critical valleys in drought can be found at:

www.industry.nsw.gov.au/water/allocations-availability/droughts-floods/drought-update/critical-valleys-in-drought

Storage levels (as at 13 January 2020)*

- Dartmouth Dam is 51 per cent full – falling – holding 1,975,000 ML.
- Hume Dam is 22 per cent full – falling – holding 650,000 ML.
- Lake Victoria is 54 per cent full – falling – holding 370,000 ML.

* NSW share of this water is approximately 29%, 53% and 53% for these storages respectively, or 38% in total.

State sharing of the Murray resource

The end of December accounts indicate that 3,180 gigalitres (GL) of total shared Murray resource is available in the extreme dry (99th percentile) case, of which about 1,160 GL is needed to run the system. The NSW portion of this shared resource is 840 GL based on rules in the Murray-Darling Basin Agreement. Following adjustments including trade, tributary inflows and usage to date, the assessment results in 980 GL of water being available for NSW to allocate.

Climatic outlook

The Bureau of Meteorology seasonal outlook for February to April shows no clear indication of drier or wetter than average conditions. Temperatures are likely to be warmer than average.

The Bureau indicates that the El Niño-Southern Oscillation (ENSO) remains neutral. ENSO is likely to remain neutral into winter. The Indian Ocean Dipole (IOD) has returned to neutral from a very strong positive IOD event, and will remain so for the coming months.

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

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 address the physical constraint at the choke and protect existing downstream entitlement holders from an increased risk of delivery shortfall. 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 across the Barmah choke.

The Menindee Lakes system is effectively empty. Temporary trade with the Murray is closed and typically remains closed until the system recovers to hold more than 640 GL of water and becomes part of the shared Murray system. Trade within the Lower Darling water source is allowed although there is no regulated water delivery.

Trade **into** the Murrumbidgee Valley is open; however, trade **out** is closed. Water users should monitor the WaterNSW website (www.waternsw.com.au) for daily information about the IVT account balance and status of trade. Trade **out** of the valley will open again when the IVT balance falls to 85 GL but will then close again should it rise to 100 GL.

Next announcement

The next water allocation statement for the NSW Murray and Lower Darling valleys will be on **Monday 3 February 2020**.

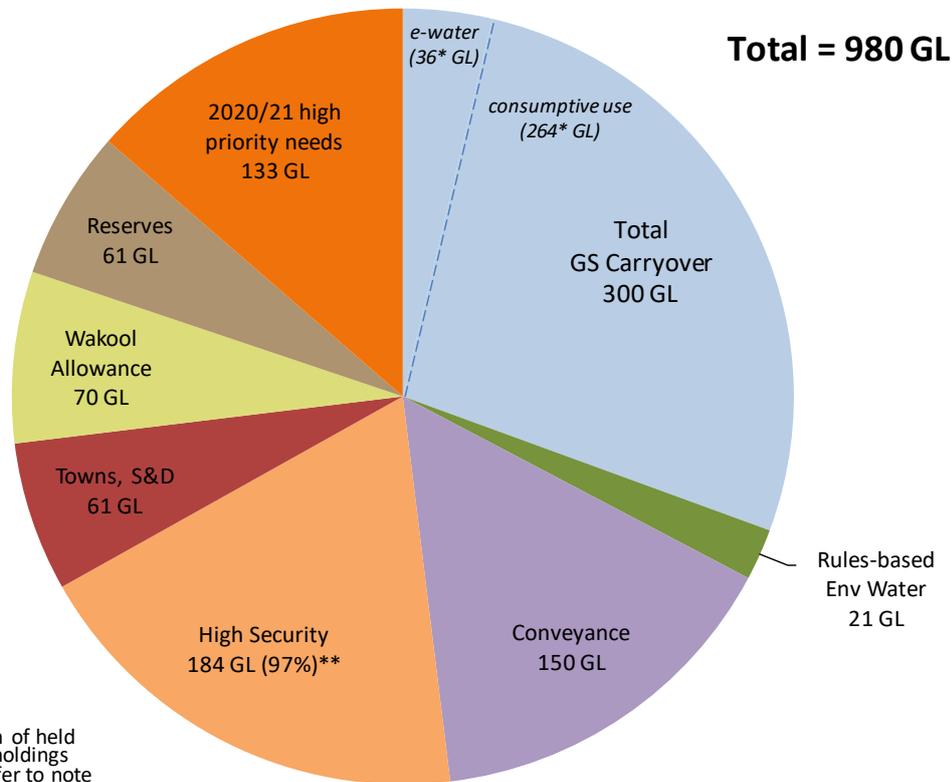
From mid-February, forecasts of indicative starting allocations for 1 July 2020 will be included in the mid-month water allocation statements. This aims to help water users with their end of year management decisions.

