

# Regional water availability report

Weekly edition  
02 September 2019

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## 1. Overview

WaterNSW manages and operates 42 dams and storages to deliver water for environmental, domestic, town water, stock, industrial and irrigation purposes across the state.

WaterNSW storages provide supplies to all the major river systems in Western NSW, Greater Sydney, the Southern Highlands, Shoalhaven Bay as well as the Hunter, Bega, and Iron Pot valleys in coastal NSW.

The total active storage percentage of rural water supplies on 02 September 2019 was 33.3% of the total active storage capacity. This was an increase of 0.2% since last week.

The total storage level of urban water supplies on 02 September 2019 was 49.7% of the total storage capacity. This was an increase of 0.2% since last week.

## 2. System risks

- Water allocations for the new Water Year are reduced for some high security, carryover water and conveyance licences due to reduced supplies and deliverability constraints. All inland systems have zero general security allocations on 1 July 2019. (see summary on back table and [link](#) to detailed operational updates for impacted valleys.)
- Menindee Lakes continues to be below the 480/640GL trigger for NSW control, and four temporary block banks have been constructed to extend drought security beyond January 2019. The water level behind the banks is now quite low and inadequate for next summer's supplies. The cease to flow conditions increase the possibility of decreasing water quality and fish deaths, with increases in; salinity, pH and algae, and reduced dissolved oxygen.
- In the Lower Namoi, releases from Keepit Dam have ceased in December 2018 and until rain in late March, cease to flow conditions existed from downstream of Keepit Dam to Walgett. Cease to flow has recommenced in the whole river from Gunnedah to Walgett.
- The Peel valley is in drought stage 4 and drought planning is underway, including the implementation of works to restrict flows below Dungowan village, to secure water supply for Tamworth.
- In the Macquarie the combination of current storage volumes and a continuation of zero inflows will mean that there isn't enough water to maintain river flows to the whole valley for all of 2019/20. If these zero inflows continue then the priority will be to extend supply for towns and

critical industries. This will mean cease to flow is likely to be implemented for the river below Warren for Duck and Crooked Creeks early in spring. If inflows do not occur at all next year, then all storage water will be depleted before the end of June 2020 and the whole river would then stop flowing. Hence the importance of implementing these drought measures.

- The Lachlan system continues to experience very low inflows, only slightly above pre-2004 minimums since the last general security allocation in August 2017. If low inflows continue this winter then the system may record new low inflow records and, based on BOM's recent outlook, this is a real possibility, hence 1 July restrictions to 57% of general security account balances.
- Due to drought conditions, end of system daily environmental flow requirements in the Belubula River have been suspended, and customers are regularly advised of deliverability constraints.

### 3. Climatic Conditions

**New South Wales Rainfall Totals (mm) Week Ending 2nd September 2019**  
 Australian Bureau of Meteorology

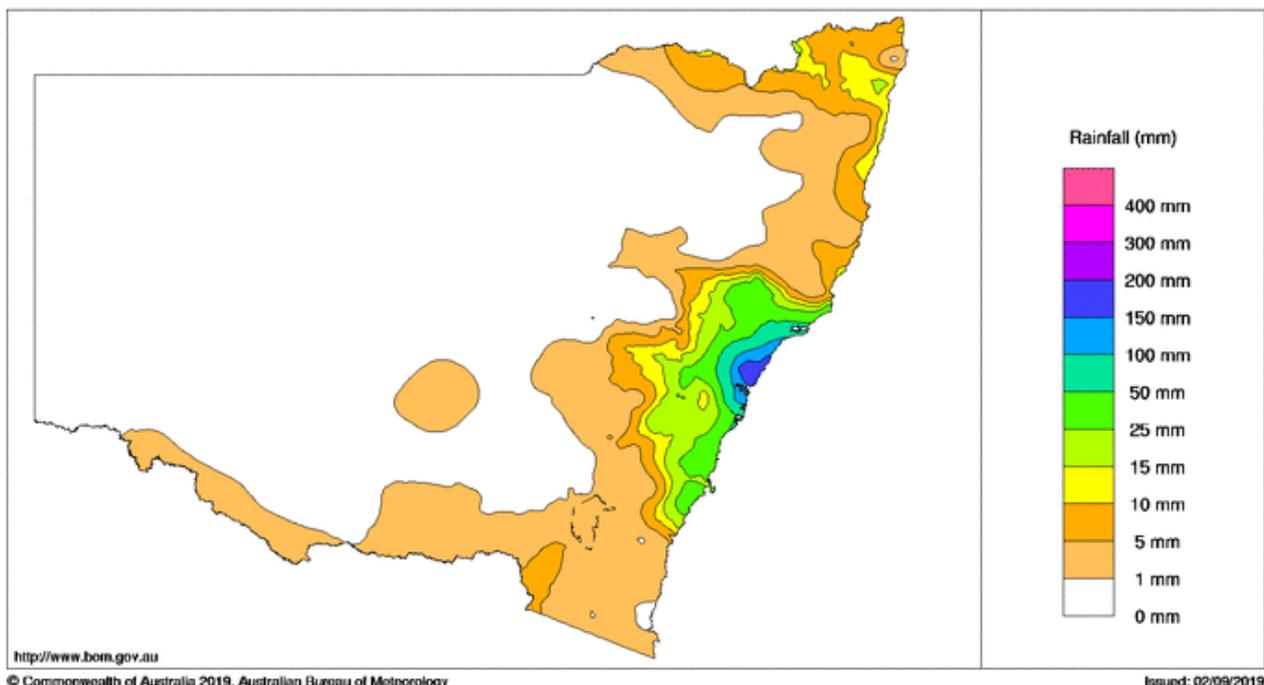


Figure 1 - Weekly rainfall totals for New South Wales

### This week's weather forecast

For the first part of the week, dry apart from the change of a late shower in the southwest. Mostly sunny with daytime temperatures above average throughout, most notable in in the west. Very warm across the north with westerly winds inland, tending south-westerly nearer the coast.

Further in the week, a shower or two developing in the southeast. Dry and mostly sunny elsewhere with daytime temperatures near average in the far south and well above average everywhere else.

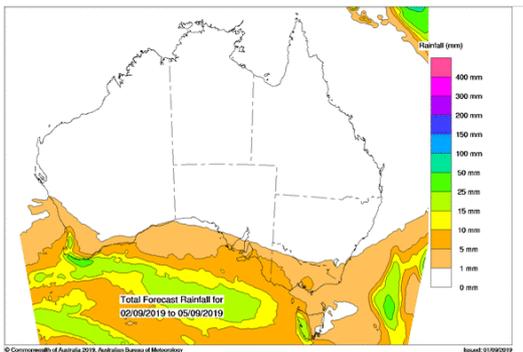


Figure 2a – First 4-day Forecast (02 - 05 September 2019)

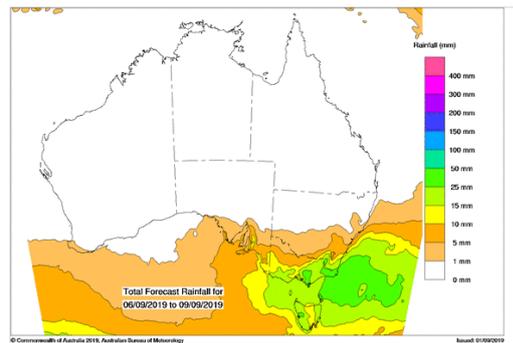


Figure 2b – Following 4-day forecast (06 – 09 September 2019)

A drier than average spring is likely for most parts of NSW meaning the remainder of the year is expected to be drier than average.

