

14 December 2018

Macquarie and Cudgegong valleys

Water allocation update

The system continues to experience **record low inflow to Burrendong Dam**. Inflows to the dam since the last water allocation in August 2017 total about 42,000 megalitres (ML). This is less than one quarter of the previous record low inflow which was about 180,000 ML for the 16 months to the end of November.

A temporary water restriction is in place to ensure that water usage below Burrendong Dam in 2018-19 is suitably limited. Macquarie regulated river (general security and EWA) access licences are restricted to 70 per cent of the volume of water in the carryover sub-account as at 1 July 2018. Water users with queries about implementation of restrictions or accounting arrangements should contact WaterNSW.

Cudgegong regulated river access licences, including general security, are not restricted.

The Bulk Water Transfer between Windamere and Burrendong dams scheduled for January 2019 will occur in two stages. The stage 1 transfer of 35,000 ML will commence from 1 January 2019. The stage two transfer will be deferred until mid-year and ensure that at least 70,000 ML remains in Windamere Dam, in accordance with the water sharing plan.

There was just 4,000 ML of inflow to Burrendong Dam during November 2018. Sufficient inflow to ease account restrictions this summer appears unlikely. Water users are advised to plan their programs accordingly and to maximise water use efficiency.

Inflows in excess of 60,000 ML are required by the end of January 2019 to secure higher priority needs for the 2019/20 water year. Advice will be provided each month on inflows and resource availability. The current restrictions will begin to be eased as soon as there is sufficient water to assure high priority entitlements for the 2019/20 water year.

Deliveries under drought operations in 2018/19, including for stock and domestic purposes, will be weather-dependent and involve water conservation measures to prolong essential water supplies. This may involve implementation of water order debiting, maintaining very low but steady flows in regulated effluent creeks to minimise operational losses and, where feasible, block releases of irrigation orders, particularly in the lower parts of the Macquarie River. Water users should liaise with WaterNSW for their water delivery arrangements.

Storage levels (as at 14 December 2018)

- Burrendong Dam is 16 per cent full – falling – currently holding 223 GL.
- Windamere Dam is 39 per cent full – steady – currently holding 143 GL.

2018-19	High Security	General Security	Drought Stage
Cudgegong	100%	0%	 Stage 1
Macquarie	100%	0%	 Stage 3

Drought stage

The NSW Extreme Events Policy has been released for all surface and ground water sources in the NSW Murray Darling Basin. This introduces a staged approach to managing extreme events such as severe droughts or poor water quality events. Incident Response Guides (IRGs) are being developed for each valley as part of water resource plans to identify triggers and types of actions taken in each stage.

The Macquarie regulated river water source is assessed to be in Stage 3. The Cudgegong regulated river water source remains in Stage 1. Account restrictions are in force in the Macquarie as described above. Water supplies are being managed to meet high priority needs for as long as possible. Increased operational contingency measures are being implemented to maintain critical water supplies as far as possible.

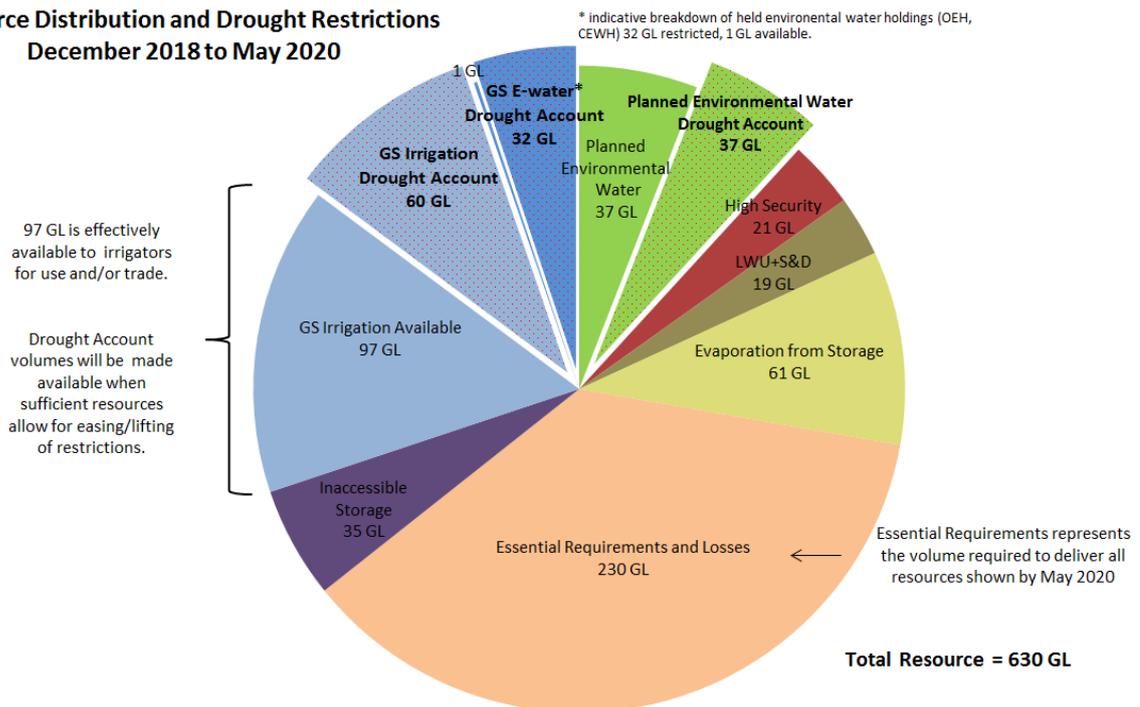
An explanatory section on drought stages has been provided at the end of this statement.

