

Water availability report

26 November 2018

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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 26 November 2018 was 42.9% of the total active storage capacity. This was a decrease of 0.9% from last week.

The total storage level of urban water supplies on 26 November 2018 was 60.4% of the total storage capacity. This was a decrease of 0.6% since last week.

2. System risks

- The continuing dry conditions in the Lower Namoi mean that water deliveries are underway via a single block release strategy from October through to December 2018. Delivery losses have exceeded the conservative forecast, but last week's rain has enabled the restriction on deliveries to be lifted.
- The actual inflows to Burrendong Dam since the last AWD in August 2017 total about 38 GL. This is only 26% of the previous record low inflow of about 143GL for the 15 months ending in October. Only 70% of remaining carryover can be delivered with the current stored volumes and these new, lower inflows.
- Cease to flow conditions in the Barwon Darling system as conditions remain dry, except for some small flows due to local rain, and near Brewarrina, from the Macquarie environmental releases.
- Block releases are scheduled in the Gwydir valley to deliver the small volumes remaining in customer accounts as conditions remain dry in 2018/19.
- Grouping of water orders and an early cessation to deliveries in the western section of the Border rivers will be required if conditions remain dry in 2018/19.
- 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 December 2018. Releases from the remaining water in Lake Pamamaroo is being used to fill these banks. Cease to flow, between these banks, is expected in coming weeks. These lower flows increase

the possibility of; access problems with very low flows and decreasing water quality with increase in; salinity, pH and Algae.

3. Climatic conditions

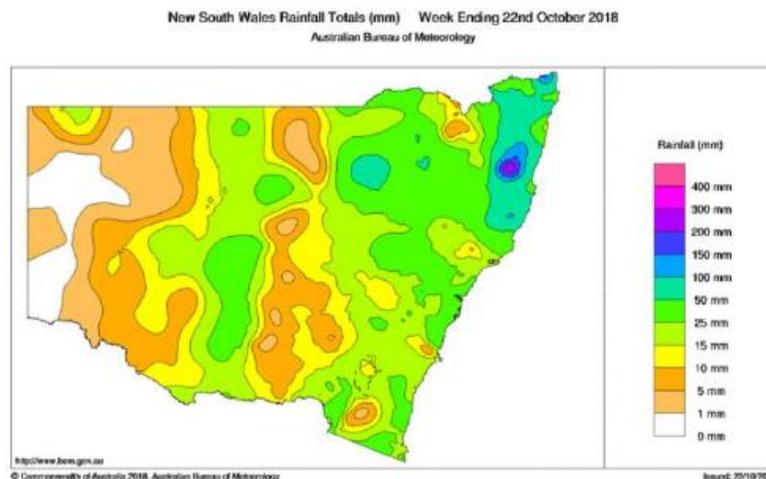


Figure 1 - Weekly rainfall totals for New South Wales

A low-pressure system in the northwest of the state will slowly track southeast on Tuesday. As the low reaches central parts of the coast on Wednesday, it is forecast to intensify, bringing heavy rainfall and vigorous winds to some central eastern districts. This low will move east away from the New South Wales coast on Thursday while a weak ridge develops over the state.

The temperature for the first half of the week should see 12 to 18 degrees in the south east, the north looking at 30 to 36 and the rest of the State around 24 – 27 degrees. Towards the latter part of the week, it is forecast that temperatures will increase in the central and northern parts of the State, to 36 – 42 degrees, with the central and southern parts of the State seeing an increase in temperature of around 21 to 33 degrees.

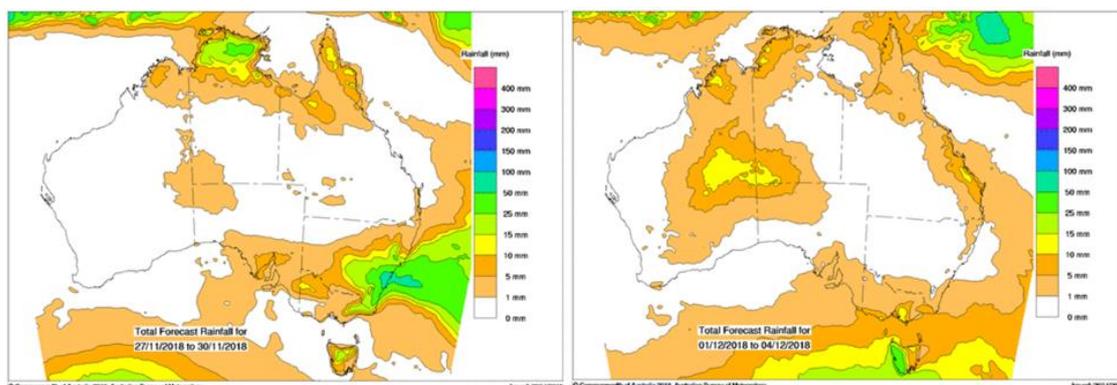


Figure 2a – First 4-day Forecast (27 - 30 Nov 18) Figure 2b – Following 4-day forecast (1 – 4 Dec 18)

December to February is predicting roughly equal chances of a wetter or drier three months, i.e., no strong tendency towards a wetter or drier than average season ahead. This pattern is fairly typical of a summer El Niño event.

December is likely to be wetter than average in eastern and central NSW, extending into eastern Victoria.

Historical outlook accuracy for December to February is low to very low.