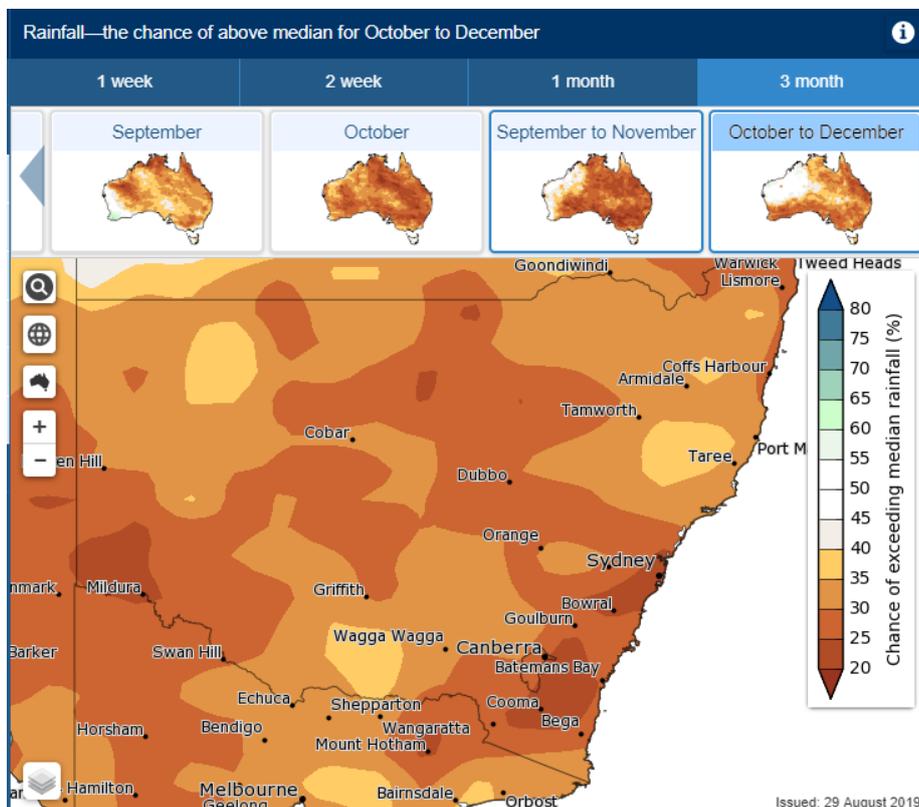


Figure 3 – 3-month rainfall outlook

## 4. Southern valley based operational activities

### 4.1 Murray valley



#### Storage and release status

- Hume Dam is currently 43% of active capacity, releases currently are about 12,900ML/d and increasing for environmental flows below Yarrawonga Weir.
- Release downstream of Yarrawonga Weir increased to 11,640ML/day.
- The Edward River Offtake flow is currently about 1,520ML/d, flow will increase to 1550 ML/d during the week.
- The Gulpa Creek Offtake flows are at about 676ML/d. The flows are expected to increase to about 700ML/day by end of August and remain steady until second week of October.
- Stevens Weir level is about 4.47m. Water level upstream of Wakool Canal offtake is about 1.73m. Flow downstream of Stevens Weir is about 1,910ML/day and is expected to increase over 2,000 ML/d during the week.
- Flows in the Colligen Creek (320ML/day) and Yallakool Creek (430ML/day) are to remain relatively steady as per environmental watering plan.
- Wakool River offtake (55ML/day) would vary between 40 and 50ML/day as per eWater plan
- Flow in Niemur River at Mallan School is currently about 265ML/d and would gradually increase during this week.
- Merran Creek flows upstream of its confluence with Wakool is about 82 ML/day and is likely to increase over the week.
- Flow in Wakool River at Stoney Crossing is currently at about 640 ML/day and is likely to increase over the week.
- Flows at Balranald are currently about 1,335ML/d as per Water Sharing Plan target for the month of September.
- Lake Victoria is currently holding about 558GL or 79% of active capacity. The flow to South Australia is about 5,725ML/d. ( <https://riverdata.mdba.gov.au/system-view> )

#### Environmental water operations

- Environmental water holders will be using environmental entitlements throughout winter and spring to benefit the ecology and build resilience in the ecosystem. Two separate pulses are planned – one for August and the other for September.
- The flow into Gulpa Creek system would be increased to about 700ML/day for about 6-weeks over September / October to completely fill the Gulpa Wetlands (Reed Beds, Coppingers and

Duck Lagoon) to provide optimal bittern nesting habitat over October-November and into December. The flows will recede in mid-October to aim to discourage colonial nesting waterbirds nesting in the wetlands.

- Environmental entitlements will be used to gradually increase the release downstream of Yarrowonga to 15,000 ML/day by mid-August, before reducing back to operational flows by the end of August. A second longer pulse (release of environmental water) is being planned in September 2019.

#### **Water availability**

- The latest [DPIE Water Allocation Statement dated 02 September 2019](#) confirmed that allocations remain unchanged. High security licences have 97%, while general security licences have 0% allocation. General security licence holders have full access to water carried over from 2018-19, which is a volume equivalent to about 18% of general security share components. Allocations are 100% for local water utility, domestic and stock and high security sub-categories (town water supply, research, and community and education). Regulated river (conveyance) has an allocation of 6.06%.

#### **Drought operation measures**

- The NSW Murray regulated river water source has advanced to Stage 2, meaning drought operational planning has commenced in preparation for extreme dry conditions that may continue through 2019-20.

#### **Water quality**

- Potential Blue Green Algae issues:
  - There are no red alerts to report for the Murray or Lower Murray
  - Recent Blue Green Algae (BGA) sampling at [Lake Hume](#) shows Lake Hume at Green alert level.
  - For more information visit: [Water Quality Algae](#)

#### **Planned supply interruptions:**

- Planning is underway to maintain the Stevens weir gates and super structure under the Coatings Programme. However, the maintenance activity is not expected to impact the normal river operations and Weir levels.



## 4.2 Lower Darling valley

### Storage and release status

- The lakes currently hold less than 1% of active capacity. The total active storage is about 13.9 GL.
- Lake Tandure, Lake Cawndilla and Lake Menindee are currently dry, while Lake Pamamaroo holds less than 10ML.
- The release from Wetherell reduced on 12 Feb 2019 and flows at Weir 32 have ceased from mid-February 2019.
- Current level at the block bank near Karoola is very low. The pipes in the Karoola bank remain closed but will be managed to maintain limited supplies downstream.
- Current level at the block bank near Jamesville is about 0.97m. The pipes at the bank remain closed, except for minor releases to supply permanent plantings immediately downstream.
- Ashvale Bank is currently very low. The pipes at the bank remain closed.
- The average pan evaporation rate at Menindee over the last week was about 4.3 mm/d equivalent to about 130ML lost from the lakes over the week.