NSW Murray resource assessment data sheet

Resource Distribution (15 January) for 2019-20	Volume (GL)
Total Available Resource ⁽¹⁾	980
less	
Carryover ^{(2), (8)}	300
Rules based Environmental Water ⁽³⁾	21
Towns, Stock, Domestic ⁽⁴⁾	61 (100%)
Announced High Security subcategory ⁽⁴⁾	<1 (100%)
Announced High Security ⁽⁴⁾	184 (97%)
Conveyance ⁽⁵⁾	150 (45%)
Wakool Allowance ⁽⁶⁾	70
Reserves ⁽⁷⁾	61
Announced General Security ⁽⁸⁾	0 (0%)
2020-21 high priority needs ⁽⁹⁾	133

*See notes below.

NSW Murray resource distribution 2019-20 – 15 January 2020



* indicative breakdown of held environmental water holdings (OEH, TLM, CEWH), refer to note
 ** includes <1GL (100%) for HS subcategory

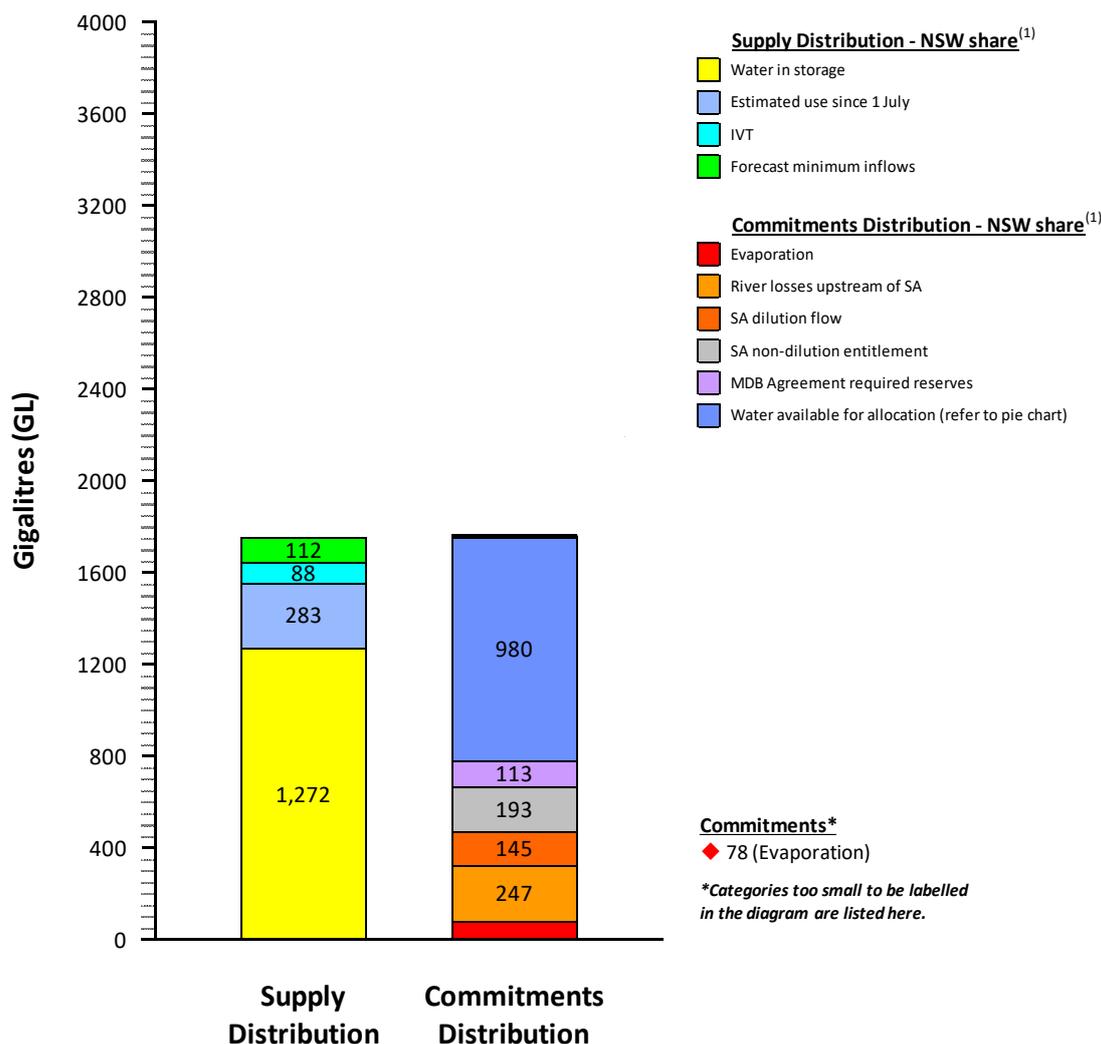
Data sheet notes

- (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 M1 releases to date for this water year (2019-20) is estimated to be about 420GL. NSW is 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 forecasts indicate that NSW is unable to meet the required reserve of 1,250GL 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 (PEW) – water required to be set aside to provide for riverine environments, as per water sharing plan and other inter-jurisdictional agreements. In the NSW Murray this includes the Murray Additional Allowance (MAA) (about 6GL) and the Barmah-Millewa Allowance (B-MA) (about 289GL – currently 100% borrowed). It also includes River Murray Increased Flows (RMIF) in Hume, accrued as part of the Snowy Water Initiative (currently about 15GL). 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, 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". Drought critical

conveyance water allocated to small irrigation districts for running channels to supply high priority entitlements has been included in this category.

- (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) Wakool Allowance – a conveyance volume necessary for NSW to operate the Edward-Wakool system. Typically up to 70 GL.
- (7) Reserves – required primarily under statutory plans, up to 61GL; set aside for critical human needs in accordance with Clause 11.03 of the Basin Plan.
- (8) 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 0GL of GS, 24GL of HS, 23GL of conveyance allocation and 36GL 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) 2020-2021 high priority needs on 1 July 2020 - volume set aside to cover high priority needs on 1 July 2020, for 'Year 2', including potential carryover