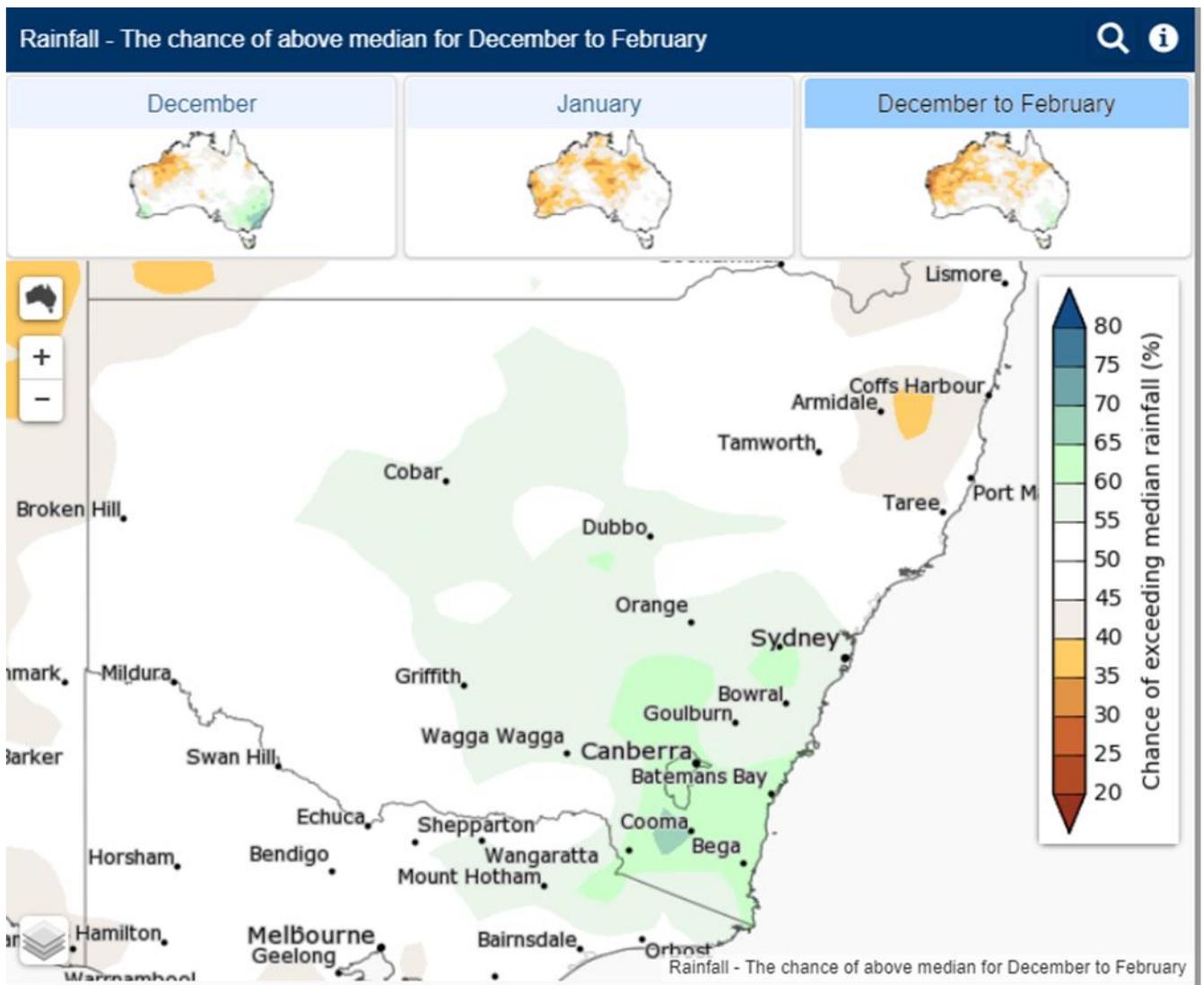


Figure 3 – 3-month rainfall outlook

4. Southern valley based operational activities

4.1 Murray valley

Storage status

- Hume Dam is currently holding about 1,303GL or at 43% of active capacity, releasing about 14,150 ML/d.



Predicted release patterns

- Releases from Hume Dam are likely to continue but at a lower rate to meet irrigation and environmental demands and to transfer water to Lake Victoria for South Australia.
- Release downstream of Yarrawonga Weir is about 15,000ML/day and is likely to remain steady. Part of the flows will be passed through specific forest regulators to take advantage of pre-wetted anabranch channels that can transfer water efficiently around the Barmah Choke. The higher flows are required to ensure sufficient water is transferred to Lake Victoria in advance of expected summer demands and avoiding the need for higher flows and losses in summer.
- Forest regulators are being actively used to maintain the river level at Picnic Point below 2.6m. Currently the level at Picnic Point is about 2.55m.
- The Edward River Offtake is currently about 1,330ML/d and is likely to remain well below the channel capacity of 1,600ML/day. The objective is to manage the flows at Toonalook at about 3,300ML/day. The Edward offtake flow will increase as the flow from Gulpa Creek is reduced to regulated capacity by next week.
- The Gulpa Creek Offtake has increased to about 600ML/d and is likely to remain relatively steady until the start of next week.
- Stevens Weir level is currently about 4.53m and is likely to remain relatively steady to manage the level upstream of Wakool Canal offtake, which is about 1.80m. Flow downstream of Stevens Weir is currently about 3,000ML/day and is likely to remain relatively steady.
- Flows in the Colligen Creek (430ML/day), Yallakool Creek (450ML/day) and Wakool River (60ML/day) are likely to vary marginally in line with Stevens Weir pool height.
- The combined Wakool – Yallakool flows are augmented with supply from Mulwala Escape at Wakool so that the flows are maintained at about 600ML/day in the Wakool system.

Operating conditions

- The latest Water Allocation Statement by DoI-Water confirmed that the general security allocation of zero, while Available Water Determinations (AWD) are 100% for towns and 97% for

high security. Average carryover into 2018-19 is estimated to be about 31% of general security share components.

- Returns to Edward River upstream of Toonalook from the environmental water delivered into the Barmah – Millewa forest is currently averaging about 1,400ML/d.
- Supply to Gulpa Creek for environmental purposes have commenced above regulated channel capacity.
- Environmental water delivery to Wakool-Yallakool and Colligen-Neimur Creek systems as per the hydrograph provided by Fisheries have been suspended. The flows are now managed to maximise the delivery to Murray using the Edward Wakool system subject to channel capacity in the Wakool system.
- Supply through Perricoota Escape (90ML/day) and Wakool Escape (80ML/day) are expected to continue for the next few weeks.
- Supply to Edward River is also augmented with Billabong Escapes at Finley, (250ML/day), which is likely to continue for the next few weeks.
- Flow at Moulamein is currently at about 2,700ML/day is likely to remain steady.
- Flow in Niemur River at Mallan School is currently about 725ML/d and is likely to remain relatively steady.
- Merran Creek flows upstream of its confluence with Wakool is about 150ML/day and is likely to vary between 140 and 200 ML/day for the next few weeks.
- Flow in Wakool River at Stoney Crossing is currently at about 1,320ML/day and is likely to remain relatively steady.
- Flows at Balranald are currently about 540ML/day and are likely to remain steady until end of November. From early December the flow will reduce to about 280ML/day.
- Lake Victoria is currently holding about 551 GL or 78% of active capacity. The flow to South Australia is about 6,100ML/d.
- Potential blue green algae issues:
 - Hume Dam: Results for October (16/10) show a fairly mixed assemblage across the storage including benign cyanobacteria, diatoms and green alga. Minor detections of *Microcystis* sp. were noted at the Dam Wall and Heywoods. Storage remains at green alert.
 - For more information visit: [water quality algae](#).

Planned supply interruptions:

- None.

4.2 Lower Darling valley



Storage status

- The lakes currently hold an active volume of about 58 GL or about 3% of active capacity. The total storage is about 105 GL.
- Lake Menindee has been dry since 6 Feb 2018.

Predicted release patterns

- Release from Lake Pamamaroo is about 240ML/d, primarily to meet the flow targets of about 220ML/d at Weir 32 to fill the Lower Darling block banks.
- The following is the tentative plan for releases from upper storages to fill the banks:
 - Weir 32 target will remain at 220ML/d. The release will be regularly reviewed as the Lake Pamamaroo outlet capacity will reduce as the lake level falls.
 - Current level at the block bank near Jamesville is about 3.70, and one pipe has been closed to increase the level at about 15 mm/day.
 - Current level at the block bank near Ashvale is about 1.32m. The pipes at the bank are closed. The filling rates of both banks are regularly reviewed.

Operating conditions

- The latest water allocation statement by DoI-Water confirmed the Available Water Determinations (AWD) are 100% for towns for high security, while general security is zero. Average carryover into 2018-19 is about 15% of general security share components.
- The average pan evaporation rate at Menindee over the last week was about 9.9mm/d equivalent to about 5,600ML from the lakes over the week.
- The total storage of Menindee Lakes reached the 480GL trigger for NSW control of the lakes on 16 December 2017. The releases from the storages will be managed as per the Lower Darling annual operations plan until the storage volume next exceeds 640GL. For more information visit: [Lower-Darling operational plan](#).
- The pumping across the temporary bank between Lake Wetherell and Lake Tandure has ceased due to low levels in Lake Tandure.
- Two temporary block banks viz. near Jamesville and Ashvale have been constructed to ensure supply to domestic, stock and permanent plantings. Additional releases from Lake Pamamaroo outlet have commenced to fill these banks.