### Water availability

- The total storage of Menindee Lakes reached the 480GL trigger for NSW control of the lakes on 16 December 2017. The storages will be managed as per the Lower Darling Operations Plan until the storage volume next exceeds 640GL. For more information visit: [Lower-Darling Operational Plan](#).
- Inflows from the Warrego River reached Wilcannia on 15 June and ceased on 19 Aug 2019. The inflows past Wilcannia have not improved water availability in Lake Wetherell with losses between Wilcannia and Wetherell accounting for all their flows.
- Water allocations for 2019/20 are 50% for stock and domestic licence holders and local water utility licence holders, 30% for high security licence holders and 0% for general security licence holders. While water has been allocated for users, delivery will be dependent upon inflows to the system as limited water available locally.
- Lower Darling water users are restricted to use water for critical human needs and permanent plantings only. The restriction will be eased or removed if flow situation improves in the future.

### **Drought operation measures**

- A temporary water restriction came into effect on 4 December 2018 limiting the taking of water to town water, domestic and stock, permanent plantings, and, from Copi Hollow, high security licences. [Gazette](#)
- The Lower Darling regulated river water source is assessed to be in drought [Stage 4](#), as restrictions limit access to water for critical needs only.
- Four temporary block banks viz. Karoola, Court Nareen, Jamesville and Ashvale have been constructed to extend supply to domestic, stock and permanent plantings. The water level behind the banks is now quite low and inadequate for next summer's supplies
- Pumping by Essential Water to Broken Hill is now met from the Wentworth to Broken Hill pipeline while pumping from Copi Hollow continues at lower rates for Menindee town and pipeline customers.
- The release to Lower Darling River from the storages has ceased and this will impact the river conditions below Weir32. River users are reminded to monitor the river levels, to look for water quality alerts and be aware of snags and other obstructions that may appear while the river ceases to flow below Weir 32.

### **Water quality**

- Amber Alert for Copi Hollow (site N1094), Lake Wetherell (sites 1 to 4), Lake Pamamaroo (N1093) and Pooncarie(N1040).
- Green Alert for Darling River at Wilcannia (N1042), Darling River at Menindee pumping station (site N1095), Darling river at Weir 32 (site N1086) and Darling river u/s of Weir 32 (site N1171).
  - For more information visit: [Water Quality Algae](#).

### **Planned supply interruptions:**

None.

### 4.3 Murrumbidgee valley



#### Storage and release status

- Burrinjuck Dam is currently at 32% of active capacity, releasing about 456ML/d and will vary marginally as per minimum transparency/translucency rules.
- Blowering Dam is currently at 54% of active capacity, releasing about 2500 ML/d to meet smaller irrigation demand.
- The Beavers Creek Offtake remains fully open as per May to August period environment rules and flows are low due to low river levels. The operational target at Kywong in Old Man Creek is about 600ML/day in September. However, with current low flows in Murrumbidgee river the flows in the creek system may not improve unless the weather turns wet or the irrigation demands increase substantially in the Murrumbidgee system
- Berembed Weir is currently about 4.96m and would be managed to meet any minor increase in downstream demands. The minimum operating level of Berembed Weir is planned to be about 3.5m during the season.
- Bundidgerry storage is currently near full at 3.71m and is likely to slightly increase during this week.
- Gogeldrie Weir, currently near full at 5.90m, and would be managed to meet any minor increase in downstream demands. The minimum operating level of Gogeldrie Weir is planned to be about 5.3m during the season.
- Tombullen storage is at about 1.86m (4.78GL, 46% of active storage volume) releasing about 840 ML/d. Water releases from Tombullen are planned to commence to meet downstream demands. The storage is expected to be fully drained over a period of two weeks.
- Hay Weir is currently at about 8.00m; and the water stored in the weir would be used to meet downstream demands. In view of the prevailing drought conditions the minimum operating level of Hay Weir is planned to be about 5.5m during the season.
- Maude Weir is at about 1.41m and would be gradually lowered to 1.14m with a view to lift the gates clear of water by first week of September for maintenance.
- The planned maintenance work at Redbank Weir has been successfully completed and the gates were reinstated on 22/8/19. Currently, the weir level is about 1.34m and is being gradually re-filled. The minimum operating level in Redbank Weir would be about 2.1m during the season.
- Flows at Balranald are currently about 1,335ML/d as per Water Sharing Plan target for the month of September.

- The current diversion into Yanco Creek is about 257 ML/d and is expected to remain around 270 ML/d during the week.
- Supply to Billabong system has been augmented via Finley Escape at a rate of about 53ML/d. This is mainly because of increase in diversions.

### **Environmental water operations**

- Planned environmental releases are being made from both Burrinjuck and Blowering dams as per the water sharing plan rules.
- Planned environmental water flow rules are fully complied at both Balranald and Darlot.

### **Water availability**

- For Inter Valley Transfer (IVT) account from Murray to Murrumbidgee refer to WaterNSW website [IVT Ordering](#). The IVT balance recently increased to about 100GL and hence the trade out of Murrumbidgee is currently closed.
- The [DPIE Water Allocation Statement of 15 August 2019](#) has increased allocations with allocations now at 100% for towns and 95% for high security, while general security has increased to 6%. General security licence holders in the Murrumbidgee will have full access to water carried over from 2018-19, which is a volume equivalent to about 8% of general security share component.

### **Drought operation measures**

- The Murrumbidgee regulated river water source has moved back to drought [Stage 1](#), meaning all allocated water can now be delivered under normal regulated river operations. Despite the small improvements, drought conditions continue to threaten.

### **Water quality**

- Potential Blue Green Algae issues:
  - Lake Albert in Wagga Wagga is on a Green alert for blue-green algae. More information can be obtained from the following link: [Lake Albert - Wagga City Council](#)
  - Lake Wyangan South in Griffith has an Amber status for blue green algae. For more information select the following link: [Murrumbidgee Irrigation](#).
  - Lake Wyangan North in Griffith has an Amber status for blue green algae. For more information select the following link: [Lake Wyangan](#).
  - The Hay weir at Leonard Street and Murrumbidgee River at Maude Weir Buoy are on a Green alert status.

- Green alert is current for Burrinjuck Dam and Green alert downstream of the dam wall.
- Green alert is current for Blowering Dam and Green alert downstream of the dam wall.
- Green alerts are current at Gogeldrie Weir, Hay weir Buoy and Balranald,
- Other sites have no alerts. For more information visit: [Water Quality Algae](#).

**Planned supply interruptions:**

- Maintenance of Tarabah Weir is underway. However, the structure is being operated manually to deliver about 50ML/d below the structure.
- Nimmie Creek, North Caira and South Caira offtake regulators are under maintenance and will remain unavailable until early October.
- Essential maintenance of Maude Weir is expected to commence by first week of September and continue for about two weeks. At the successful conclusion of the maintenance work the weir would be reinstated and raised to about 2.5m.
- An [operations update](#) has been issued on the planned maintenance schedules for Berembed, Gogeldrie, Maude and Redbank Weir weirs; and, Yanga and Waugorah regulators.