NSW Murray water balance – 15 January 2020



Water balance notes:

- (1) Supply Distribution and Remaining Commitments – The volumes in the categories shown are only those relating to NSW's share of the resource, at the end of the preceding month. The categories include the following:
- Water in storage: Volumes in the dams at the end of the previous month. (Excludes water in storage unavailable to NSW under the water sharing arrangements of the Murray Darling Basin Agreement).
 - Estimated use since 1 July: Estimated NSW usage to-date, reconciled periodically with hydrographic updates (meter readings).
 - Forecast inflows: NSW's share of forecast inflows into the River Murray System based on assumed extremely dry future conditions (includes Snowy Hydro's guaranteed inflows for the water year, and Murrumbidgee end of system flows).
 - IVT: Total tributary system water bought by Murray system users that is yet to be delivered.
 - Evaporation: Water set aside for evaporation for the remainder of the year. This reduces as the year progresses.
 - River losses upstream of SA: Water budgeted for transmission losses from the River Murray system upstream of the South Australian border for the remainder of the year. Generally reduces as the water year progresses.
 - SA non-dilution entitlement: Water to supply South Australia's entitlement flow, as required under the Murray-Darling Basin (MDB) Agreement. Reduces as water year progresses.
 - SA dilution flow: Water to provide South Australia's dilution and conveyance component of flow, as required under the MDB Agreement. Reduces as the year progresses, unless Additional Dilution Flow (ADF) is triggered.
 - MDB Agreement required reserves: Includes conveyance reserve and minimum reserve to be set aside for use in the next water year, as required by the MDB Agreement in clause 102D and 103, respectively.
 - Water available for allocation: NSW's bulk share of the resource that can be assigned to NSW Murray entitlement holders based on the water sharing plan. Allocation of this volume is provided in the above table and pie chart.

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