Climatic outlook

The Bureau of Meteorology seasonal outlook for December 2018 to February 2019 shows no clear indication of drier or wetter conditions for the catchment. Daytime and overnight temperatures are likely above average.

The Bureau's El Niño-Southern Oscillation (ENSO) Outlook 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 little influence on Australia from December to April.

Resource Distribution and Drought Restrictions December 2018 to May 2020



Macquarie-Cudgong Resource Assessment Data Sheet

Macquarie Resource Distribution (December 2018 to May 2020)	
	Volume (GL)
Total Available Resource ⁽¹⁾	305*
less	
Carryover remaining in accounts ^{(2), (7)}	190
Planned Environmental Water ⁽³⁾	74
Towns, Stock, Domestic ⁽⁴⁾	19 (100%)
Inaccessible storage ⁽⁶⁾	35
High Security ⁽⁴⁾	21 (100%)
General Security 2018/2019 AWD ⁽⁷⁾	0 (0%)
Essential Requirements (transmission, operations) ⁽⁵⁾	230
Evaporation from storage	61

* 325GL of additional inflow required to meet the 630GL budget.

Notes:

- (1) Storage volume in Burrendong Dam plus minimum forecast dam inflows plus transfers from Windamere Dam.
- (2) Carryover remaining in accounts: volume remaining in carryover sub-accounts (excludes Cudgong), discounted for evaporative losses.
- (3) Planned environmental water: water allocated to the Environmental Water Allowance (EWA) under the water sharing plan (WSP) to provide for the Macquarie Marshes and the riverine environment. Excludes 'licence-based' environmental water.
- (4) Towns, Stock, Domestic and High Security: reserves required to meet 100 per cent of entitlement over the assessment horizon. This represents total entitlement below Burrendong Dam.

- (5) Essential Requirements: best estimate of the volume required to run the river under dry conditions over the next 18 months to meet all demands. This includes transmission losses and operational loss. It is conservatively assumed that forecast inflows correspond to dry conditions. This estimate is regularly refined as the year unfolds.
- (6) Inaccessible storage: Dead storage of 34 GL plus 1 GL to ensure valve operations at very low storage levels.
- (7) Held environmental water (HEW): as a trial, we are reporting held environmental water administered by the environmental water holders, with the associated portions of general security allocation also identified in the above pie chart. This reporting of held environmental water is indicative only, prior to reconciliation of usage and net trade, and is estimated to be 33GL of GS and 0GL of HS. 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) and the Commonwealth Environmental Water Holder (CEWH). Details on environmental holdings can be found on individual agency websites.

Drought stage trigger levels

The drought stage is determined in accordance with critical trigger levels for this valley as outlined in the Macquarie-Castlereagh Incident Response Guide developed by the NSW Department of Industry-Water. A drought stage can range from Stage 1 (normal operations) to Stage 4 (critical drought). It is informed by routine water resource assessment results and is triggered by the degree to which water use priorities can be met within the water source. A summary of each drought stage is provided in the table below.

These drought stages are focused on the ability of the regulated river to deliver existing and high priority commitments within the valley. This is distinct from the drought phases determined by the NSW Department of Primary Industries in their Combined Drought Indicator, which is focused on categorising seasonal conditions based on rainfall, soil water, plant growth and drought direction for individual parishes in NSW.

For further details: www.industry.nsw.gov.au/water/allocations-availability/droughts-floods/extreme-events

Drought stage trigger levels for surface water – general principles

Criticality	Evidence base for surface water	Broad intent of measures
Stage 1 Normal management 	Can deliver all account water under normal river operations practices.	Provide certainty for water use planning. Long term water security and emergency/drought contingency planning.
Stage 2 Drought management 	Unable to deliver 100% of high priority account water and maximum expected use of general security under normal river operations practices.	Operational measures in the current water year to reduce transmission losses and prevent potential future failure to supply water in accounts. Drought response readiness Local Water Utilities (LWUs).

Criticality	Evidence base for surface water	Broad intent of measures
<p>Stage 3</p> <p>Severe drought/water shortage</p> 	<p>Only able to deliver restricted high priority demands and restricted remaining general security account water.</p>	<p>Restricting access to account water, restricting trade, and suspending some Water Sharing Plan (WSP) rules in addition to increased operational measures to prevent potential future failure to supply water in accounts.</p> <p>Drought management/restrictions (LWUs).</p>
<p>Stage 4</p> <p>Critical drought/water shortage</p> 	<p>Only able to deliver restricted town water supply, stock and domestic and other restricted high priority demands.</p>	<p>Suspension of some WSP rules. Severe restrictions required to prioritise remaining supplies for critical human water needs.</p> <p>Emergency drought management measures/restrictions (LWUs).</p>

Next announcement

The next water allocation statement for the regulated Macquarie-Cudgegong valleys will be on **Friday 11 January 2019**.