## 5. Central valley based operational activities

### 5.1 Lachlan valley



#### Storage and release status

- Carcoar Dam is currently 20.5% of capacity and releasing 2ML/d. Releases are forecast to be around 2 ML/d for the rest of the week.
- Wyangala Dam is currently 42% of capacity and releasing an average of around 800ML/d. Releases are forecast to be around 800ML/d for the rest of the week.
- Lake Cargelligo is currently around 52% of capacity and the level is likely to drop down to around 50%.
- Releases downstream of Brewster Weir are currently around 250ML/d. Releases are forecast to stay around 250-300ML/d this week.
- Annual S&D replenishment flows into Merrowie Creek started on 18<sup>th</sup> May and finished on 13<sup>th</sup> July. Willandra Creek and Merrimajeel/Muggabah started on 15<sup>th</sup> June and 17<sup>th</sup> June respectively. Muggabah Creek offtake was closed on the 15<sup>th</sup> August. Stock and Domestic flows into Merrimajeel ceased on the 12<sup>th</sup> August, the current flows are for the Environment.

#### Environmental water operations

- There is a watering event into Booberoi Creek, which started on the 6 June and finished on the 31 August.
- Around 300 ML of Licenced Environmental water was delivered to Mid Lachlan wetlands (Kiagathur swamp) for breeding activities for migrating birds starting from 24 July.
- At the end of S&D flow, Environmental water was delivered in Merrowie Creek for Murphy's lake.
- At the end of S&D flow, Environmental water will be delivered into Merrimajeel Creek
- Due to drought conditions, end of system daily environmental flow requirements in the Belubula River have been suspended and are only being met intermittently with the contribution from tributaries.

#### Water Availability

- It is estimated that a combined dam and tributary inflow volume of more than 280,000 ML was required in August before a further allocation can be made in the Lachlan River. Inflows received were around 3,000 ML.

- The DPIE Water Allocation Statement (WAS) on 1 July 2019 announced that the water access licence holders are only allowed to access 57% of the volume of water in their accounts carried over from 2018-19 water year. The restriction will be eased or removed if inflow situation improves in the future.
- The temporary water restriction can be viewed at – <http://www.industry.nsw.gov.au/water/allocations-availability/temporary-water-restrictions>
- Local water utility and domestic and stock access licence holders on the Lachlan regulated river receive 100% of allocation.
- Regulated river high security water access licence holders receive an allocation of 87%, while regulated river general security access licence holders receive no allocation at this time.
- In the Belubula, general security water access licence holders have 0% allocation but will have access to account water that has been carried over from the previous water year. Deliverability of this water is restricted. [Belubula-Operations-Update-1-July-2019](#)
- High security and domestic and stock access licence holders on regulated Belubula receive 100% allocation.
- The detailed May WAS by Dept Planning, Industry & Environment can be viewed at: [WAS](#)

| <b>2019-20 Inflows by end of Month</b> | <b>Assessment based on drought inflow restarting in</b> | <b>Combined drought Inflows (GL)</b> | <b>Deficit in drought Inflows (GL)</b> | <b>Additional combined inflows required prior to easing GS restriction and increase HS allocation (GL)</b> | <b>Predicted dam level end May 2020</b> | <b>Predicted dam level end May 2021</b> |
|--|---|--------------------------------------|--|--|---|---|
|  |   |                                      |  |  |   |   |
| July - August                          | September   | 133.6                                | 89.5                                   | <b>100</b>   | 6.8%                                    | 0.10%                                   |
|  |   |                                      |  |  |   |   |
| July - September                       | October   | 91.7                                 | 131.4                                  | <b>143</b>   | 9.4%                                    | 0.04%                                   |
|  |   |                                      |  |  |   |   |
| July - October                         | November  | 75                                   | 148.1                                  | <b>161</b>   | 9.5%                                    | 0.11%                                   |
|  |   |                                      |  |  |   |   |

Note 1: Estimated water held in general security accounts on 1 July 2019 was 156,000 ML.

Note 2: Water delivery operations in 2019-20 provided under drought contingency planning (Stage 3).

Note 3: Minimum storage level of 3% is targeted at end 2019-20 to maintain critical supplies in 2020-21.

- These are indicative improvements only and are not guaranteed. Estimates may change based on weather variability, water management decisions and other events. This means water users should use this information with caution and at their own risk, as it projects many months ahead.
- The assessment for the table above is based on water delivery operations in 2019-20 provided under drought stage 3 and 2020-21 under severe drought stage 4. NSW extreme events policy can be viewed at [Extreme Events Policy](#)
- The meeting with Belubula Landholders Association at Canowindra on 3 June 2019 to discuss river operation and delivery options for 2019/20 was well-attended with the majority of active water users. Following a detailed presentation on the HS and GS account balances, the volume in Carcoar and the rules on uncontrolled flow access and end of system flows, there was a wide-ranging discussion on river management options for 2019/20.
- There was unanimous support from the meeting for WaterNSW to make the following recommendations to DPIE -Water on operations in 2019/20:
  - Access to water held on GS accounts should be unrestricted from 1 July to 30 September and expected to be delivered primarily from downstream tributary inflows. Releases from Carcoar will only be made to deliver water upstream of Needles.
  - From 1 October access to GS account balances may be restricted.
  - Access to uncontrolled flows will be available in accordance with current WSP rules.
  - The effective available water for uncontrolled flow access should be calculated based on the restriction applied to GS account balances.
  - Supplementary flow access to be in accordance with current WSP rules.
  - If inflows occur the HS allocation to increase at a higher rate than the release of suspended GS account balances.
  - Allow trades of GS and HS allocations upstream.
  - Target 2,500 ML in Carcoar at the end of the 2019/20 water year.
  - The end of system (EOS) flow rule should immediately be formally suspended.
  - There was concern that the Flyer's Creek 'wet' trigger of the 120-day moving average exceeding 40 ML/day should not result in automatic reinstatement of the EOS flow rule, due to the risk that dam levels may not recover sufficiently, and advice that a further review of this should be undertaken with the Belubula Landholders Association.

## Water Quality

- Latest BGA samples show that Curlew Waters is on green alert. Lake Cargelligo Outlet, Lake Cargelligo TWS, Lake Cargelligo Boatshed and lake Brewster inlet are on Green alert.

- Wyangala Storage results (15<sup>th</sup> August) show that the overall productivity decline across the storage. The assemblage is currently variable across the storage. All sites remain at green alert.
- Some river flow is being circulated through the Lake Cargelligo with the intention of improving water quality in the channels connecting the lakes and the river.

**Planned supply interruptions:**

- Nil.

## 5.2 Macquarie valley



### Storage and release status

- Burrendong Dam is at 4.6% of capacity and currently releasing around 150ML/d. Releases are forecast to be remain around 150 ML/d later in the week. Releases are primarily for town water supply, research high security and some S&D demands.
- Burrendong Dam has been drawn below 10% on five similar occasions (June 1995, Jan 1998, Apr 2003, May 2004 and Jan 2007).
- Windamere Dam is currently 31.6% of capacity and releasing 50ML/d. Releases are forecast to be between 40-60ML/d for the rest of this week.
- There have been inflows of about 51,500 ML into Burrendong Dam since 1 January. The combination of earlier Windamere releases and Burrendong inflows has resulted in Burrendong Dam being higher than previously forecast for this stage of the drought planning.
- If conditions remain dry, a second phase of the transfer will recommence in late 2019, leaving a minimum of 70GL in Windamere Dam, which provides a very secure supply for local demand for the next five to seven years.

