

Regional water availability report

Weekly edition
13 April 2020

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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 13 April 2020 was 26.3% of the total active storage capacity. This was an increase of 0.8% since last week.

The total storage level of urban water supplies on 13 April 2020 was 83.1% of the total storage capacity. This was the same as last week.

2. System risks

Inflows adding to over 395 GL are continuing to flow into Menindee Lakes over the next few weeks and releases to the Lower Darling have commenced. The resumption of flow in the Lower Darling will bring significant relief to native fish stocks between Menindee and Wentworth that have been confined to a series of refuge pools during the record period of low flow. However, this also brings a short-term risk to native fish, as the input of organic matter from dry riverbeds and the mixing of low-oxygen pools can cause short term impacts on water quality. Members of the public can be on the lookout for signs of stressed or dead fish and report them through the Fishers Watch Hotline on 1800 043 536.

The relatively small inflows to most northern dams mean that drought measures and works are being reviewed, but most will likely remain in place, despite the large flows downstream.

3. Climatic Conditions

New South Wales Rainfall Totals (mm) Week Ending 12th April 2020
Australian Bureau of Meteorology

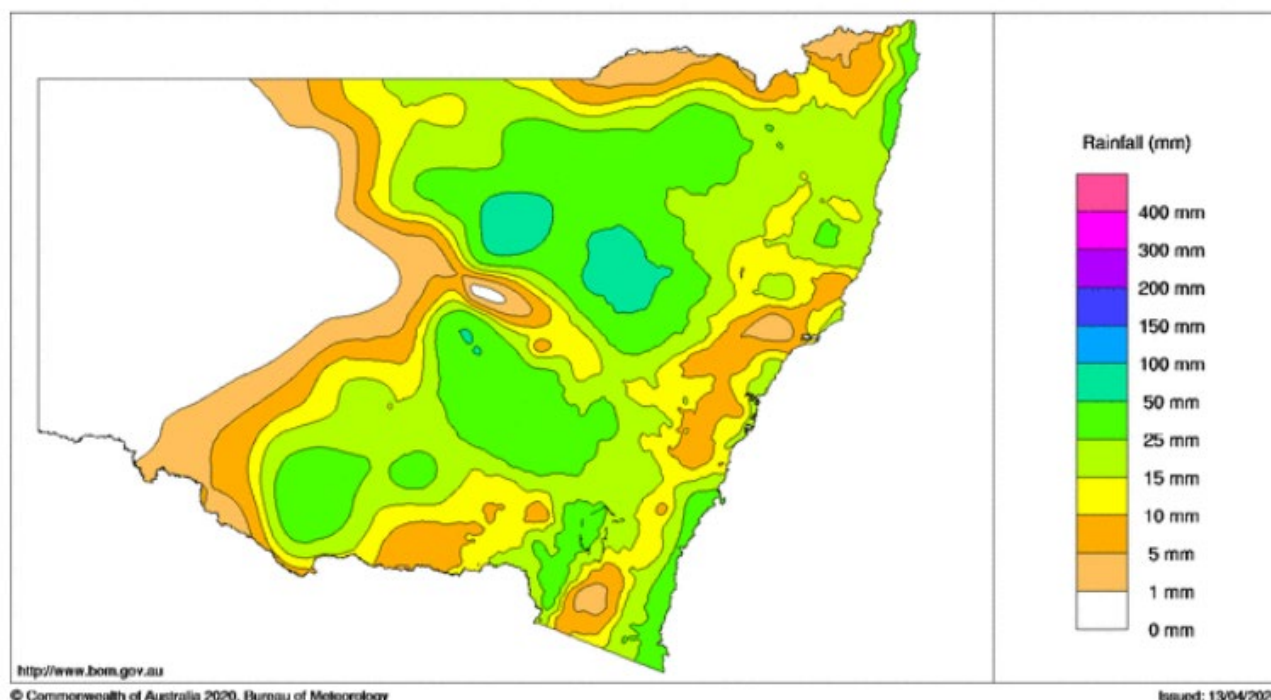


Figure 1 - Weekly rainfall totals for New South Wales

This week's weather forecast

A high pressure system over the New South Wales is slowly moving east to the Tasman Sea today, bringing settled conditions to New South Wales for the first half of this week. Then a cold front and its associated trough is forecast to cross the state on Thursday and Friday.

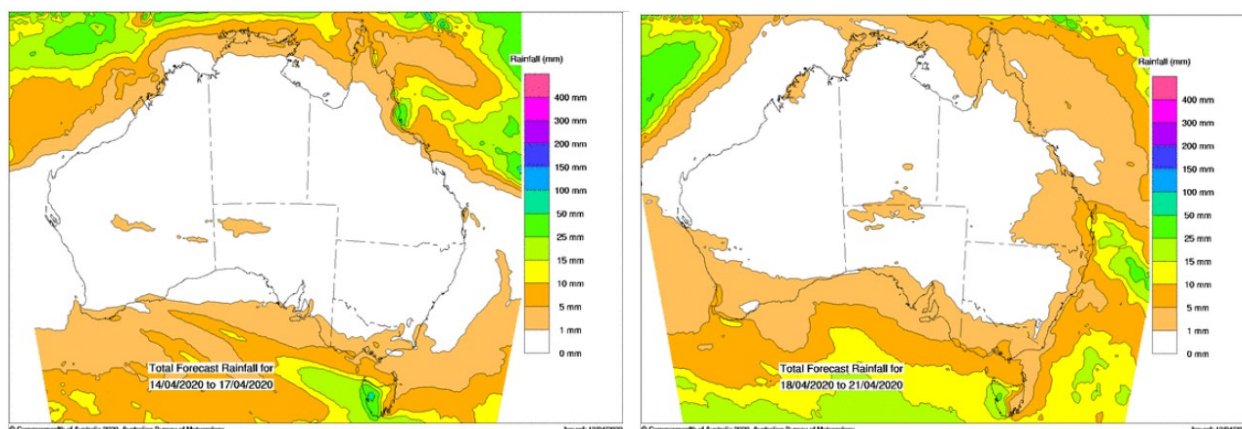


Figure 2a – First 4-day Forecast (14-17 April 2020) Figure 2b – Following 4-day forecast (18-21 April 2020)

Rainfall for the fortnight 18 April to 1 May is likely to be slightly above average for western NSW.