- Construction of two additional temporary banks upstream of Pooncarie have commenced. The bank at Karoola has been completed and has commenced filling, but with pipes open. The construction of the court nareen bank has commenced and may interrupt flows downstream of the construction.
- Pumping from Lake Pamamaroo to Copi Hollow has now ceased as Copi Hollow is fully surcharged. About 11,100ML has been transferred into Copi Hollow to date.
- Potential blue green algae issues. As per the results to 23/10/2018, the following warnings are current for the various sampling locations within the Menindee lake system and Lower Darling river immediately downstream of the storages.
 - Darling river at Wilcannia, Darling river u/s in Weir 32, Darling river at Weir 32, Lake Wetherell - Site 1,2, and 4, Lake Tandure- Site 8, Lake Pamamaroo – Site 9,10,13, Copi Hollow, Darling river pumping station at Menindee are on green alert.
 - Lake Wetherell Site No. 3 and Lake Cawndilla site No. 32 are on amber alert.
 - Lake Cawndilla Outlet is on red alert.
 - There is no current alert for Lake Menindee - Site 19.
 - For more information visit: [water quality algae.](#)

Planned supply interruptions:

- None.

4.3 Murrumbidgee valley



Storage status

- Burrinjuck Dam is currently 42% of active capacity, releasing about 450 ML/d.
- Blowering Dam is currently 51% of active capacity, releasing about 4,600 ML/d.

Predicted release patterns

- Releases from Burrinjuck Dam are being maintained as per planned environmental water rules.
- Release from Blowering Dam have now increased to meet the irrigation demand and existing environmental water orders.
- The current diversion into Yanco Creek is about 300 ML/d and is likely to remain relatively steady.
- Delivery to Billabong system via Finley Escapes is about 250ML/day and is likely to remain at this maximum capacity for the next few weeks.
- The Beavers Creek Offtake is controlled to achieve a target of around 100ML/day as an average flow in November at Kywong.

Operating conditions

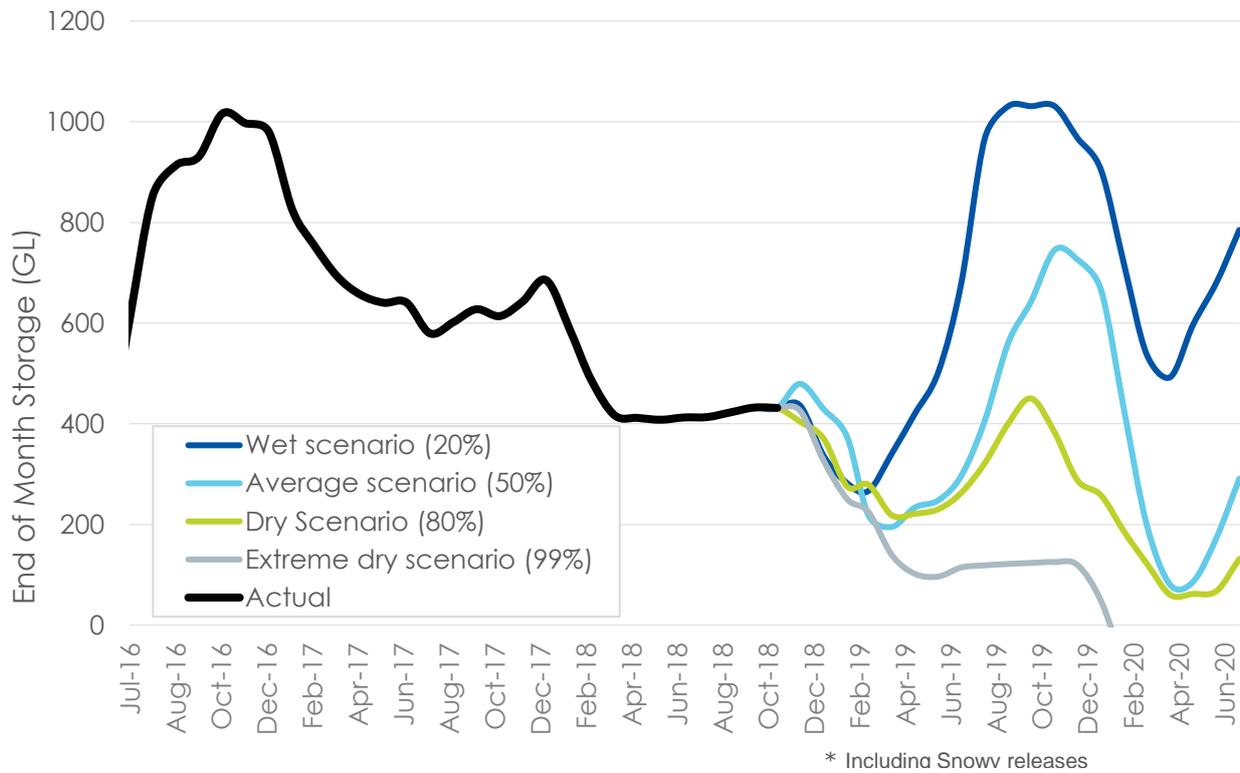
- The latest Water Allocation Statement by DoI-Water confirmed the Available Water Determinations (AWD) are 100% for towns and 95% for high security, while general security is now 7%. Carryover into 2018-19 is 22% of general security share components.
- Berembed Weir is currently below full supply level at about 4.3m and will be used to capture any system surplus.
- Bundigerry storage is currently below full supply level at 3.5m to provide sufficient airspace to capture any system surplus.
- Gogeldrie Weir is currently below full supply level at about 5.4m. The Weir is being actively used for re-regulation to capture any system surplus and then to meet downstream system demands while maintaining sufficient head to supply water to meet the irrigation demand to Sturt Canal and Coleambally Main Canal.
- Tombullen storage is at about 2.2m and is being actively used for re-regulation, with capture of system surplus due to rainfall rejections and then to reuse the captured water to meet downstream system demands.
- Hay Weir is currently at about 8.4m and will be filled with any system surplus. The stored water would then be used to meet downstream demands over the next two weeks. The weir is expected to be about 6.0m by mid-December.

- Maude Weir is currently at 5.9m and will be maintained relatively steady. The weir is being used to deliver environmental water orders into South Caira channel.
- Redbank Weir is at operational full supply level of about 5.6m to supply environmental water to Yanga wetlands until mid-December. The environmental delivery to Patterson's Pipe is expected to commence this week.
- Flows at Balranald are currently about 540ML/day and are likely to remain steady until end of November. From early December, the flow will reduce to about 280ML/day.
- For Inter Valley Transfer (IVT) account from Murray to Murrumbidgee refer to WaterNSW website [IVT ordering](#).
- Potential blue green algae issues:
 - Blowering Dam: Latest results (06/11) show minor counts of benign cyanobacteria and green alga. Downstream results showed no cyanobacteria. Storage remains at green alert.
 - Burrinjuck Dam: November sampling results show that few cyanobacteria were detected at any u/s location. Mainly diatoms were detected in all samples. Storage remains at green alert
 - Other sites have no alerts.
 - For more information visit: [water quality algae](#).