### Environmental water operations

- Translucent environmental water from Windamere Dam is deliverable all through the year when inflows to the dam meet the relevant triggers.
- Environmental water accounts in Burrendong have been suspended to extend supplied for towns and critical industries. [Link](#)

### Water availability

- It was estimated that inflows of around 346 GL was required in August before an increment in Available Water Determination could be made. Inflows in August were negligible.

### Drought operation measures

- The Macquarie is in drought Stage 4, the highest level under the Incident Response Guide.
- The combination of current storage volumes and a continuation of zero inflows will mean that there isn't enough water to maintain river flows to the whole valley for all of 2019/20. If zero inflows continue then the priority will be to extend supply for towns and critical industries. This will mean cease to flow is likely to be implemented for the river below Warren and for Duck and Crooked Creeks in Winter - Spring. If inflows do not occur at all next year and no drought measures are implemented, then all storage water will be depleted before the end of June 2020 and the whole river would then stop flowing.

- Flows into Duck and Crooked Creeks ceased on the 28<sup>th</sup> August. Construction of the temporary drought works have now commenced at the fishway.
- The Water Allocation Statement from DPIE on 1 July 2019 announced allocations for high security of 70% and high security access licence sub categories of 35%, while general security has 0%.
- Macquarie general security water access licence holders are also restricted from any access to water in their accounts carried over from the previous water year.
- The temporary water restriction can be viewed at - [temporary water restrictions](#)
- The timing of all S&D replenishments in 2019 will depend on further rainfall events, dam inflows, and contributions from downstream tributaries, rather than dam releases.
- Cudgegong general security carryover is not restricted.
- Any inflows received will be used to improve the drought management operations in 2019-20 from stage 4 to stage 3 prior to easing the current restrictions and drought management operations further. The Macquarie–Castlereagh incident response guide can be viewed at [Incident response guide Macquarie](#).
- The actual inflows to Burrendong Dam since the last AWD in August 2017 total about 89 GL to end of June 2019. This is only 35% of the previous record low inflow of about 256 GL for the 23 months ending in June.
- This drier than historical minimum inflow confirms that the system has entered into a new drought of record for Burrendong Dam, and the next few months of inflows will be important for planning this season's operations.

### **Water quality**

- Burrendong algal results for the 21<sup>st</sup> August show no cyanobacteria. sp. at the Dam Wall, however the current red alert level will remain until there are two clear results in a row. Downstream is showing a minor detection of the same species. Both the Mookerawa and Cudgegong arms show a diatom bloom is occurring. Storage is now at red alert.
- Windamere algal results for the 13<sup>th</sup> August show the Microcystis sp. presence at all upstream sites has diminished and is now not detectable. Windamere is now on green alert.
- Windamere Dam trash rack position is 12.69m – 15.69m below the water surface.
- Works to reinstate the temperature curtain at Burrendong Dam have been completed and the commissioning phase has commenced. The curtain is fully lowered due to low storage levels.

### **Planned supply interruptions:**

- Nil

## 6. Northern valley based operational activities

### 6.1 Namoi valley



#### Storage and release status

- Split Rock Dam is at 2% of active capacity and is currently releasing around 34 ML/d for the Upper Namoi.
- Keepit Dam is at 1% of active capacity and releases have ceased since December 2018.
- Chaffey Dam is at 21% of active capacity and currently releasing 76ML/d.
- Flows from the current environmental fish flows have reached Walgett on the Barwon River and filled the weir, providing water for the town supply.
- The Pian Creek replenishment flow was not able to be delivered in the usual manner so unless conditions improve, other supply arrangements may need to be made.

#### Environmental water operations

- There are not any current orders for the release of environmental water in the Namoi. No water is available to environmental accounts in the Peel River.

#### Water availability

- There is currently a shortfall of more than 95GL before there is likely to be an AWD increment in the Lower Namoi valley.
- The latest Water Allocation Statement by DPIE (dated [1st July 2019](#)) confirmed that in the Peel Valley local water utility and domestic and stock allocation is 70%; high security and its sub categories is 50%, and general security is 0%.
- Upper Namoi local water utility and D&S have 100%, high security has 75% and general security has 0% and are only allowed to access 75% of the volume of water in their accounts carried over from the previous water year.
- Lower Namoi local water utility and D&S have 100%, high security has 75% and general security has 0% and are not allowed to access water in their accounts as of 1 July 2019. The restrictions will be eased or removed if inflow situation improves in the future.

#### Drought operation measures

- The Peel valley is in drought stage 3. Drought planning is underway, including the potential to restrict flows below Dungowan to secure town water supply. Current operational targets below Tamworth are for very low flows. [Operations Update Peel 24-July](#)

- The Upper Namoi is in drought Stage 3, while the Lower Namoi is at Stage 4, the highest level under the Incident Response Guide.
- Deliverability of water in accounts is restricted, see detailed [Operations Update Namoi 1-July](#)
- Deliverability of this water will rely on tributary flows and/or improved storage volumes. No further block releases are planned for the Lower Namoi until inflows occur.

#### **Water quality**

- Recent sampling for BGA indicates that Chaffey Dam storage water is on a Green alert.
- Split Rock Dam is on an Amber alert in the storage and on an Amber alert downstream.
- Keepit Dam is on an Amber alert in the storage and on an Amber alert downstream.

#### **Planned supply interruptions:**

- Mollee fish way is currently unavailable due to infrastructure failure.



## 6.2 Gwydir valley

### Storage and release status

- Copeton Dam is at 8.8% of active capacity and is currently releasing 98 ML/d.

### Environmental water operations

- There are not any current orders for the release of environmental water in Gwydir River.

### Water availability

- Inflows of about 50GL are required to refill the Essential Requirements and Delivery Loss accounts before any increase in general security AWD is possible.
- The latest Water Allocation Statement by DPIE -Water (dated [8<sup>th</sup> August 2019](#)) confirmed that in the local water utility and domestic and stock access licence holders have 100% of entitlement. High security has 100% and general security have 0%. These licence holders have access to general security account water carried over from the previous water year.

### Water quality

- Recent Blue Green Algae (BGA) sampling at Copeton shows Copeton at an Amber level.

### Drought operation measures

- The Gwydir is in drought Stage 3 as the drought is deepening and tougher measures are needed to protect critical human needs. Management action will focus on ensuring water is available for critical needs for as long as possible.
- However, deliverability will rely on downstream tributary contributions and infrequent block releases. [Operations Update Gwydir 1-July](#)

### Planned supply interruptions:

- No supply interruptions are expected.

## 6.3 Border rivers

### Storage status

- Pindari Dam is at 5% of capacity and releasing around 13ML/d (minimum release).
- Glenlyon Dam is at 8% of capacity. Releases ceased.
- Releases currently ceased from Boggabilla.

### Environmental water operations

- Releases of about 7.4 GL from Glenlyon Dam to maintain fish refuge areas in the Border and Barwon Rivers commenced on 24 April and ceased on 13 May. [Operations update](#).
- This environmental water arrived at Mungindi on 23 May and around 1,250ML has passed Mungindi. Flow currently ceased.