There is a higher chance of a wetter than average May to July for most parts of western NSW.

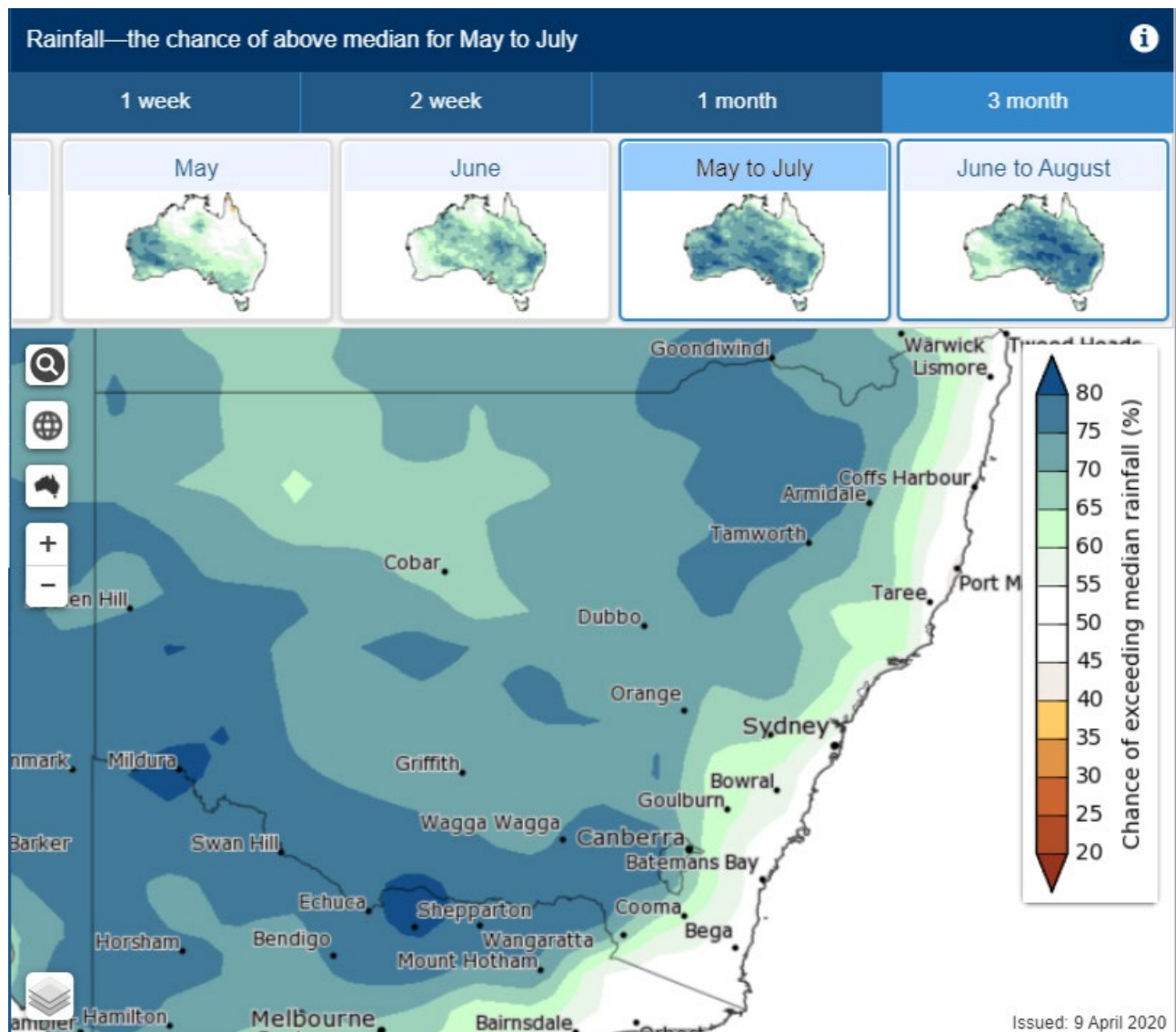


Figure 3 – 3-month rainfall outlook

4. Southern valley based operational activities

4.1 Murray Valley



Storage and release status

- Hume Dam is currently 12.5% of active capacity, and releasing about 2,100ML/d.
- Release downstream of Yarrawonga Weir has reduced to about 6,400ML/day.
- The Edward River Offtake flow is currently about 1,120 ML/d and is likely to remain steady.
- The Gulpa Creek Offtake flows are at about 200ML/d and will remain steady.
- Stevens Weir level is about 4.50m and will marginally vary. Water level upstream of Wakool Canal offtake is about 1.81 m.
- Flow downstream of Stevens Weir is about 890 ML/day. The target is likely to be revised downwards in the coming days to about 600 ML/day.
- Flows in the Colligen Creek (170ML/day), Yallakool Creek (220ML/day) and Wakool offtake (25ML/day) are likely to remain steady.
- Flow in Niemur River at Mallan School is currently about 130ML/d and is likely to remain relatively steady.
- Merran Creek flows upstream of its confluence with Wakool is about 60 ML/day and is likely to gradually increase to 170ML/d by next week.
- Flow in Wakool River at Stoney Crossing is currently at about 350 ML/day and is likely to gradually increase to 450 ML/day over the week.
- Flow at Balranald is currently about 280 ML/d and will gradually reduce to meet the end of system target at Balranald for the month of April, which is 180ML/day.
- Lake Victoria is currently holding about 231 GL or 22.7% of active capacity. The [flow to South Australia](#) is about 4,100ML/d.