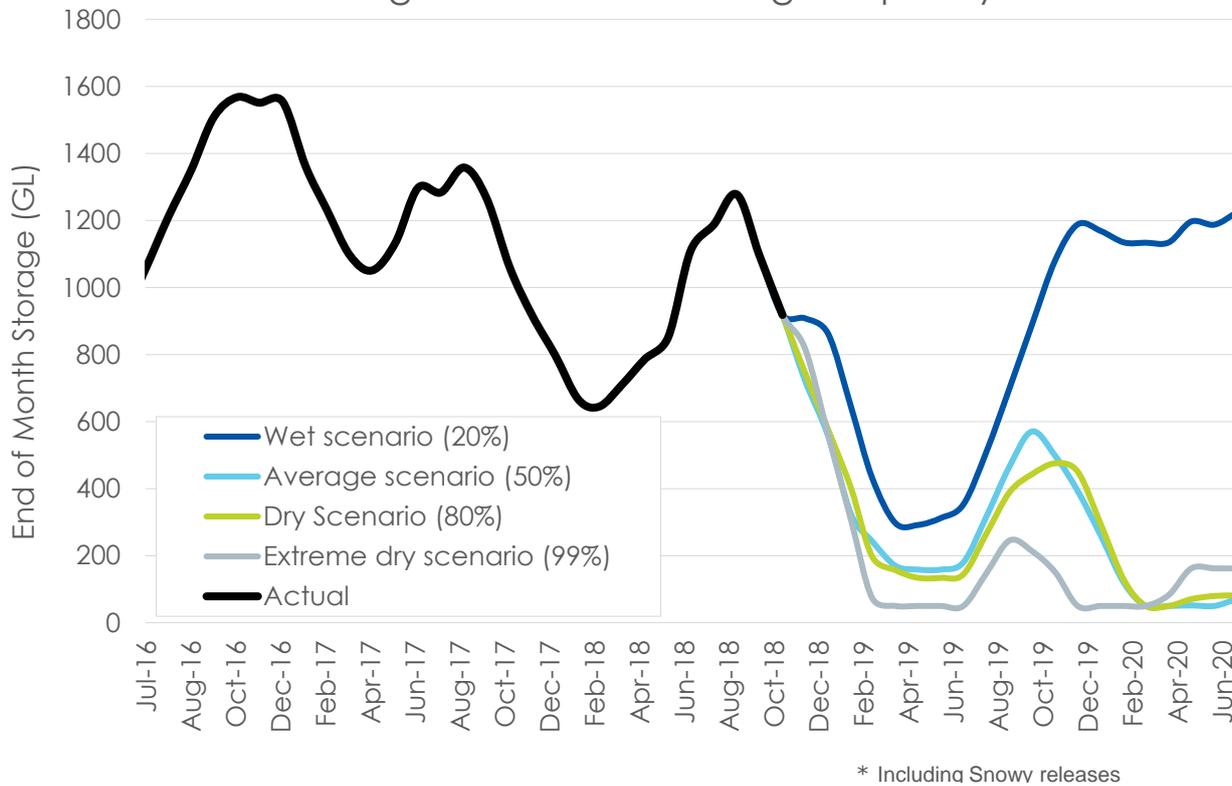
Planned supply interruptions:

- Planning is underway for the maintenance of Tarabah Weir as the maintenance is team is awaiting a suitable window of low flows.
- At Spillers Regulator, plans are underway to install a new gate. Current low flows at the top end of Yanco Creek is expected to assist the maintenance activities.

Burrinjuck Dam forecast storage capacity



Blowering Dam forecast storage capacity



5. Central valley based operational activities

5.1 Lachlan valley

Storage status

- Carcoar Dam is currently 45% and releases have averaged around 35ML/d.
- Wyangala Dam is currently 48% and releases have averaged around 1,300ML/d.
- Lake Cargelligo is currently 82%



Predicted release patterns

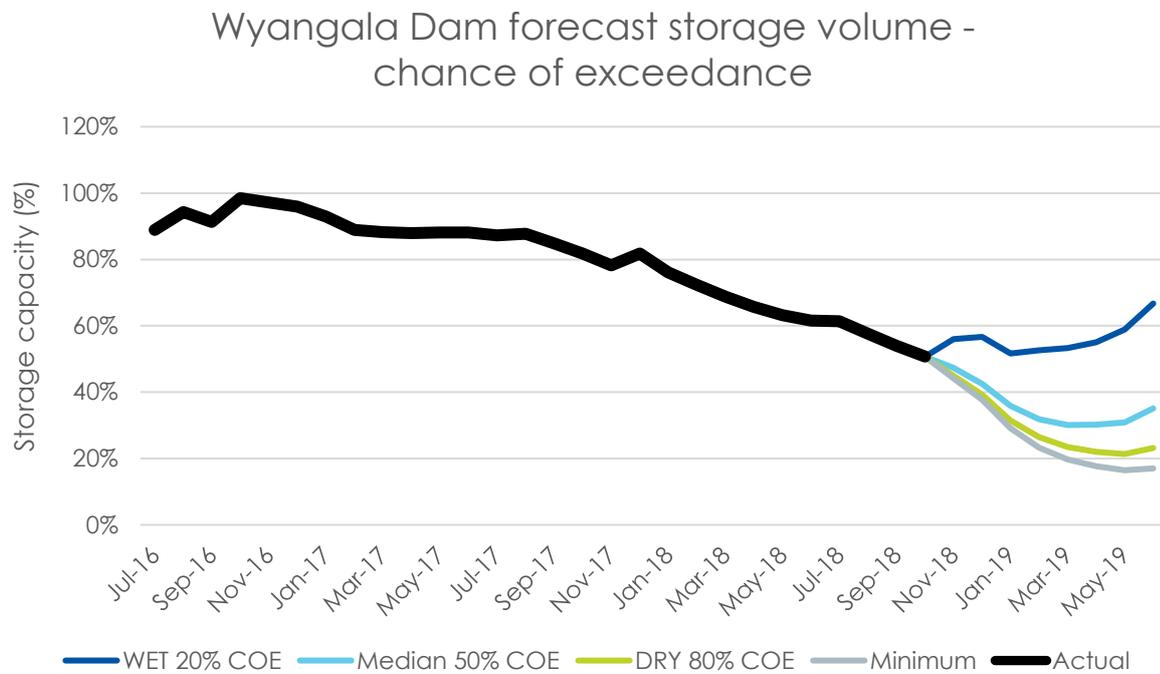
- Carcoar - continue at a release rate of 30ML/d and will be dependent on the rainfall runoff from Wednesday's forecast rainfall event.
- Wyangala - Remain steady at current 1400ML/d release.
- Brewster Weir - Likely to remain between 350-450ML/d depending on orders.

Operating conditions

- The 15th November water allocation statement confirmed zero for general security and the initial Available Water Determinations (AWD) of 100% for towns, S&D and high security. Carryover into 2018-19 in Lachlan River is about 369GL, equivalent to about 62% of general security share components.
- It is estimated that a combined dam and tributary inflow volume more than 225,000 ML is required in November before a further allocation can be made in the Lachlan River. Inflows received in November to date are under 1,000ML.
- Lake Cargelligo storage is currently at 82% and the level is likely to remain between 40% and 80% during the irrigation season.
- As of 25 July 2018, Lake Brewster main storage is effectively empty. Starting on the 27 September environmental water has been delivered into the outflow wetlands, with the goal of building the seedbank through a full growth cycle of wetland vegetation.
- Latest BGA samples show that Willandra Weir, Lake Brewster outlet channel, Lake Brewster Regulator C, Lake Cargelligo Outlet and Boatshed are all on green alert.
- Delivery of translucent environmental flow as provided for in the WSP has not been triggered in 2018. Total Wyangala Dam inflow since 1 January 2018 is about 40 GL. Translucent flows are released from Wyangala Dam only after a total of 250 GL of inflow has occurred in a calendar year and only between 15 May to 15 November.

Planned supply interruptions:

- Nil.



Account spill and reset of general security allocations

- If WaterNSW were to commence dam releases to maintain airspace in Wyangala Dam, it will trigger an account spill and reset of general security allocation accounts, high security spillable sub-accounts and the conveyance licence account as per section 56 of the Lachlan WSP. The Department of Industry - Water has announced that if there is an account spill and reset there will be no further reset in the following 6 months.