### Water availability

- The Available Water Determinations (AWD) for 2019-20 is 100% for towns and high security, while general security A-class and general security B-class is zero. Total carryover into 2018-19 is around 1.8% of general security share components but 50% of that is restricted until the inflow situation is improved.
- While allocations for the Border Rivers have been announced by DPIE -Water, the delivery of water is restricted due to the ongoing drought. Releases will be made to ensure supplies for towns including Goondiwindi and Boggabilla, however releases are not able to be made to supply Mungindi. No dam releases will be made for Glenlyon to Junction and downstream of the Junction to Mungindi section. Very limited access may be available for Pindari to the Junction customers. Access may be available from tributary inflows for all sections. Detail water delivery arrangements are available in the [operations update](#).

### Drought operation measures

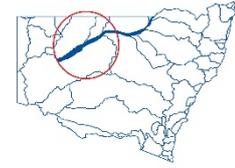
- The Border Rivers is in drought [Stage 4](#). Customers are advised that if dry condition persists, future deliveries, including essential supplies, will be grouped together (block releases) to improve delivery efficiencies.

### Water quality

- Recent Blue Green Algae (BGA) sampling at Pindari shows an amber alert level.
- Red alert warning has lifted at Boggabilla and Goondiwindi. [Media release](#).

### Planned supply interruptions:

- No supply interruptions are currently forecast



## 6.4 Barwon-Darling River system

### River flow status

- The environmental release from the Border valley reached Mungindi on 23 May with around 1,250ML over the weir. This flow reached Mogil Mogil on 8 June and total observed volume was around 280ML.
- Gwydir valley releases reached Collarenebri on 27 May with around 15,350ML recorded to date. Water arrived Warraweena, downstream of the Culgoa River junction, on 28 July. So far, around 475ML is observed at Warraweena and flow is not expected to reach Bourke.
- Flows from the Nebine/Culgoa River reached the Darling River upstream of Bourke on 9 May and Bourke Weir rose about 1.2 m and is currently reducing.
- Flows in the Darling had recommenced between Bourke and Louth because of local rainfall over the Easter weekend and ongoing inflows from the Warrego River that contributed to the flow at Louth. This flow reached Wilcannia on 15 June. Cease to flow conditions re-commenced from Louth to Wilcannia and this inflow event did not contribute any volume to Lake Wetherell.
- The Northern Fish Flow event is coming to an end and cease to flow conditions re-commenced from Mungindi to Brewarrina. Currently a small flow exists at Warraweena.
- The Barwon-Darling Rivers travel through a very arid environment with significant losses from the system due to high evaporation and long travel times. It is very difficult to accurately forecast downstream flows as local conditions can vary significantly over the number of weeks it takes the water to travel along the river. In addition, sections of the river have ceased to flow for an extended time and significant losses will occur with wetting up the river bed along these sections and refilling weir pools and natural holes in the river. The below summarises the current forecast estimates of flows along the system and timing of the flows reaching sections. This information will be regularly updated as the event progresses.

| River station                     | Gauging station | Observed volume (ML) | Total forecast volume – including observed (ML) | Flow arrival/expected arrival date |
|-----------------------------------|-----------------|----------------------|---|------------------------------------|
| Barwon at Mungindi                | 416001          | 1,250                | 1,250   | 23 May 2019                        |
| Barwon upstream of Presbury       | 416050          | 590                  | 590   | 27 May 2019                        |
| Barwon at Mogil Mogil             | 422004          | 279                  | 279   | 9 June 2019                        |
| Barwon at Collarenebri            | 422033          | 15,350               | 15,350  | 27 May 2019                        |
| Barwon at Tara                    | 422025          | 12,307               | 12,307  | 5 June 2019                        |
| Barwon at Danger Bridge (Walgett) | 422001          | 9,288                | 9,288   | 12 June 2019                       |
| Barwon at Boorooma                | 422026          | 4,234                | 4,234   | 26 June 2019                       |
| Barwon at Geera                   | 422027          | 3,722                | 3,722   | 27 June 20019                      |
| Barwon at Brewarrina              | 422002          | 2,223                | 2,223   | 5 July 2019                        |
| Barwon at Bemeery                 | 422028          | 641                  | 641   | 22 July 2019                       |
| Darling at Warraweena             | 425039          | 475*                 | 450-500   | 28 July 2019                       |
| Darling at Bourke                 | 425003          | 0                    | 0   |                                    |
| Darling at Louth                  | 425004          | 23,428               | 23,428  | 29 April 20019                     |
| Darling at Tilpa                  | 425900          | 15,425               | 15,425  | 13 May 2019                        |
| Darling at Wilcannia              | 425008          | 3,352                | 3,352   | 14 June 2019                       |
| Lake Wetherell                    | 425020          | 0                    | 0   |                                    |

\*Flow arrived Warraweena on 28 July 2019. Small part of this flow is from Culgoa inflow

### Environmental water operations

- Releases of Held Environmental water to maintain fish refuge areas in the Barwon River from Copeton Dam commenced on 16 April and ceased on 23 June. Releases from Glenlyon Dam commenced on 24 April and ceased on 13 May.
- A Section 324 temporary water restriction is in place to restrict irrigation access to this water. This restriction is extended from Tilpa to Lake Wetherell to allow the Warrego water to re-establish flows as far down the system as possible. [News](#).
- Planned Environmental Water (PEW) is water in the system that is below the commence to pump conditions for access licences.