Environmental water operations

- eWater delivery continues into Wakool-Yallakool system and into Colligen-Niemur system to match a specific hydrograph requested by environmental water managers to support fish habitat and water quality aspects. 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 1 Apr 20](#) confirmed that general security allocation remains unchanged. As dry conditions continue to strain resources, the system is being managed to maintain deliverability of all account water and support full opening allocations to high priority needs in 2020-21.

Drought operation measures

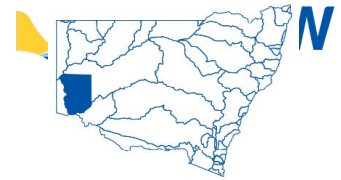
- The NSW Murray regulated river water source has advanced to Stage 2, meaning drought operational planning has commenced in preparation for extreme dry conditions that may continue through 2019-20.

Water quality

- Potential Blue Green Algae issues:
 - Recent Blue Green Algae (BGA) sampling at [Lake Hume](#) shows all Lake Hume sites on an Amber alert level apart from the Dam Wall site that is on No alert.
 - Murray River at Corowa (N1001), D/S Yarrawonga Weir (N1007), at Tocumwal (N1013), at Moama (N1050), at Cobram (N1051) and at Buronga (N1062) are on a Red alert level.
 - Murray River at Barham (N1003), at Murray Downs (N1054) and at Tooleybuc (N1055) are on a Green alert level.
 - All other sites on Murray River and on an Amber alert
 - 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

- Menindee Lakes system collectively holds about 14.8% of active capacity, and releasing about 1,250 ML/d.
- The status of individual lakes: Lake Wetherell - 90%, Lake Tandure – 96%, Lake Pamamaroo – 28%, Copi Hollow – 26%. While Lakes Menindee and Cawndilla remain dry.
- At this stage the connectivity flows to River Murray that commenced on 26 March are being delivered from Lake Wetherell outlet regulator. About 46GL will be delivered at Weir 32 until mid-April, after which the flow rates will be stable at about 300ML/day.
- The resumption of flow in the Lower Darling will bring significant relief to native fish stocks between Menindee and Wentworth that have been confined to a series of refuge pools during the record period of low flow. However, this also brings a short-term risk to native fish, as the input of organic matter from dry riverbeds and the mixing of low-oxygen pools can cause short term impacts on water quality. Members of the public can be on the lookout for signs of stressed or dead fish and report them through the Fishers Watch Hotline on 1800 043 536. River users are reminded to monitor the river levels, to look for water quality alerts and be aware of snags and other obstructions.
- In order to manage the Lake Wetherell below Full Supply Level, part of the inflows is being diverted into Lake Pamamaroo. Current diversion of about 4,000ML/day is likely to continue for one more week.
- Inflows to the lakes commenced on 10 March 2020 and so far about 431 GL has reached Wilcannia.
- Current forecast in the Barwon-Darling system indicates that in total at least 390 GL is expected to reach the lakes, after initial losses.
- WaterNSW is working with MDBA to manage a drawdown of up to 300 mm below full supply level of Wentworth Weir, to assist in moving poor quality water through the weir pool as quickly as possible.
- The average pan evaporation rate at Menindee over the last week was about 7.0 mm/d equivalent to about 3,100 ML 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 have been increased to 100% for domestic and stock licence holders, local water utility licence holders, and high security licence holders. General security remains at zero, but with access to carryover.

Drought operation measures

- The temporary water restriction that 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 has been repealed on 30 March 2020. [DPIE Media Release](#)
- Removal of the Lower Darling block banks is complete. For regular updates, refer to the [Operations Update](#) page in WaterNSW website.
- The Lower Darling regulated river water source is assessed to be in drought [Stage 3](#),

Water quality

- Red Alert for Wilcannia (N1042), and Darling River Pumping Station @ Menindee (N1095)..
- Amber Alert for Copi Hollow (site N1094), Darling river u/s of Weir 32 (site N1171) and Darling river at Menindee Weir 32 (site N1086)
- Green alert for Lake Wetherell (site 1, 2, 3 and 4).
 - For more information visit: [Water Quality Algae](#).

Planned supply interruptions:

None.



4.3 Murrumbidgee valley

Storage and release status

- Burrinjuck Dam is currently at 37% of active capacity, releasing about 620 ML/d. The releases are expected to be about 450 ML/d over the week.
- Blowering Dam is currently at 45% of active capacity, releasing about 570 ML/d. The release is likely to remain steady as per minimum transparent release rules.
- The Beavers Creek offtake regulator is fully open, however as the flow in the Murrumbidgee River around Wagga being very low, there is very little flow at the offtake regulator.
- Berembed Weir is currently about 4.94m 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.
- Bundidgerry storage is currently at about 3.9 m and is likely to remain steady.
- Gogeldrie Weir is currently at full supply level of about 6.1 m and will remain steady over the week.
- The Hay Weir is currently at about 8.55m and is likely to remain steady over the next two weeks.
- Maude Weir is at about 3.25 m and is likely to increase to about 3.5m over the week. The maximum water level at Maude will be maintained below 3.7 m in order to keep the Nimmie-Caira offtake channels drier for maintenance works in the Nimmie Creek Regulator.
- Currently, the Redbank Weir level is about 4.26 m. The level will gradually increase to operational full supply level of 5.6m in the next fortnight.
- Flow at Balranald is currently about 280 ML/d and will gradually reduce to meet the end of system target at Balranald for the month of April, which is 180ML/day.
- The current diversion into Yanco Creek is about 290 ML/d and is likely to decrease to about 220 ML/day to meet the system demands in the Yanco-Billabong creek.
- Diversion to Yanco-Billabong system via DC 800 is about 15 ML/d

