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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 06 January 2020 was 24.5% of the total active storage capacity. This was a decrease of 1.6% within the last fortnight.

The total storage level of urban water supplies on 06 January 2020 was 43.2% of the total storage capacity. This was a decrease of 0.5% since last week.

2. System risks

Water allocations for the year have been reduced for some high security, carryover water and conveyance licences due to reduced water availability and deliverability constraints. (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 the four temporary block banks were constructed to extend drought security beyond January 2019 are now empty. 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 ceased in December 2018 and cease to flow has recommenced in the whole river from Keepit to Walgett after rainfall in March 2019.

In the Upper Namoi, preserving supplies for town water supplies means that formal restrictions on general security licences took effect on 6 December and pulse releases will be used to supply water to Manilla. Current Split Rock Dam release is zero.

The Peel valley is in drought stage 4 and drought works are underway, including the implementation of works to restrict flows below Dungowan village from 1 December 2019, 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. With the continuation of low inflows to the system the priority is to extend supply for towns and critical industries. To secure water for these requirements cease to flow conditions have been implemented for the river below Warren for Duck and Crooked Creeks, as well as ceasing flows in Gunningbar Ck from 8 December, below the Albert Priest Channel offtake.
The Lachlan system continues to experience very low inflows. The low inflows this winter mean the system has entered a new low inflow record, hence 1 July restrictions to 57% of general security account balances. The Wyangala Dam forecast is for very low levels by June 2020 if zero inflows occur. Willandra Ck flows have ceased from December to March.

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.

Brogo / Bega supplies can only continue to early Jan 2020 when Brogo Dam is forecast to reach the 1,200ML reserve required for town water supply.

Toonumbar Dam can continue to supply till March 2020 when Toonumbar will be depleted and releases will cease.

3. Climatic Conditions

![Weekly rainfall totals for New South Wales](https://www.bom.gov.au/water/)

Figure 1 - Weekly rainfall totals for New South Wales
This week’s weather forecast

Chance of a shower or two and the chance of a thunderstorm about the northern and central ranges and about parts of the north coast and northern inland. Hot in the west with daytime temperatures above average inland and average near the coast. South to South-westerly winds inland.

Rainfall across New South Wales for January to March next year is likely to be average for most areas.

Figure 2a – First 4-day Forecast (06-09 January 2020)

Figure 2b – Following 4-day forecast 10-13 January 2020)

Figure 3 – 3-month rainfall outlook
4. Southern valley based operational activities

4.1 Murray valley

Storage and release status

- Hume Dam is currently 23% of active capacity, releases currently are about 11,500ML/d.
- Release downstream of Yarrawonga Weir has reduced to 8,700ML/day.
- The Edward River Offtake flow is currently about 1,550ML/d, flow will target 1,600 ML/d during the week.
- The Gulpa Creek Offtake flows are at about 230ML/d and will remain steady.
- Stevens Weir level is about 4.50m and will marginally vary to accommodate a specific environmental water flow into Yallakool system. Water level upstream of Wakool Canal offtake is about 1.82m.
- Flow downstream of Stevens Weir is about 2,400ML/day. The downstream flow is set to increase to about 2,600ML/day. In order to address the Barmah choke constraint, the delivery via Edward river is being maximised.
- Flows in the Colligen Creek (175ML/day) and Yallakool Creek (220ML/day) are likely to remain steady to meet the system demands. Wakool river at offtake is about 40ML/day.
- Flow in Niemur River at Mallan School is currently about 120ML/d and will remain steady next two weeks.
- Merran Creek flows upstream of its confluence with Wakool is about 140ML/day and is likely to decrease down to 100ML/day over the week.
- Flow in Wakool River at Stoney Crossing is currently at about 400 ML/day and is likely to decrease to about 350ML/d over the week.
- Flow at Balranald is currently about 1,200ML/d and will remain steady as Inter Valley Trade water will be delivered on top of the end of system targets until end of January 2020.
- Lake Victoria is currently holding about 404GL or 53% of active capacity. The flow to South Australia is about 8,200ML/d.