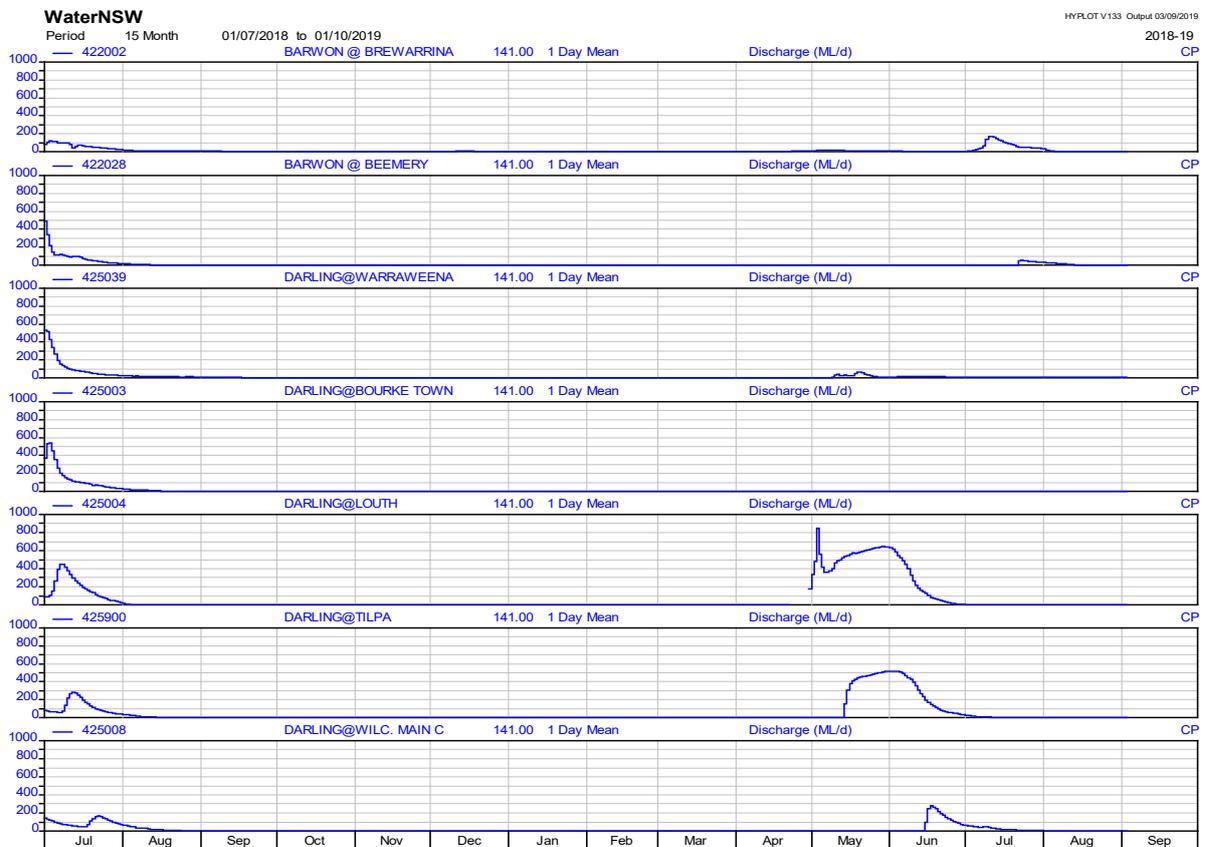
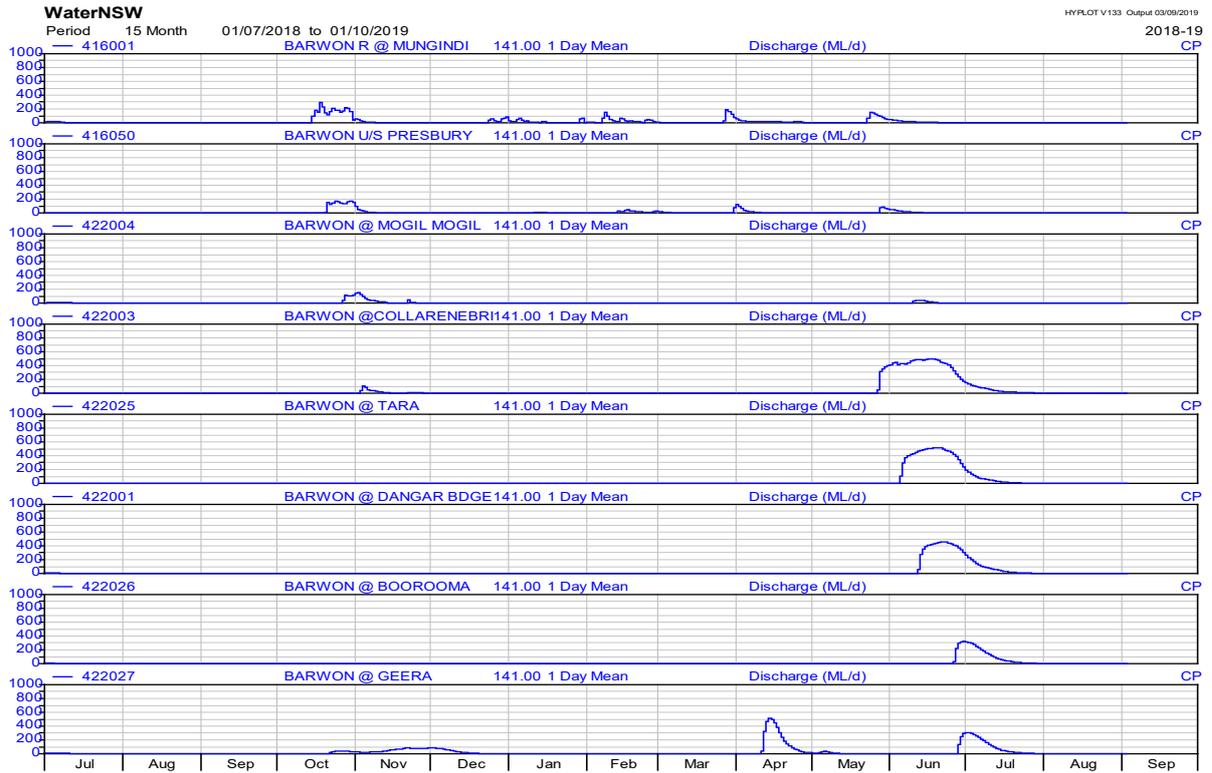
### Water Availability

- The table below sets out the river management zones and access availability using daily average data to 6 am, these are provided as an indication only and access may have changed during the 24-hour period.

### Drought operation measures

- The Barwon Darling unregulated river water source is assessed to be in Stage 4. A Temporary water restriction order is in place from Mungindi to Lake Wetherell to ensure critical water needs.

| River section                            | Gauging station | Classification |           |           |           |           |           |           |
|--|-----------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|
|  |                 | 26-08-19       | 27-08-19  | 28-08-19  | 29-08-19  | 30-08-19  | 31-08-19  | 32-08-19  |
| Mungindi to Boomi river conf             | 416001 - 416050 | No access      | No access | No access | No access | No access | No access | No access |
| Boomi river confluence to U/S Mogil Weir | 416050 - 422004 | No access      | No access | No access | No access | No access | No access | No access |
| Mogil Weir                               | 422004          | No access      | No access | No access | No access | No access | No access | No access |
| D/S Mogil to Collarenebri                | 422,004- 422003 | No access      | No access | No access | No access | No access | No access | No access |
| Collarenebri to U/S Walgett Weir         | 422003 - 422025 | No access      | No access | No access | No access | No access | No access | No access |
| Walgett Weir                             | 422001          | No access      | No access | No access | No access | No access | No access | No access |
| D/S Walgett to Boorooma                  | 422001- 422026  | No access      | No access | No access | No access | No access | No access | No access |
| Geera to Brewarrina                      | 422027- 422002  | No access      | No access | No access | No access | No access | No access | No access |
| Brewarrina to Culgoa river junction      | 422002- 422028  | No access      | No access | No access | No access | No access | No access | No access |
| Culgoa river junc to Bourke              | 425039- 425003  | No access      | No access | No access | No access | No access | No access | No access |
| Bourke to Louth                          | 425003- 425004  | No access      | No access | No access | No access | No access | No access | No access |
| Louth to Tilpa                           | 425004- 425900  | No access      | No access | No access | No access | No access | No access | No access |
| Tilpa to Wilcannia                       | 425900- 425008  | No access      | No access | No access | No access | No access | No access | No access |
| Wilcannia to U/S Lake Wetherell          | 425008          | No access      | No access | No access | No access | No access | No access | No access |



## 7. Coastal valley based operational activities

### 7.1 Bega river

#### Storage and release status

- Brogo Dam is at 83% of capacity and releasing around 32 ML/d.



#### Environmental water operations

- No current additional operations.

#### Water availability

- An AWD of 40% for general security, and 100% for all other licence categories was announced on 1 July 19.