Environmental water operations

- Planned environmental releases as per the transparency rules is being delivered from Blowering and Burrinjuck dams.
- 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 [WaterNSW website](#)
- As per the [Murrumbidgee Water Allocation Statement 1 Apr 20](#) 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 Red 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 an Amber status for blue green algae. For more information select the following link: [Lake Wyangan](#).
 - Burrinjuck Dam at Woolgarlo on an Amber alert level and at Waters State Park on a Green alert level. Other Burrinjuck sites are on the No Alert status.
 - Burrinjuck Dam sites are on the No Alert status.
 - Murrumbidgee River at Redbank Weir Buoy and D/S Wagga Wagga (Roaches Road) are on an Amber alert level.
 - All other weirs on Murrumbidgee River are on the No 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 60ML/d below the structure.
- There is no power supply to Nimmie Creek, North Caira and South Caira offtake regulators. Restoration of power supply, installation of walkway and painting of gates at the Nimmie regulator have commenced. The maintenance work is expected to be complete by mid-May. Supply to North Caira, South Caira and Nimmie Creeks are impacted. Maude weir will be maintained below a level of 3.7m in order to keep the Nimmie creek regulator work area from being inundated.

- 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 will be available in the next four weeks.
- Planning for painting super-structure of the Maude Weir under the coating Programme is in final stages.
- Planning is underway for the maintenance of the high-level outlets in the Burrinjuck Dam is underway. This will impact the releases through the hydroelectric power station. However, for normal irrigation / environmental releases through low level outlets there is no impact.

5. Central valley based operational activities

5.1 Lachlan valley



Storage and release status

- Carcoar Dam is currently 13.2% of capacity and releasing 2ML/d.
- Wyangala Dam is currently 12.9% of capacity and releasing around 100ML/d. Releases are forecast to remain at 100M/d for next few days and may increase to 300ML/d later in the week.
- Lake Cargelligo is currently around 93% of capacity and forecast to remain around 95% by end of the week.
- Releases downstream of Brewster Weir are currently around 50ML/d. Releases are forecast to remain steady during the week.
- Willandra Ck flow ceased from 1st December and releases may resume with any increase in tributary inflows.
- The recent rain and tributary flows d/s of dam have produced some surplus flows. Some of these flows are diverted into Lake Cargelligo and most of the flows will be diverted into Lake Brewster outflow wetlands from lake Brewster weir.

Environmental water operations

- The delivery of Water Quality Allowance (WQA) in lower Lachlan by targeting 50ML/d at Booligal to mitigate risks and response to sustained poor water quality ceased at Booligal around 31st March. During the WQA delivery period the flows in excess of operational target of 30ML/d at Booligal were 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 345GL was required in April before a further allocation can be made in the Lachlan River. Inflows received so far in April were around 9GL.
- 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

2019-20 inflow period	Estimated cumulative inflows required prior to easing of restrictions (GL)	Inflows received since July 2019 (GL) (to 29 Feb only)	Additional inflows required to increase GS delivery to 75% and increase HS allocation to 92% (GL)	Additional inflows required for new GS AWD (GL) (no restrictions)
By end of February	176	<u>85</u>	<u>132</u>	<u>342</u>
By end of March	176	<u>85</u>	<u>132</u>	
By end of April	176	85	132	

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](#)
- At the Belubula Landholders Association meeting on 21 January 2020 the following were agreed,

- Water delivery between Carcoar Dam and Needles is maintained to meet daily demand until end of February or early March 2020.
- High security and domestic and stock access licence holders on regulated Belubula receive 100% allocation.
- The Department of Planning, Industry & Environment – Water has now approved access to uncontrolled flows in the Belubula River.

Water Quality

- Latest BGA samples show that Lake Cargelligo Outlet, Lake Cargelligo TWS and Lake Cargelligo Boatshed are on Amber alert. However, Lake Cargelligo intake d/s of Curlew Water is at Green Alert.
- Wyangala Storage results (2nd April) show that overall productivity continues to be high with the assemblage at most sites dominated by *Microcystis* sp. The Abercrombie Rvr is now also showing a significant *Microcystis* sp. presence. Downstream showed few cyanobacteria present. The storage remains at red alert
- Some flow is being circulated through the Lake Cargelligo inlet and outlet 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 15.6% of capacity and currently releasing around 30ML/d. Releases are forecast to remain at this minimum rate while downstream tributary flows continue to meet town water supply and Domestic and Stock demands. Storage inflows from 1 April to 13 April are around 94GL.
- Windamere Dam is currently 27.1% of capacity (100GL) and releasing 5ML/d. Releases are forecast to stay around 20- 30 ML/d during this week.
- The recent storms and isolated stream flows have delayed the second phase of the transfer from Windamere to Burrendong to at least June 2021. The transfer will leave 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, subject to storage volume being more than 110GL.
- Environmental water accounts in Burrendong have been suspended to extend supplies for towns and critical industries. [Link](#)

Water availability

- Rainfall in the catchment below Burrendong Dam has produced some inflows in the tributaries. The flows are being managed under the tributary flow management plan. Stock and Domestic replenishment flows to all the creeks have now been complete.
- Tributary flows downstream of Burrendong dam have triggered a supplementary flow event. Access to a total of 78hrs of supplementary has been announced.
- WaterNSW maintains contact with several representatives of the regulated creeks and the Macquarie River below Warren from the Macquarie Cudgegong ROSCCo to ascertain the stock and domestic water requirements and also to understand the risks and benefits from diverting some of these flows into the creeks.
- WaterNSW also meets with the environmental agencies to discuss the critical environmental needs in the regulated creeks and river where the flows have stopped in response to drought operation.
- A Tributary management plan for this event is published on WaterNSW website and can be accessed from [here](#).
- Temporary works have been removed from Warren Weir, Duck and Crooked Ck offtakes to pass tributary inflows downstream.