5.2 Macquarie valley

Storage status

- Burrendong Dam is currently at 18% and Windamere Dam is at 39% of capacity.



Predicted release patterns

- Currently releases from Burrendong are around 2,000ML/d and are planned to stay in between 1,500 – 2,000ML/d for rest of the week depending on irrigation demand.
- Currently releases from Windamere are around 85ML/d and are planned to stay steady for rest of the week.

Operating conditions

- Delivery of environmental flows commenced at Burrendong Dam on 12 July 2018. Currently releases for the fifth component of the 'spring event' are being made from the dam with a hydrograph designed to provide a steady flow rate of 600 ML/d at Marebone Weir until 29th November and then with a recession ending the deliveries on 8 December. This release pattern aims to maintain a stable flow for Murray Cod who are actively breeding and maintain/expand the area of inundation achieved to date.
- The current releases from Burrendong Dam are largely for Irrigation orders, and a portion for environment, town water demand and minimum flow targets. Deliveries for second round of watering for summer crop has started from the dam last week, as irrigation demand has increased.
- Flows from EWA sub-account 2 (active) are estimated to have arrived at Miltara from 18 October 2018 and progressed through to Brewon Bridge on 23 October 2018 and reached Barwon River confluence on 26 October 2018. The licence holders in the lower Macquarie River below the Marshes are reminded that Macquarie Bogan Unregulated WSP condition 53 (27) prohibits taking of water from flows resulting from releases made from EWA sub-account 2 (active) in the regulated Macquarie River.
- The timing of all S&D deliveries in 2019 will depend on rainfall events, dam inflows, and contributions from downstream tributaries.
- The initial Available Water Determinations (AWD) for 2018-19 are 100% for towns, S&D and high security, while general security is zero.
- Carryover into 2018-19 in the Macquarie River was about 316GL or 52% of general security share component. Carryover into 2018-19 in Cudgegong River was about 102% of share component. However, as per the Temporary Water Restriction Order by DoI Water, the resources in Burrendong Dam, minimum expected inflows, plus planned bulk water transfer from Windamere

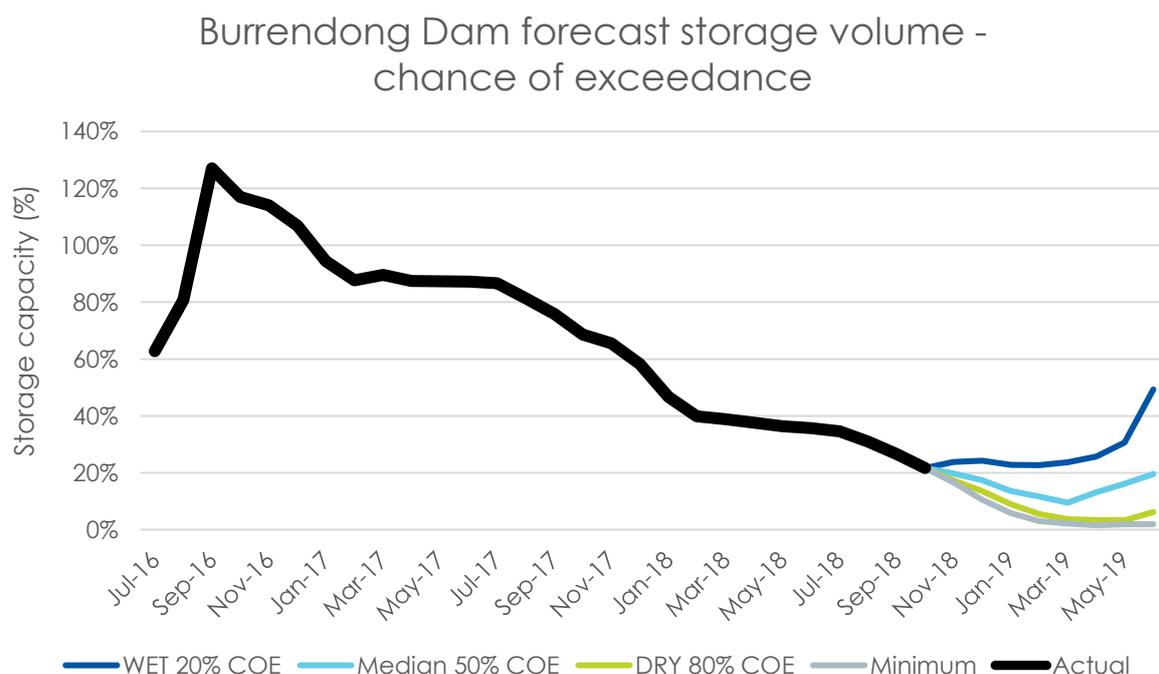
Dam, will only provide 70 per cent of the 1 July 2018 balance of general security and environmental accounts (including EWA).

- The Order states that Macquarie regulated river (general security) access licences will be restricted to 70 per cent of the volume of water in the carryover sub-account account as at 1 July 2018. Cudgegong regulated river access licences, including general security, are not restricted.
- As inflows are received during the year, subject to meeting high priority commitments such as town water supply and basic landholder rights for 2019-20, the amount of water in the drought reserve may be reduced and be made available to customers.
- End of October resource assessment indicates that the access to water in the drought reserve is likely to be reviewed before June in "Average" conditions and before January under "Wet" conditions.
- Cropping and catchment conditions are being assessed to inform demand and deliverability requirements. At this stage the planned bulk water transfer from Windamere Dam will commence in January. The transfer will take place in two distinct stages. The first phase of the transfer would be in January/February 2019 comprised of 35 gigalitres. A second phase of the transfer will occur in spring 2019, leaving a minimum of 70GL in Windamere Dam, which provides a very secure supply for local demand for the next seven years.
- An information session on bulk water transfer is being planned in Mudgee at 4pm on Tuesday, 4 December 2018 at The Stables. This information session is scheduled to follow immediately after the information session on the new WSP/WRP by DoI Water. At the information session it is hoped to assist the stakeholders to register for the Early Warning Network to receive customer notices and other relevant communications on the bulk water transfer.
- The level in Burrendong Dam is expected to drop steadily and is likely to below 3% by end of summer. Since commissioning Burrendong Dam had been drawn below 10% on five similar occasions (June 1995, Jan 1998, Apr 2003, May 2004 and Jan 2007).
- It is estimated that inflows of around 330 GL are required in November before an increment in Available Water Determination could be made. Inflows received in November are around 3 GL.
- The actual inflows to Burrendong Dam since the last AWD in August 2017 total about 38 GL. This is only 26% of the previous record low inflow of about 144GL for the 15 months ending in October.
- 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 inflows will be important for planning this season's operations.

- Under very dry conditions, deliveries in 2018-19 require water conservation initiatives to reduce losses. This will involve implementation of water order debiting and, where feasible, block releases of irrigation orders in lower parts of the Macquarie River.
- Customers are reminded that those who repeatedly extract less water than indicated in their approved water order will have their account debited for the full amount ordered, rather than the amount extracted. Please view the approved water order debiting rules as below: [Fact Sheet](#).
- Burrendong algal results for the 13th Nov show no presence of potentially toxic species. Assemblage at station 1 and Mookerawa were dominated by flood alga, whereas the Cudgegong showed mainly green alga. Storage is now at Green alert. However weekly sampling will continue as part of the curtain reinstatement.
- Windamere algal results for the 24th Oct shows a minor presence of toxic species at Dam Wall and mid lake, however storage remains on green alert.
- The position of the trash rack at Windamere Dam is currently 11-14 m below the surface.
- Works to reinstate the temperature curtain at Burrendong Dam have been completed and the commissioning phase has commenced. The commissioning of the curtain operation will allow the continuation of this trial as the water near the surface of the lake begins to warm.