Environmental water operations

- eWater delivery release continues into Wakool-Yallakool system and into Colligen-Niemur system to match a specific hydrograph requested by environmental water managers to support fish habitat. However, when the system demands are higher than the eWater flows then the diversions will increase to match the system demands.
Water availability

- The latest Murray Water Allocation Statement confirmed that general security allocation remains 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 increased to 45%.

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:

- Maintenance activities are underway in 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 0.5% of active capacity. The total active storage is about 6.4GL.
- Lake Tandure, Lake Cawndilla, Lake Menindee and Lake Pamamaroo are currently dry.
- The release from Wetherell reduced on 12 Feb 2019 and flows at Weir 32 have ceased from mid-February 2019.
- Current levels at the block bank near Karoola, Jamesville and Ashvale are very low and effectively empty.
- The average pan evaporation rate at Menindee over the last week was about 15 mm/d equivalent to about 270ML 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.
- 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 were constructed to extend supply to domestic, stock and permanent plantings. The water level behind the banks is now quite low and inadequate for 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 including in 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

• Red Alert for Wilcannia (N1042) and Lake Wetherell (site 1, 3 and 4).

• Amber Alert for Copi Hollow (site N1094), Darling river u/s of Weir 32 (site N1171) and Lake Wetherell (site 2).

• Green Alert for Darling River at Menindee pumping station (site N1095) and Darling river at Weir 32 (site N1086).

  – 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 300ML/d as per minimum transparency rules. The release is likely to increase to about 1,000ML/day this week in order to address potential bushfire risk in the Blowering Dam site.
- Blowering Dam is currently at 38% of active capacity, releasing about 6,400 ML/d. The release is likely to vary, in line with irrigation demand, environmental water orders and continuation of IVT water delivery at Balranald and Darlot.
- The operational target at Kywong in Old Man Creek is 60ML/d in December to March period, current flow is 90ML/d and is likely to remain steady.
- Berembed Weir is currently about 4.7m and will be managed to meet any increase in downstream demands. The minimum operating level of Berembed Weir is planned to be about 3.8m during the season.
- Bundidgerry storage is currently at 3.81m and will gradually increase to about 3.95m, which is the operational target for the season.
- Gogeldrie Weir is currently at 6.04m and will vary marginally to meet downstream demand.
- The operating level of Hay Weir is targeted to be about 7.0m during the holiday season; but the level may vary ±0.5m depending on system demands.
- Maude Weir is at about 2.93m. The weir shall be lowered gradually throughout January 2020. The gates at Maude weir are expected to be removed from water by next week to provide fish passage while there is no operational requirement to maintain the weir pool.
- Currently, the Redbank Weir level is about 2.52m. The weir gates could be removed from water to provide fish passage possibly by next week while there is no operational requirement to maintain the weir pool.
- Flow at Balranald is currently about 1,200ML/d and will remain steady as Inter Valley Trade water will be delivered on top of the end of system targets until end of January 2020.
- The current diversion into Yanco Creek is about 400 ML/d and is expected to remain steady until mid-January 2020.
- Supply to Mid-Murray via Billabong system continues with the target at Darlot set to about 300ML/day until end of January 2020. The target is made up of Planned eWater minimum flows, IVT clearance and operational delivery via MIL escapes.
- Supply to Yanco-Billabong system via Coleambally Irrigation Escapes (CCD and DC800) is at about 330ML/day. It is to remain steady until mid-January 2020.
• The increased flow at the Yanco Offtake and deliveries through the Irrigation escapes are to maximise the ecological values of the Yanco – Colombo – Billabong system while delivering about 4,000 to 5,000ML of IVT at Darlot site during January 2020. The call to utilise the Yanco system for the delivery of IVT was made by MDBA at the request of YACTAC.

Environmental water operations

• Planned environmental releases are being made from Burrinjuck dam as per the transparency rules (likely to cease with irrigation orders commencing by this week)
• Planned environmental water flow rules are fully complied with at both Balranald and Darlot.