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 minimal inflows will mean that there isn't enough water to maintain river flows to the whole valley for all of 2021. If negligible inflows continue, then the priority will be to extend supply for towns and critical industries.
- Prior to the recent tributary inflows, the delivery of water from regulated flows from the dam ceased for the river below Warren and for Duck and Crooked Creeks on 28 August 2019. Construction of the temporary drought works were installed at the fishways.
- Regulated flows into Gunningbar Ck below the Albert Priest Channel offtake ceased on 10th December 2019. A total of approx. 5.5GL has been delivered below Gunningbar Weir from the recent tributary flows as part of the Trib management plan since the 22 Jan.
- The Water Allocation Statement from DPIE on 1 July 2019 announced allocations for high security of 70% and high security access licence subcategories 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](#)
- All S&D replenishments were complete, from the recent rainfall events and contributions from downstream tributaries.
- Cudgegong general security carryover is not restricted.
- Any inflows received will be used to improve the drought management operations in 2020-21 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 165 GL to end of March 2020. This is just 31% of the previous record low inflow for the 32 months ending in March.
- This drier than historical minimum inflow confirms that the system has entered into a new drought of record for Burrendong Dam.

Water quality

- Burrendong dam results for the 1st April show a large *Microcystis* sp. presence at the Dam Wall. All other sites show few cyanobacteria with the assemblage dominated by green alga. Storage is now at **red alert**
- Windamere dam results for 30/03 show a mixed assemblage of cyanobacteria at the Dam Wall and mid-lake. Both sites show moderate productivity but appears to be reducing. Downstream

showed only a minor cyanobacterial detection and has low productivity. Windamere remains 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.

Planned supply interruptions:

- Nil

6. Northern valley based operational activities

6.1 Namoi valley



Storage, release and inflow status

- Split Rock Dam is at 4.5 % of active capacity, is currently releasing 2ML/d; releases have recommenced in April.
- Keepit Dam is at 13.3% of active capacity, releases have ceased after recommencing briefly for limited domestic and stock near the dam.
- Chaffey Dam is at 14.1% of active capacity and currently releasing 15ML/d.
- The Pian Creek replenishment flow has been completed from flows below Keepit Dam.
- For regular updates, refer to the [Operations Update](#) page in WaterNSW website.

Environmental water operations

- There are not any current orders for the release of environmental water in the Namoi. Environmental releases of 30ML per week continue in the Peel Valley.

Water availability

- Limited supplementary and uncontrolled flow access continues to be available in the Namoi and Peel Valleys in recent weeks. See announcements [here](#).
- Pian Creek replenishment recommenced on 19 Feb 2020.
- There is a shortfall of more than **28.20** GL (down from 102GL in January) before there is likely to be an AWD increment in the Lower Namoi valley.
- The Water Allocation Statement by DPIE (dated [22nd January 2020](#)) 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 [7th April 2020](#)) confirmed that in the Upper Namoi local water utility and D&S have 100%, high security has 75% and general security has 0%. The restrictions on access to carryover have been repealed.
- Lower Namoi local water utility and D&S have 100%, high security has 75% and general security has 0%. The restrictions on access to carryover have been repealed.

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 over the temporary weir once every 4 days. Commissioning of the Chaffey to Dungowan pipeline is to commence in April.

- The Upper Namoi is now at Stage 3, down from the Stage 4, the highest level under the Incident Response Guide. Releases recommenced on 30 March and will be used to supply water orders in the Manilla River from Split Rock Dam to the junction with the Namoi River. For customers located on the Namoi River (below Manilla), water orders will be supplied (were possible) using the inflows from the Namoi Unregulated River. Customers wishing to take water from their high security, general security or stock and domestic licences are reminded to place an order for their water
- The Lower Namoi is at Stage 3, down from the Stage 4, the highest level under the Incident Response Guide.
- 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 further inflows occur.

Water quality

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

Planned supply interruptions:

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



6.2 Gwydir valley

Storage, release and inflow status

- Copeton Dam is at 12.2% of active capacity and is currently releasing 39ML/d. Releases are to remain steady at about 35ML/d for the following two weeks.
- Copeton Dam has recorded 58,000ML of net inflow in February and 7,300ML in March
- There are also flows in the Horton River at Rider, the first flows since December 2017.
- The Gwydir River and Carole/Gil have had flows run to end of system.
- For regular updates, refer to the [Operations Update](#) page in WaterNSW website.

Environmental water operations

- Block release containing high security, ECA and environmental water, was finalised at the dam on 10th of January.

Water availability

- Limited supplementary access events continue, see updates here [Supplementary Announcements](#).
- Inflows of about **9.5 GL** 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 [7th April](#) 2020) 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 on an Amber alert in the storage and no alert downstream of the storage.

Drought operation measures

- The Gwydir is in drought Stage 3. 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, release and inflow status

- Pindari Dam is at 11% of capacity and releasing around 13ML/d (minimum release). Approximately 3,100ML inflow recorded since 1 April 2020.
- Glenlyon Dam is at 13.7% of capacity. Releases ceased.
- Boggabilla weir is full from tributary inflows and currently passing all inflows.
- Flow arrived Mungindi weir pool on 15 Feb and currently spilling.
- Continued rainfall since February has generated significant flows across the Northern valleys. Catchment is wet now and response from further rainfall will be quicker.
- Significant improvements are expected due to recent inflow event. Actual resource position will be available after next resource assessment is finalised.
- For regular updates, refer to the [Operations Update](#) page in WaterNSW website.

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.
- Supplementary access was allowed in Border Rivers due to recent rainfall event. Refer to [supplementary announcement](#) page in WaterNSW website for details.
- General Security customers can access GS account balance now. Refer to [Operations update](#) page in WaterNSW website for details.