Planned supply interruptions:

- Nil



6. Northern valley based operational activities

6.1 Namoi valley

Storage status

- Split Rock Dam is at 6% of active capacity.
- Keepit Dam is at 4% of active capacity.
- Chaffey Dam is at 45% of active capacity.



Predicted release patterns

- Split Rock Dam is currently releasing around 300 ML/day and will increase to around 400ML/d during the week before receding to lower levels next week.
- Keepit Dam outlets are fully open and is currently releasing around 1300 ML/day. Releases will gradually reduce as the storage level falls over the week.
- Chaffey Dam is currently releasing around 130 ML/day.

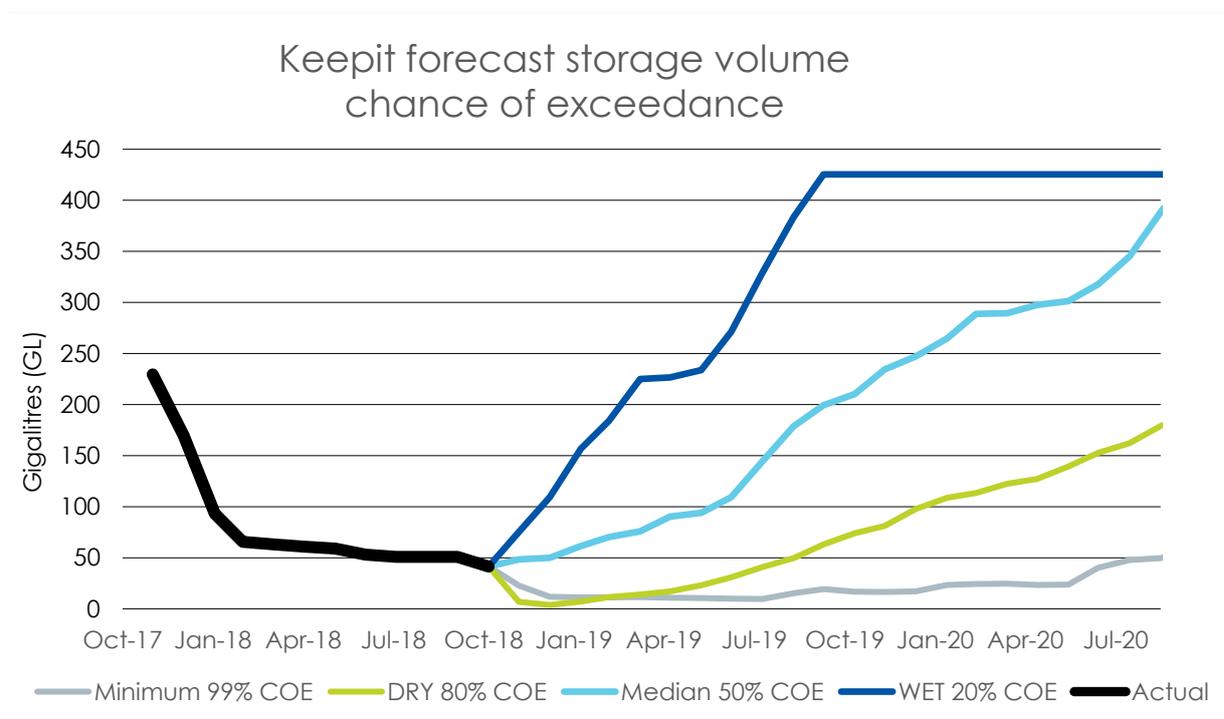
Operating conditions

- The local rainfall last week has allowed the temporary water restrictions to be lifted on 27 November. [Customer Notice](#) access is now available to all account water in the Upper Namoi and, for the Lower Namoi, all orders placed by 5 November are available. Releases from Keepit Dam commenced in mid-October and experienced very high initial transmission losses - exceeding conservative estimates. General security Lower Namoi water orders placed after 9am Monday 5 November 2018 are not able to be delivered, until conditions improve. Trade to or from Lower Namoi general security accounts remains prohibited. The delivery of general security water will be made only to the Namoi River upstream of Gunidgera Weir, and to the Pian Creek upstream of Greylands Weir.
- The initial Available Water Determinations (AWD) for the Lower Namoi are 100% for towns and high security, while general security is zero. Carryover into 2018-19 is estimated to be up to 19% of general security share components.
- The initial Available Water Determinations (AWD) for the Upper Namoi are 100% for towns, high security, and general security. The temporary water restriction limits general security access and trade to 85% of the water in accounts on 6 November 2018.

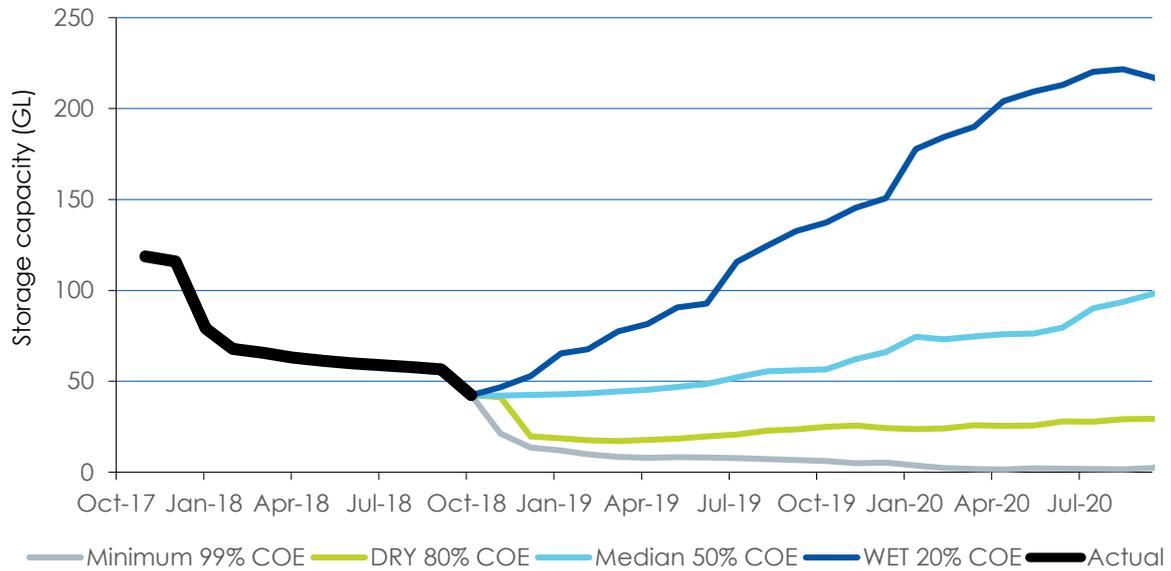
- The initial Available Water Determinations (AWD) for the Peel are 100% for towns and high security, while general security initially was 29%, with an increase in October to a total of 38%.
- Maximum temperatures during the week are forecast to reach 30 degrees in some parts of the catchment.
- No flow has been present in the Namoi River at Walgett (Station No 419091) since March 2018.
- The Pian Creek replenishment flow is not able to be delivered in the usual manner so, unless conditions improve, other supply arrangements will need to be made.
- Supply on demand will continue for the Upper Namoi and the Peel Valley.
- Recent sampling for BGA indicates that Keepit Dam and Chaffey Dam are on a green alert while Split Rock Dam is on amber alert.