Water availability

• For Inter Valley Transfer (IVT) account from Murray to Murrumbidgee refer to WaterNSW website IVT Ordering.
• The Murrumbidgee inter-valley trade (IVT) account balance is at 84.4 GL as of 11am on 7 January. Trade out of the Murrumbidgee will reopen at 10 am NSW time on Wednesday 8 January 2020, as per revised terms and conditions that can be found on the WaterNSW website.
• The Murray-Darling Basin Authority (MDBA) has requested that WaterNSW extend the delivery of IVT with an extra volume of up to 40GL during January 2020. The delivery will be made at both Balranald and Darlot sites.
• WaterNSW is targeting a daily clearance rate of 1,000 ML/day at Balranald in excess of the end of system flow requirement, meaning the flow at Balranald will be around 1,200 ML/day in January 2020, while IVT delivery is occurring.
• Similarly, the targeted clearance rate would average about 150ML/day at Darlot, and the IVT would be on top of the end of system target rate of 50ML/day at Darlot and other operational required flows.
• As per The DPIE Water Allocation Statement there is no change to general security availability (which currently stands at 6%) in the Murrumbidgee regulated water source. Allocation is at 100% for towns and 95% for high security. General security licence holders in the Murrumbidgee 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 is at 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.
• An operational update has been issued to advise river users on the low river levels due to the drought measures.

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 a Red status for blue green algae. For more information select the following link: Murrumbidgee Irrigation.
  – Lake Wyangan North in Griffith has a Red status for blue green algae. For more information select the following link: Lake Wyangan.
  – 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.
  – The Murrumbidgee River at Maude Weir Buoy and at Balranald are on an Amber alert status.
  – The Murrumbidgee River at Redbank Weir Buoy is on a Red alert status.
  – The Murrumbidgee River at The Hay weir at Leonard Street is on a Green alert status.
  – 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.
• There is no power supply to Nimmie Creek, North Caira and South Caira offtake regulators. The structures can be operated manually.
• Planning for maintenance of Yanco Weir is underway. A viable solution to provide safe working conditions is being considered while maintaining continued uninterrupted supply to Yanco Creek system. More information would be available in the next four to six weeks.
5. Central valley based operational activities

5.1 Lachlan valley

Storage and release status

- Carcoar Dam is currently 13.0% of capacity and releasing 5ML/d.
- Wyangala Dam is currently 11.3% of capacity and releasing around 1,400ML/d. Releases are forecast to remain same during the week.
- Lake Cargelligo is currently around 48% of capacity and the level is likely to increase slightly through the week.
- Releases downstream of Brewster Weir are currently around 250ML/d. Releases are forecast to increase to up to 300ML/d this week.
- Willandra Ck flow ceased from 1st December and if current conditions continue releases will resume in March 2020.

Environmental water operations

- About 22 gigalitres of water for the environment has been used for a spring pulse. The release of water from Wyangala Dam started on 16 September and have now ceased. The pulse has now passed Booligal. These flows are intended to improve native fish, plant and animal health. This flow has enabled the river to be linked to other key sites that will also be watered including Booheroi Creek, Yarrabandai Lagoon, Brewster Weir Pool and sites in and near The Great Cumbung Swamp. Further information about this watering event is available from the Commonwealth Environmental Water Office website at - Lachlan Spring flow.
- Currently flows in Booheroi ck are for environmental purposes.
- Currently Water Quality Allowance (WQA) is being delivered in lower Lachlan by targeting 70ML/d at Booligal to mitigate risks and response to sustained poor water quality (low dissolved oxygen) which can pose a threat to water-dependent ecology. Any flows in excess of operational target of 40ML/d at Booligal will be accounted as WQA.
- 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 417GL was required in November before a further allocation can be made in the Lachlan River. Inflows received in November were negligible.
• 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.