Drought operation measures

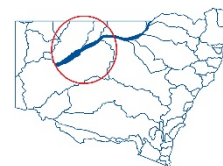
- The Border Rivers is in drought [Stage 3](#). Customers are advised that if dry condition persists, future deliveries, including essential supplies, will be grouped together (block releases), and where possible with tributary flows, to improve delivery efficiencies.

Water quality

- Recent Blue Green Algae (BGA) sampling at Pindari shows a red alert level.

Planned supply interruptions:

- No supply interruptions are currently forecast



6.4 Barwon-Darling River system

River flow status

- Significant rainfall observed across northern valleys since January.
- Inflows arrived from the Border, Moonie, Gwydir, Namoi, Culgoa, Bokhara, Castlereagh and Warrego systems.
- Due recent rainfall, further inflow is expected from Castlereagh and Bogan Rivers.
- The Barwon-Darling is now flowing from Mungindi to Wilcannia. Flow arrived at Lake Wetherell on 10 March. For regular updates, refer to the [Operations Update](#) page in WaterNSW website.
- The Temporary Water Restriction Order for A, B and C class licences was removed for Mungindi to upstream of Culgoa junction section on 27 February. Temporary Water Restriction removed from downstream of Culgoa junction to upstream of Lake Wetherell section on 6 March 2020.
<https://www.industry.nsw.gov.au/water/allocations-availability/temporary-water-restrictions>

Environmental water operations

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

Water Availability

- Flow has resumed between Mungindi and Wilcannia and reached Lake Wetherell on 10 March. Access is allowed for customers for all management zones.
- Refer to the [Barwon-Darling flow class map](#) for up to date information on licence class availability.

Drought operation measures

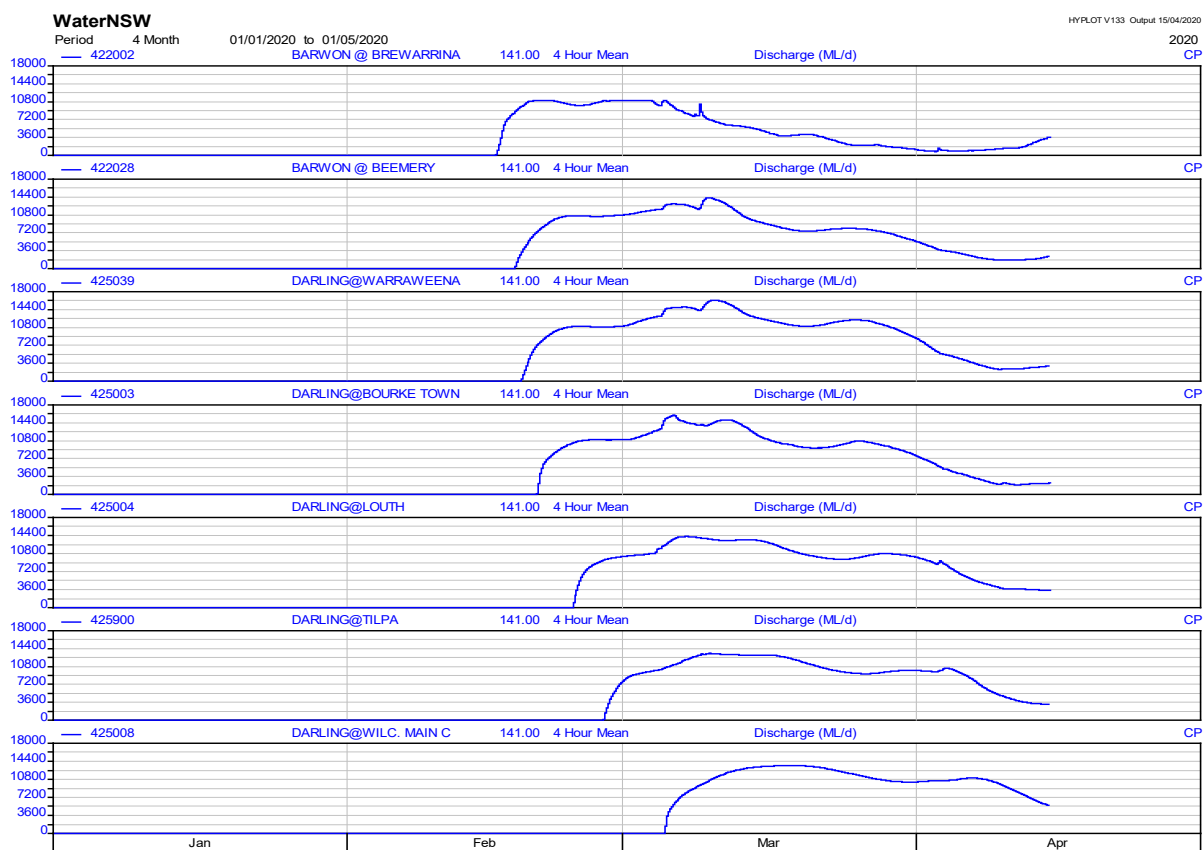
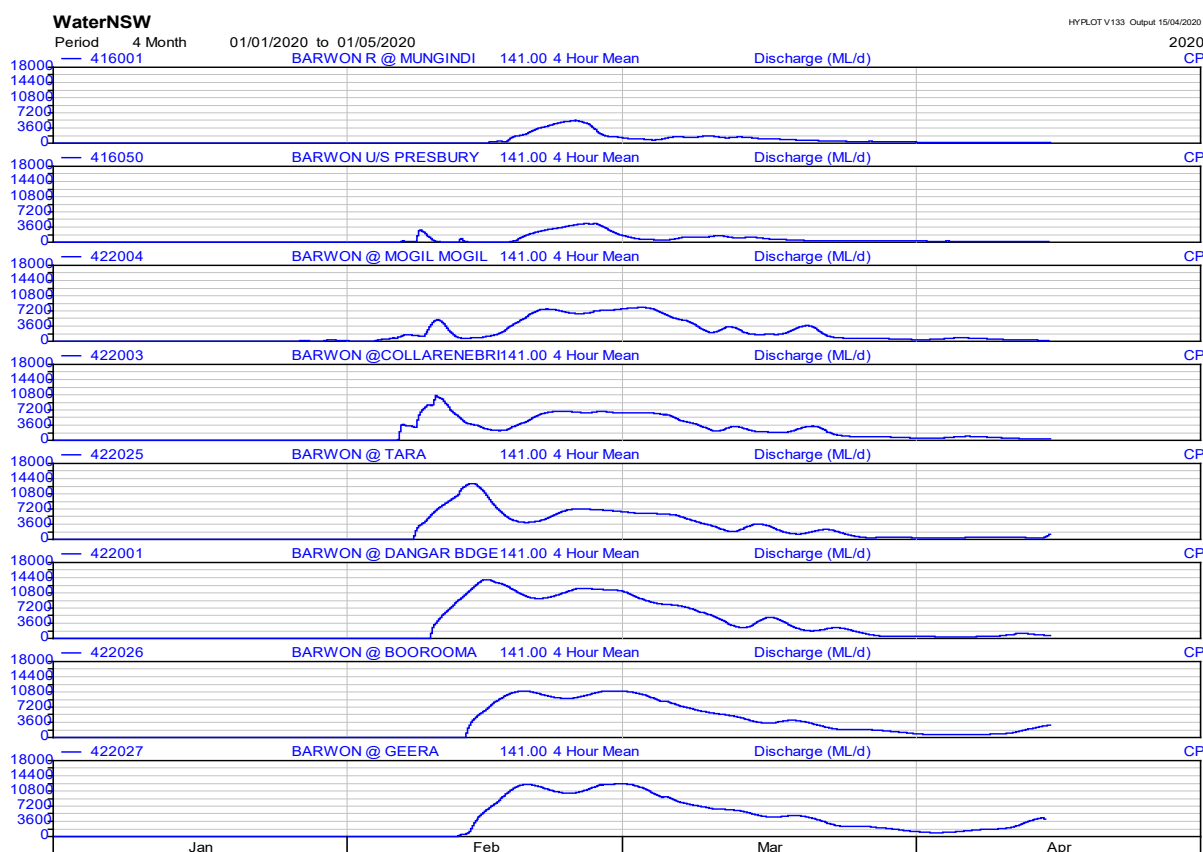
- The Barwon Darling unregulated river water source is assessed to be in Stage 3.