#### Water quality

- Recent BGA sampling at Brogo indicates a green alert level is maintained.

#### Planned supply interruptions:

- Nil

## 7.2 Hunter valley

### Storage and release status

- Glenbawn Dam is currently at 50% of capacity and releasing around 300 ML/d. Releases are forecast to be around 200 ML/d through the week.
- Glennies Creek Dam is at 50% of capacity and releases are currently around 80 ML/d. Releases are forecast to remain steady during the week.
- Lostock Dam is at 74 % of capacity and releasing 20ML/d.



### Environmental water operations

- No current additional operations.

### Water availability

- General Security licenses in the Hunter Valley received 95% allocation on the 1 July 2019 while all other categories received 100%.
- Paterson valley allocations are 100% for all licence categories.

### Water quality

- Recent BGA sampling at Hunter storages indicates a green alert is maintained at Glenbawn and Glennies Creek. Lostock storage is also at green alert.

### Planned supply interruptions:

- Nil

### 7.3 Toonumbar Dam

#### Storage and release status

- Toonumbar Dam is at 58% of capacity and releasing 21 ML/d. Releases are forecast to remain steady for the week ahead.

#### Environmental water operations

- No current additional operations.

#### Water availability

- All licence categories have 100% availability.

#### Water quality

- Recent BGA sampling at Toonumbar indicates an amber alert.

#### Planned supply interruptions:

- Nil

## 8. Rural Dam Levels

The following table shows the status of water supplies at 19 August 2019.

| River Valley                   | Cap-<br>acity<br><br>(GL) | Current Status                  |                | Weekly<br>change<br>(GL) | Comments<br><br>Supply Issues                         | Likeli-<br>hood<br><br>of fill<br>and<br>spill | Allocations for 2019/20 |                  |                             |
|--------------------------------|---------------------------|---------------------------------|----------------|--------------------------|---|--|-------------------------|------------------|-----------------------------|
|                                |                           | % of<br>active<br>cap-<br>acity | Active<br>(GL) |                          |   |  | High<br>Security        | Gen.<br>Security | C'over<br>avail @<br>1/7/19 |
| <b>Border Rivers</b>           |                           |                                 |                |                          |   |  |                         |                  |                             |
| Glenlyon Dam, Stanthorpe (Qld) | 253                       | 8%                              | 21             | -0                       | C'over restricted to 50%<br>Deliverability restricted | <20%   | 100%                    | 0%               | <1%                         |
| Pindari Dam, Inverell          | 312                       | 5%                              | 15             | -0                       | C'over restricted to 50%<br>Deliverability restricted | <20%   | 100%                    | 0%               | <1%                         |
| <b>Gwydir Valley</b>           |                           |                                 |                |                          |   |  |                         |                  |                             |
| Copeton Dam, Inverell          | 1346                      | 9%                              | 118            | -0                       | Deliverability restricted                             | <5%  | 100%                    | 0%               | 5%                          |
| <b>Namoi Valley</b>            |                           |                                 |                |                          |   |  |                         |                  |                             |
| Keepit Dam, Gunnedah           | 419                       | 1%                              | 4              | -0                       | C'over restricted to 0%<br>Deliverability restricted  | <20%   | 75%                     | 0%               | 0%                          |
| Split Rock Dam, Manilla        | 394                       | 2%                              | 8              | -0                       | C'over restricted to 75%                              | <5%  | 75%                     | 0%               | 22%                         |
| Chaffey Dam, Tamworth          | 98                        | 22%                             | 21             | -0                       | Deliverability restricted                             | <50%   | 50%                     | 0%               | N/A                         |
| <b>Macquarie Valley</b>        |                           |                                 |                |                          |   |  |                         |                  |                             |
| Burrendong Dam, Wellington     | 1154                      | 5%                              | 53             | -1                       | C'over restricted to 0%<br>Deliverability restricted  | <20%   | 70%                     | 0%               | 0%                          |
| Windamere Dam, Mudgee          | 367                       | 32%                             | 116            | -0                       | Regulated releases.                                   | <5%  | 70%                     | 0%               | 54%                         |
| <b>Lachlan Valley</b>          |                           |                                 |                |                          |   |  |                         |                  |                             |
| Wyangala Dam, Cowra            | 1216                      | 24%                             | 293            | -5                       | C'over restricted to 57%                              | <20%   | 87%                     | 0%               | 15%                         |
| Carcoar Dam, Carcoar           | 36                        | 20%                             | 7              | 0                        | Deliverability restricted                             | 10%  | 100%                    | 0%               | 38%                         |
| <b>Murrumbidgee Valley</b>     |                           |                                 |                |                          |   |  |                         |                  |                             |
| Burrinjuck Dam, Yass           | 1025                      | 33%                             | 333            | 2                        | Min Planned eWater                                    | 40%  | 95%                     | 6%               | 8%                          |
| Blowering Dam, Tumut           | 1604                      | 54%                             | 863            | 39                       | Min Planned eWater                                    | <10%   | 95%                     | 6%               | 8%                          |
| <b>Murray</b>                  |                           |                                 |                |                          |   |  |                         |                  |                             |
| Dartmouth, Mitta Mitta (Vic)   | 3837                      | 59%                             | 2222           | -8.6                     | Transfers to Hume                                     | N/A  | N/A                     | N/A              | N/A                         |
| Hume Dam, Albury               | 2982                      | 43%                             | 1279           | 2.4                      | eWater & t'fers to L Vic                              | <25%   | 97%                     | 0%               | 18%                         |
| <b>Lower Darling</b>           |                           |                                 |                |                          |   |  |                         |                  |                             |
| Menindee Lakes, Broken Hill    | 1633                      | 1%                              | 14             | -0                       | Temp water restrictions                               | N/A  | 30%                     | 0%               | 19%                         |
| <b>Hunter Valley</b>           |                           |                                 |                |                          |   |  |                         |                  |                             |
| Glenbawn Dam, Scone            | 750                       | 49%                             | 371            | -2                       | Regulated releases                                    | <20%   | 100%                    | 95%              | 23%                         |
| Glennies Ck Dam, Singleton     | 282                       | 50%                             | 141            | -1                       | Regulated releases                                    | <20%   | 100%                    | 95%              | 23%                         |
| Lostock Dam, Gresford          | 20                        | 74%                             | 15             | -0                       | Regulated releases                                    | 100%   | 100%                    | 100%             | N/A                         |
| <b>Coastal Area</b>            |                           |                                 |                |                          |   |  |                         |                  |                             |
| Toonumbar Dam, Kyogle          | 11                        | 59%                             | 6              | -0                       | Regulated releases                                    | 100%   | 100%                    | 100%             | N/A                         |
| Brogo Dam, Bega                | 9                         | 83%                             | 7              | -0                       | Regulated releases                                    | 100%   | 100%                    | 40%              | N/A                         |
| <b>Total</b>                   | <b>17746</b>              | <b>33.3</b>                     | <b>5910</b>    | <b>40</b>                |   |  |                         |                  |                             |

WaterNSW has water resources in Dartmouth, Hume and Glenlyon Dams. TWS = Town Water Supplies

1 Gigalitre (GL) = 1,000 Megalitres (ML) 1 ML = 1,000,000 litres

## More information

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