• The detailed October WAS by Dept Planning, Industry & Environment can be viewed at: WAS

### Inflows needed to improve deliverability of carryover

<table>
<thead>
<tr>
<th>2019-20 inflow period</th>
<th>Estimated cumulative inflows required prior to easing of restrictions (GL)</th>
<th>Inflows received since July 2019 (GL)</th>
<th>Additional inflows required to increase GS delivery to 75% and increase HS allocation to 92% (GL)</th>
<th>Additional inflows required for new GS AWD (GL) (no restrictions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>By end of December</td>
<td>164</td>
<td>9</td>
<td>197</td>
<td>417</td>
</tr>
<tr>
<td>By end of January</td>
<td>167</td>
<td>9</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>By end of February</td>
<td>168</td>
<td>9</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>By end of March</td>
<td>169</td>
<td>9</td>
<td>200</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Estimated water held in general security accounts on 1 July 2019 was 155,000 ML. Water delivery operations in 2019-20 provided under drought contingency planning (Stage 3). Minimum storage level of 5% is targeted at the end of 2019-20 water year 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.
• 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. A Temporary Water Restriction under Section 324 of the Water Management Act 2000 has been gazetted on 1 October 2019. It allows access to 40% of the water in general security access licence account balance as at 30 September 2019. The remaining 60 per cent is moved to a drought subaccount and cannot be used. Please refer: Belubula WAS Oct 2019

• While allocations for the Belubula River system have been announced by DPIE Water, the delivery of water is restricted due to the ongoing drought. Please refer: Belubula Ops Update Oct 2019

• High security and domestic and stock access licence holders on regulated Belubula receive 100% allocation.

Water Quality

• Latest BGA samples show that Curlew Waters, Lake Cargelligo Outlet, Lake Cargelligo TWS, and Lake Cargelligo Boatshed are on Green alert.

• Wyangala storage results (11th December) show that overall productivity has increased across the storage. Abercrombie and Lachlan Rivers are now undergoing a Dolichospermum sp. and Microcystis sp. bloom. Downstream results show a reduction in biomass but it remains at amber alert awaiting another clear result. Upstream sites are now at red 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 1.9% of capacity and currently releasing around 300ML/d. Releases are forecast to be in between 280-300 ML/d during this week. Releases are primarily for town water supply and some Domestic and Stock 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 27.5% of capacity and releasing 110ML/d. Releases are forecast to remain steady between 100-120ML/d during this week.
- If conditions remain dry, a second phase of the transfer will recommence in early February 2020, 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 supplies for towns and critical industries. Link

Water availability

- It was estimated that inflows of around 452 GL were required in December before an increment in Available Water Determination can be made. Inflows in Dec so far are negligible.
- There was just 94,300 megalitres (ML) of inflow to Burrendong Dam since last general security allocation in August 2017. The system continues to experience its worst ever drought inflow sequence, and resources are being managed to extend the supply of critical needs.

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. Cease to flow has been implemented for the river below Warren and for Duck and Crooked Creeks on 28 August. If inflows do not occur at all this 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 28th August. Construction of the temporary drought works were installed at the fishways.
• Flows into Gunningbar Ck below the Albert Priest Channel offtake ceased on 10th December.
• 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 2020 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 94 GL to end of Nov 2019. This is only 20.7% of the previous record low inflow of about 452.9 GL for the 28 months ending in November.
• This drier than historical minimum inflow confirms that the system has entered into a new drought of record for Burrendong Dam.
• Windamere- Burrendong Bulk water transfer information session is planned to be held on Thursday, 16 January 2020 in Mudgee. For more information click here

Water quality
• Burrendong Dam results for the 18th December shows an increase in productivity across the storage however the expression differs for each part of the lake. The Dam Wall and downstream show large counts of Microcystis sp. The Mookerawa arm is dominated by a large diatom bloom and the Cudgegong arm continues to show a green alga bloom. Storage remains at red alert awaiting another clear result.
• Windamere results for 27/12 show a continuing presence of Microcystis cf. flos aquae (potentially toxic) at all upstream sites. Higher productivity was also noted mid-lake. Downstream showed a similar assemblage but at lower concentrations. Storage is now on amber alert.
• 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.
• An aerator has been installed to improve DO levels in Burrendong and had been commissioned.