Flow forecast

- The Barwon-Darling system is an unregulated river, which travels 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 riverbed along these sections and refilling weir pools and natural holes in the river.
- The below summaries are the current forecast estimates of flows along the system. This information will be regularly updated as required.

Location	Observed volume (ML)	Total forecast volume – including observed (ML)	Date or expected date of flow arrival	Comments about inflows to each section
Mungindi	70,782	73,000 – 75,000	15 Feb 2020	Inflows are from the Border Rivers
Presbury	63,344	64,000-67,000	5 Feb 2020	
Mogil Mogil	202,972	204,000-206,000	27 Jan 2020	Expected total inflows (observed and forecast) are 17-18 GL from Gil Gil and about 76 GL from Moonie. Gain from localised inflows.
Collarenberi (total flow including Old Pockataroo anabranch)	238,378	240,000 – 243,000	6 Feb 2020	Expected total inflows (observed and forecast) are 25 GL from Mehi. Total observed flows at Garwon (Old Pockataroo) are 10 GL
Tara	249,486	251,000 – 254,000	7 Feb 2020	Gain from localised inflows
Walgett	350,459	355,000 –360,000	9 Feb 2020	Expected total inflows (observed and forecast) are about 89-92 GL from Namoi at Goangra
Boorooma	311,335	320,000 – 330,000	13 Feb 2020	Flows were out of bank
Geera	361,388	390,000 - 410,000	12 Feb 2020	Significant inflow expected from Castlereagh River and Marthaguy Ck from recent rainfall
Brewarrina	317,510	350,000 – 370,000	16 Feb 2020	
Beemery	439,570	475,000 – 495,000	18 Feb 2020	Based on observed flows at NSW gauges, around 32-34 GL inflow is expected from Bokhara. Gain from localised inflows.
Warraweena	545,340	585,000 – 610,000	19 Feb 2020	Based on observed flows at NSW gauges, around 174-177 GL inflow is expected from Culgoa.
Bourke	494,910	515,000 – 540,000	20 Feb 2020	
Louth	472,694	500,000 – 530,000	24 Feb 2020	Around 40-50 GL inflow considered as forecast from Warrego

Tilpa	449,782	475,000 – 505,000	28 Feb 2020	
Wilcannia	431,393	475,000– 505,000	5 Mar 2020	
Lake Wetherell, Lake Tandure and Lake Pamamaroo	335,269	400,000 - 440,000	10 Mar 2020	Around 10-20 GL expected from Dolo-Bonley Creek system downstream of Wilcannia. Higher losses between Wilcannia and Lake Wetherell.



7. Coastal valley based operational activities

7.1 Bega river

Storage and release status

- Brogo Dam is at 100% of capacity and spilling.



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.
- Due to heavy rainfall on the weekend of 8 and 9 February 2020 Brogo Dam filled to 100% and continuing to spill. In these circumstances, full water security has been restored, and the temporary water restrictions on general security has been lifted on 12 February 2020.
- This has also resulted in increased allocation for general security licence by 20 per cent, which makes the total allocation to 60 per cent of entitlement. The increase in GS allocation was announced on 24th February 20.

Drought operation measures

- The Bega/Brogo regulated river water source is assessed to be in normal conditions now, improved from drought Stage 4 to Stage 1.

Water quality

- Recent BGA sampling at Brogo shows low productivity across the storage mostly represented by green alga. No cyanobacteria were detected upstream or downstream. Storage remains on green alert.