Planned supply interruptions:

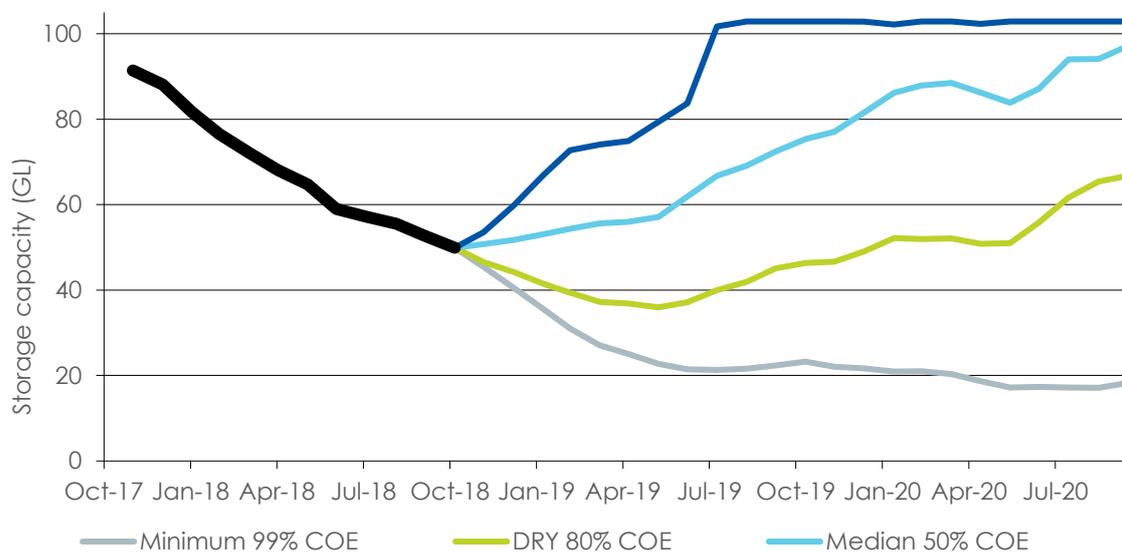
- Mollee fish way is currently unavailable due to infrastructure failure.



Split Rock - forecast storage volume chance of exceedance



Chaffey Dam - forecast storage volume chance of exceedance





6.2 Gwydir valley

Storage status

- Copeton Dam is at 19% of active capacity.

Predicted release patterns

- Copeton Dam is currently releasing around 380 ML/day and this is expected to increase with orders and the block release to Carole Creek.

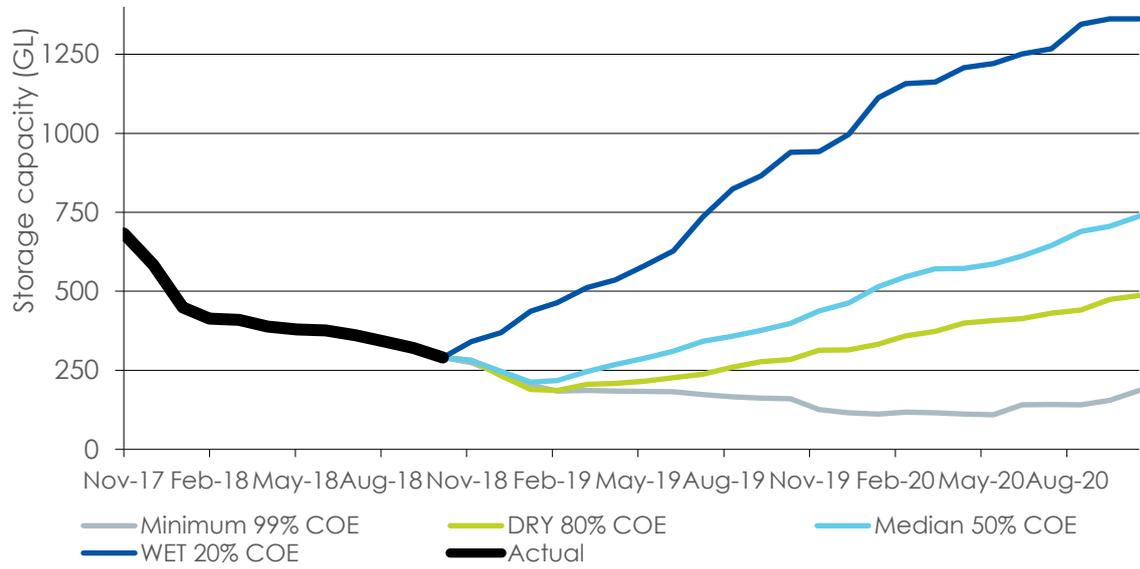
Operating conditions

- If conditions remain dry the delivery of remaining volumes will need to be managed so that essential supplies can be met going forward. Block releases will be required on western effluent streams. See updated customer notice.
- The initial Available Water Determinations (AWD) are 100% for towns and high security, while general security is zero. Total carryover into 2018-19 is estimated to be up to 22% of general security share components.
- Maximum temperatures during the week are forecast to reach 30 degrees in some parts of the catchment.
- Carryover of general security for industry production was limited to roughly 40 GL (about 8% of general security share components).
- Carryover of general security for environmental use is roughly 71 GL (about 14 % of general security share components), in addition roughly 75 GL is available for the Environmental Contingency Allowance (ECA).
- The first of two planned 30GL ECA deliveries are complete and flows have reached the target sites; Millewa and Gingham.
- The first of two planned 10GL CEWO (Commonwealth Environmental Water Office) Mallowa Creek deliveries is underway, flow has reached Mallowa Creek off-take. The first delivery (10GL) is planned from September to early December. The second (10GL) is planned from end of January to early April.
- Recent Blue Green Algae (BGA) sampling at Copeton shows Copeton at green alert level.

Planned supply interruptions:

- No supply interruptions are expected.

Copeton - forecast storage volume chance of exceedance





6.3 Border rivers

Storage status

- Pindari Dam is at 42%, and Glenlyon is at 39% of active capacity.

Predicted release patterns

- Pindari Dam is currently releasing around 848 ML/day and expected to increase in coming weeks with increasing orders.
- Glenlyon Dam is currently releasing around 512 ML/day, and expected to increase.