Planned supply interruptions:
• Nil
6. Northern valley based operational activities

6.1 Namoi valley

Storage and release status

- Split Rock Dam is at 0.8% of active capacity and is currently not releasing any water.
- Keepit Dam is at less than 1% of active capacity and releases have ceased since December 2018.
- Chaffey Dam is at 14% of active capacity and currently releasing 30ML/d.
- The Pian Creek replenishment flow was not able to be delivered in the usual manner so other supply arrangements have been required.

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 101.2GL before there is likely to be an AWD increment in the Lower Namoi valley.
- The Water Allocation Statement by DPIE (dated 9th October 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%.
- The latest Water Allocation Statement by DPIE (dated 6th December 2019) confirmed that in the 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 4. Drought measures are underway, including restricting flows below Dungowan from 30 November to secure town water supply. Current operational targets below Dungowan are for very low flows.
- The Upper Namoi is now in drought Stage 4. In order to preserve supplies for town water needs, formal restrictions on general security licences were announced on 6 December. Holders of high security and stock & domestic licences upstream of Manilla will be able to access water when
pulse releases from Split Rock Dam are made to supply Manilla. For holders of High Security and Stock & Domestic licences downstream of Manilla, limited access to water is likely to only be available from river pools. Alternative arrangements may need to be made for Stock & Domestic water needs.  

Operations Update Upper Namoi

- 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**

- Split Rock Dam is on a Green alert in the storage,
- Keepit Dam is on an Amber alert in the storage, and
- Chaffey Dam is on an Amber alert in the storage.

**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 6% of active capacity and is currently releasing 700 ML/d for high security, ECA and environmental water orders. Flow is planned to decrease to 400ML/d and then further to 40ML/d at the end of the week.

Environmental water operations

- Block release is planned to end by mid this week.

Water availability

- Whilst every endeavour will be made to supply further stock and domestic flows in the future, should conditions remain extreme, further releases from Copeton Dam for stock and domestic flows may not be feasible.
- Inflows of about 76.3GL 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 6th December 2019) confirmed that 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 4% of capacity and releasing around 13ML/d (minimum release).
- Glenlyon Dam is at 3% of capacity. Releases ceased. Bulk releases to transfer water to Boggabilla Weir for Goondiwindi town water supply have been completed.
- Releases currently ceased from Boggabilla weir. A small continuous release is planned from this week to maintain Goondiwindi weir pool at a relatively low level to try and minimise evaporation and seepage from Goondiwindi weir.

Environmental water operations

- No current additional releases for environmental water orders.

Water availability

- The Available Water Determination (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. Detailed 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), and where possible with tributary flows, to improve delivery efficiencies.

Water quality

- Recent Blue Green Algae (BGA) sampling at Pindari shows an amber alert level.

Planned supply interruptions:

- No supply interruptions are currently forecast
6.4 Barwon-Darling River system

River flow status

- Significant rainfall was recorded near Bourke and surrounding areas over the weekend of 2nd and 3rd Nov 2019. Around 95mm was observed at Bourke and around 51mm at Brewarrina over two days. This rainfall generated flow at Beemery, Warraweena, Bourke and Louth. Flow reached Tilpa on 17 Nov 2019. Flows have already ceased at all locations.

- Substantial rainfall also occurred in the Warrego catchment, which generated flow at Fords Bridge and Dicks Dam and additional inflow to the Barwon Darling system.

- A section 324 Temporary Water Restriction Order for A, B and C class licences from the Culgoa Junction to Menindee was issued on 4 Nov to protect the flow and this has been extended to 5 Jan 2020.

- The Northern Fish Flow event and Warrego inflow replenished the weir pools along the Barwon Darling system into July 2019. The current rainfall event replenished Bourke, Louth and Tilpa weir pool and will further extend the water supply for critical human needs.

- The Barwon-Darling Rivers are an unregulated rivers, which 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 summaries are the total observed volumes from the November 2019 event.