Planned supply interruptions:

- Nil

7.2 Hunter valley

Storage and release status

- Glenbawn Dam is currently at 40% of capacity and releasing around 20 ML/d. Releases are forecast to remain steady during the week.
- Glennies Creek Dam is at 37% of capacity and releases are currently around 20 ML/d. Releases are forecast to remain steady during the week after rainfall event contributed to instream flows and reduced demand.
- Lostock Dam is at 100% of capacity and spilling.
- Recent rain has produced large flows in the Hunter River downstream of Glenbawn Dam, resulting in triggering both Salinity and Supplementary events.



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.

Drought operation measures

- The Hunter regulated river water source is assessed to be at drought Stage 1, however if conditions remain dry the drought stage may escalate to stage 2 or higher.
- Water Allocation Statement published on 20 March, by Department of Planning, Industry and Environment stated that to ensure security of supply for high priority commitments, general security allocations may be very low or zero at the commencement of the 2020-21 water year (1 July 2020).

Water quality

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

Planned supply interruptions:

- Nil

7.3 Toonumbar Dam

Storage and release status

- Toonumbar Dam is at 70% of capacity and releasing about 11 ML/d. A small inflow is still coming into the dam from recent rainfall. This should lead to small increase in storage volume.

Environmental water operations

- No current additional operations.

Water availability

- All licence categories have 100% availability.
- Recently, WaterNSW held a River Operations Stakeholder Consultation Committee (ROSCCo) in Casino on 10th March 2020 and advised the stakeholders of the current situation and future operations Plan.
- Full allocations already announced for all entitlement holders in 2019-20 are confirmed and fully deliverable this year, while high priority commitments for 2020-21 are also assured.
- Recent rain and forecast weather conditions indicate a possible shift in weather patterns following months of extreme dry weather. If Toonumbar storage levels are maintained or increased in coming months, there will be a strong possibility of full general security allocation for 2020-21.

Drought operation measures

- The drought criticality level has eased from Stage 2 to Stage 1 – normal operations.

Water quality

- Recent results for Toonumbar shows that benign cyanobacteria dominate the assemblage with minor counts of Microcystis sp. noted. No cyanobacteria were detected downstream. Storage remains at amber alert awaiting another clear result

Planned supply interruptions:

- Valve upgrade works are planned at Toonumbar Dam, which will cause interruptions to the supply downstream. WaterNSW has issued a media release regarding the planned outage.
<https://www.watarnsw.com.au/about/newsroom/2020/upgrade-works-to-halt-water-releases-from-toonumbar-dam>
- The work is scheduled to start from the 20 April 2020 and take 1 week to complete.
- This work is essential to ensure the efficient delivery of water to customers and to meet contemporary safety and engineering standards.

8. Rural Dam Levels

The following table shows the status of water supplies at 13 April 2020.

River Valley	Capacity	Current Status		Weekly change (GL)	Comments	Likelihood of fill and spill	Allocations for 2019/20		
Storage Dam, Nearest Town	(GL)	% of active capacity	Active (GL)		Supply Issues		High Security	Gen. Security	C'over avail @ 1/7/19
Border Rivers									
Glenlyon Dam, Stanthorpe (Qld)	253	14%	34	-0	d/s trib flows continue	<20%	100%	0%	<1%
Pindari Dam, Inverell	312	11%	34	2	d/s trib flows continue	<20%	100%	0%	<1%
Gwydir Valley									
Copeton Dam, Inverell	1346	12%	164	9	d/s trib flows continue	<5%	100%	0%	5%
Namoi Valley									
Keepit Dam, Gunnedah	419	13%	56	2	d/s trib flows continue	<20%	75%	0%	0%
Split Rock Dam, Manilla	394	4%	18	1	d/s trib flows continue	<5%	75%	0%	22%
Chaffey Dam, Tamworth	98	14%	14	-0	d/s trib flows continue	<50%	50%	0%	N/A
Macquarie Valley									
Burrendong Dam, Wellington	1154	15.6%	180	46	d/s trib flows recession continue, Access to Supp announced	<20%	70%	0%	0%
Windamere Dam,	367	27%	99	1	Regulated releases.	<5%	70%	0%	54%
Lachlan Valley									
Wyangala Dam, Cowra	1216	13%	156	5	C'over restricted to 57%	<20%	87%	0%	15%
Carcoar Dam, Carcoar	36	13%	5	0	d/s trib flows, access to	<10%	100%	0%	38%
Murrumbidgee Valley									
Burrinjuck Dam, Yass	1025	37%	383	6	Regulated releases.	40%	95%	6%	8%
Blowering Dam, Tumut	1604	45%	721	10	Min Planned eWater	<10%	95%	6%	8%
Murray									
Dartmouth, Mitta Mitta	3837	45%	1740	8	Transfer to Hume ceased	N/A	N/A	N/A	N/A
Hume Dam, Albury	2982	13%	383	11	Regulated releases	<25%	97%	0%	18%
Lower Darling									
Menindee Lakes, Broken Hill	1633	15%	234	39	Release reach Murray R Block banks removed	<30%	100%	0%	19%
Hunter Valley									
Glenbawn Dam, Scone	750	40%	301	1	Large d/s trib flows ,	<20%	100%	95%	23%
Glennies Ck Dam,	282	37%	106	-0	Small d/s trib flows	<20%	100%	95%	23%
Lostock Dam, Gresford	20	100%	20	-0	spilling	100%	100%	100%	N/A
Coastal Area									
Toonumbar Dam, Kyogle	11	69%	7	-0	d/s trib flows continue	100%	100%	100%	N/A
Brogo Dam, Bega	9	101%	9	0	Spilling	100%	100%	60%	N/A
Total	17746	26.3%	4663	141					

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

Subscribe to our customer information (weekly water availability reports, e-newsletters, etc.) at waternsw.com.au/subscribe.