<table>
<thead>
<tr>
<th>Location</th>
<th>Total observed volume (ML)</th>
<th>Flow arrival date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beemery</td>
<td>1,828</td>
<td>3 Nov 2019</td>
</tr>
<tr>
<td>Warraweena</td>
<td>5,210</td>
<td>3 Nov 2019</td>
</tr>
<tr>
<td>Bourke</td>
<td>7,531</td>
<td>4 Nov 2019</td>
</tr>
<tr>
<td>Louth</td>
<td>6,683</td>
<td>3 Nov 2019</td>
</tr>
<tr>
<td>Tilpa</td>
<td>3024</td>
<td>17 Nov 2019</td>
</tr>
</tbody>
</table>
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 2019. Releases from Glenlyon Dam commenced on 24 April and ceased on 13 May.

- A Section 324 temporary water restriction was in place to restrict irrigation access to this water which expired on 30 August 2019. New section 324 order issued on 4 Nov.

- Planned Environmental Water (PEW) is water in the system that is below the commence to pump conditions for access licences.

Water Availability

Cease to flow condition recommenced between Mungindi to Wilcannia.

Drought operation measures

- The Barwon Darling unregulated river water source is assessed to be in Stage 4.
Coastal valley based operational activities

7.1 Bega river

Storage and release status

- Brogo Dam is at 13% of capacity and releasing around 30 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.
- WaterNSW held a River Operations Stakeholder Consultation Committee (ROSCCo) in Bega on 4th Dec 2019 and advised the stakeholders of the current situation and future operations Plan.
- With the current release pattern and assuming zero inflows to dam, supply from the dam can continue to early January 2020. Leaving 1,200ML in the dam for town water supply.
- A restriction may be applied to remaining general security account balance in early Jan 2020.

Water quality

- Recent BGA sampling at Brogo indicates an amber alert.

Planned supply interruptions:

- Nil
7.2 Hunter valley

Storage and release status

- Glenbawn Dam is currently at 40% of capacity and releasing around 460 ML/d. Releases are forecast to remain steady till mid next week.
- Glennies Creek Dam is at 39% of capacity and releases are currently around 260 ML/d. Releases are forecast to increase up to 310ML/d during the week.
- Lostock Dam is at 50% of capacity and releasing 57 ML/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 21% of capacity and releasing about 38 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.
- WaterNSW held a River Operations Stakeholder Consultation Committee (ROSCCo) in Casino on 10\textsuperscript{th} Dec 2019 and advised the stakeholders of the current situation and future operations Plan.
- With the current release pattern and assuming zero inflows to dam, releases will be able to continue to early March 2020.
- Irrigators in the regulated section of Richmond River suggested to continue the release at the current rate or as per demand with no benefit in maintaining a reserve in storage.
- When resource in the dam cannot meet the demand, restrictions to general security accounts and suspension of stream flows need to be applied.
- Landholders and customers along the river need to consider their water plans for the worst case scenario when flows may cease in Mar 2020.

Water quality

- Recent BGA sampling at Toonumbar indicates a red alert.

Planned supply interruptions:

- Nil
8. Rural Dam Levels

The following table shows the status of water supplies at 6 January 2020.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Storage Dam, Nearest Town</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Border Rivers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glenlyon Dam, Stanthorpe (Qld)</td>
<td>253</td>
<td>3%</td>
<td>7</td>
<td>-0</td>
<td>C’over restricted to 50% Deliverability restricted</td>
<td>&lt;20%</td>
</tr>
<tr>
<td>Pindari Dam, Inverell</td>
<td>312</td>
<td>4%</td>
<td>13</td>
<td>-0</td>
<td>C’over restricted to 50% Deliverability restricted</td>
<td>&lt;20%</td>
</tr>
<tr>
<td><strong>Gwydir Valley</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copeton Dam, Inverell</td>
<td>1346</td>
<td>6%</td>
<td>82</td>
<td>-4</td>
<td>Deliverability restricted</td>
<td>&lt;5%</td>
</tr>
<tr>
<td><strong>Namoi Valley</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keepit Dam, Gunnedah</td>
<td>419</td>
<td>1%</td>
<td>3</td>
<td>-0</td>
<td>Releases ceased</td>
<td>&lt;20%</td>
</tr>
<tr>
<td>Split Rock Dam, Manilla</td>
<td>394</td>
<td>1%</td>
<td>3</td>
<td>-0</td>
<td>C’over restricted to 75%</td>
<td>&lt;5%</td>
</tr>
<tr>
<td>Chaffey Dam, Tamworth</td>
<td>98</td>
<td>14%</td>
<td>14</td>
<td>-0</td>
<td>Deliverability restricted</td>
<td>&lt;50%</td>
</tr>
<tr>
<td><strong>Macquarie Valley</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Burrendong Dam, Wellington</td>
<td>1154</td>
<td>1.9%</td>
<td>22</td>
<td>-3</td>
<td>C’over restricted to 0% Deliverability restricted</td>
<td>&lt;20%</td>
</tr>
<tr>
<td>Windamere Dam,</td>
<td>367</td>
<td>27%</td>
<td>101</td>
<td>-1</td>
<td>Regulated releases.</td>
<td>&lt;5%</td>
</tr>
<tr>
<td><strong>Lachlan Valley</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wyangala Dam, Cowra</td>
<td>1216</td>
<td>11%</td>
<td>138</td>
<td>-10</td>
<td>C’over restricted to 57%</td>
<td>&lt;20%</td>
</tr>
<tr>
<td>Carcoar Dam, Carcoar</td>
<td>36</td>
<td>13%</td>
<td>5</td>
<td>-1</td>
<td>Deliverability restricted</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Murrumbidgee Valley</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burrinjuck Dam, Yass</td>
<td>1025</td>
<td>32%</td>
<td>325</td>
<td>-2</td>
<td>Min Planned eWater</td>
<td>40%</td>
</tr>
<tr>
<td>Blowering Dam, Tumut</td>
<td>1604</td>
<td>38%</td>
<td>604</td>
<td>-13</td>
<td>Regulated releases</td>
<td>&lt;10%</td>
</tr>
<tr>
<td><strong>Murray</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dartmouth, Mitta Mitta</td>
<td>3837</td>
<td>50%</td>
<td>1911</td>
<td>-12</td>
<td>Transfers to Hume</td>
<td>N/A</td>
</tr>
<tr>
<td>Hume Dam, Albury</td>
<td>2982</td>
<td>23%</td>
<td>696</td>
<td>-70</td>
<td>Transfers to L’Vic</td>
<td>&lt;25%</td>
</tr>
<tr>
<td><strong>Lower Darling</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menindee Lakes, Broken</td>
<td>1633</td>
<td>0%</td>
<td>7</td>
<td>-1</td>
<td>Releases ceased</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Hunter Valley</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glenbawn Dam, Scone</td>
<td>750</td>
<td>40%</td>
<td>300</td>
<td>-4</td>
<td>Regulated releases</td>
<td>&lt;20%</td>
</tr>
<tr>
<td>Glennies Ck Dam,</td>
<td>282</td>
<td>39%</td>
<td>109</td>
<td>-3</td>
<td>Regulated releases</td>
<td>&lt;20%</td>
</tr>
<tr>
<td>Lostock Dam, Gresford</td>
<td>20</td>
<td>48%</td>
<td>10</td>
<td>-1</td>
<td>Regulated releases</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Coastal Area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toonumbar Dam, Kyogle</td>
<td>11</td>
<td>20%</td>
<td>2</td>
<td>-0</td>
<td>Regulated releases</td>
<td>100%</td>
</tr>
<tr>
<td>Brago Dam, Bega</td>
<td>9</td>
<td>14%</td>
<td>1</td>
<td>-0</td>
<td>Regulated releases</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>17746</td>
<td>24.5%</td>
<td>4351</td>
<td>-127</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

This will be the final Water Availability Report for 2019. Subscribe to our customer information (weekly water availability reports, e-newsletters, etc.) at waternsw.com.au/subscribe.