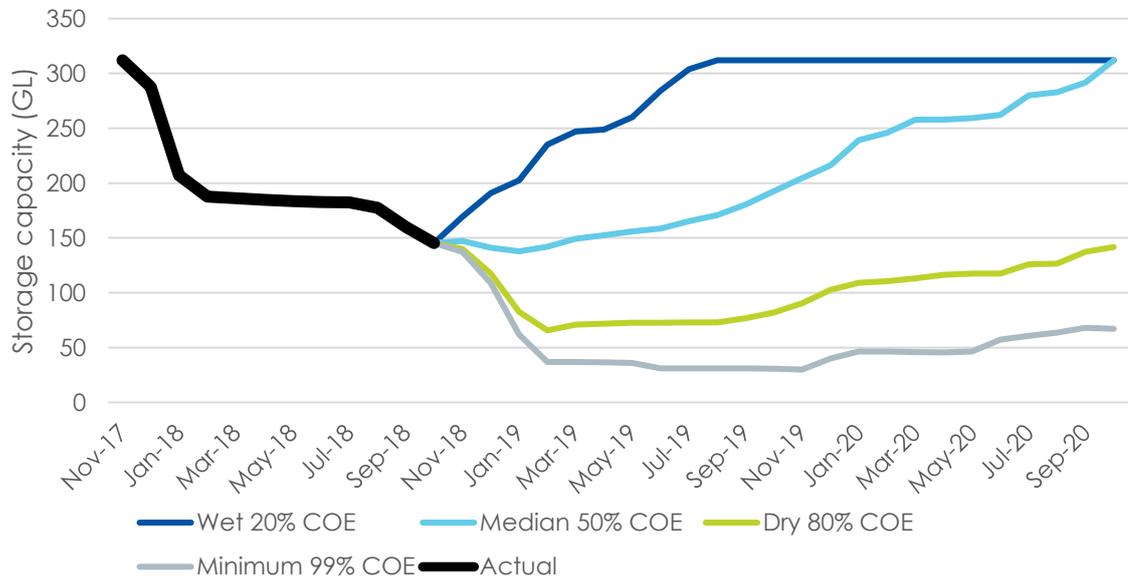
Operating conditions

- Water deliveries west of Boomi have recommenced and will be grouped together and a shortened release period will be implemented to ensure efficient deliveries during the 2018/19 growing season.
- The Available Water Determinations (AWD) are 100% for towns and high security, while general security A is 32.8% and general security B is zero. Total carryover into 2018-19 is around 53% of general security share components.
- Maximum temperatures during the week are forecast to exceed 40 degrees in some parts of the catchment.
- Some rainfall was observed during last week. No significant rainfall is forecast for this week.
- Releases from Boggabilla Weir are currently around 365 ML/day and will change frequently depending on downstream orders.
- Recent Blue Green Algae (BGA) sampling at Pindari shows that Pindari is at red alert level.

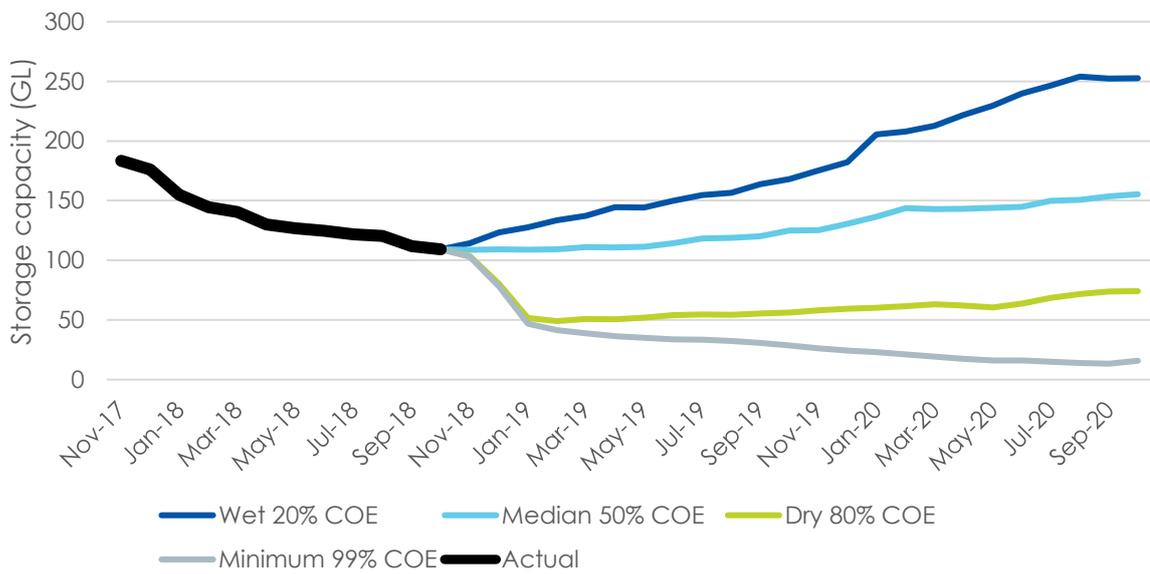
Planned supply interruptions:

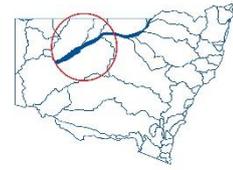
- No supply interruptions are currently forecast.

Pindari forecast storage volume - chance of exceedance



Glenlyon forecast storage volume - chance of exceedance





6.4 Barwon-Darling river system

River flow status

- Border Rivers end of system flow at Mungindi ended last week and flows have again ceased for most of the river system, Mungindi to Wilcannia.
- There are small flows at Mogil Mogil and Collarenebri due to local rain and Environmental flows at Geera.

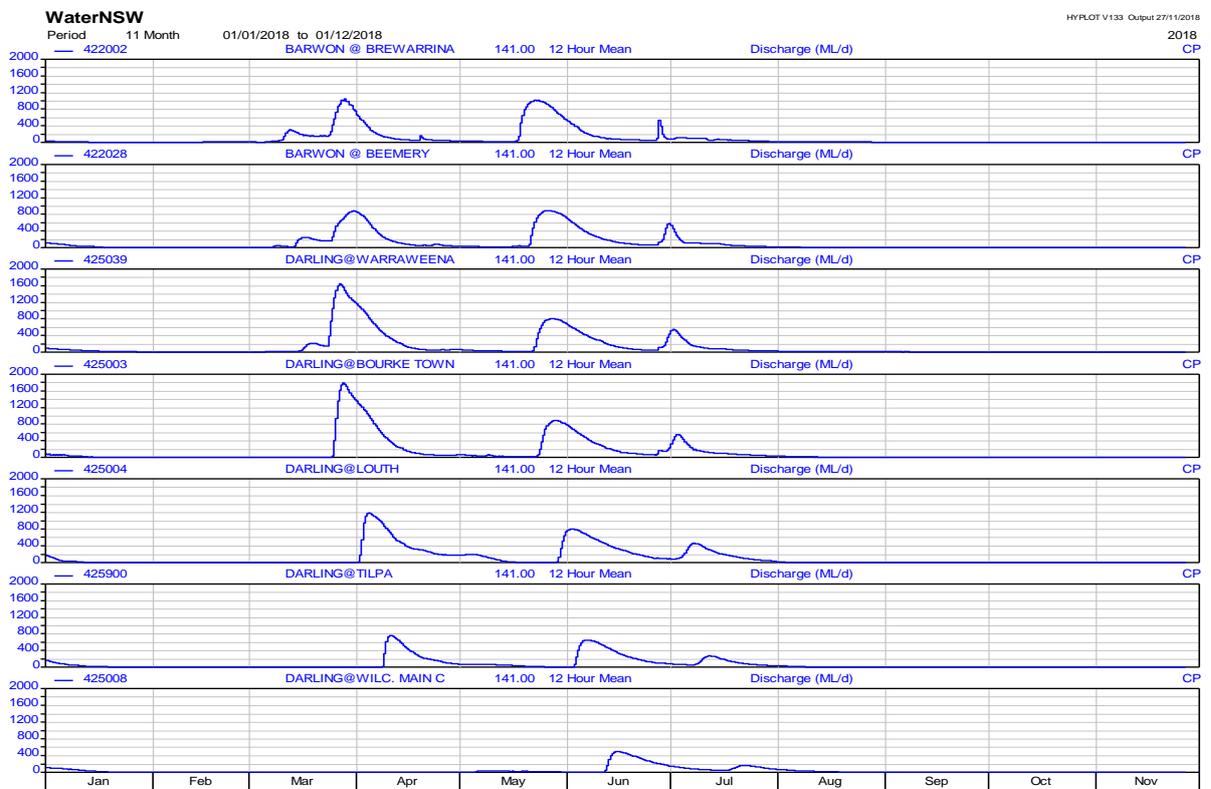
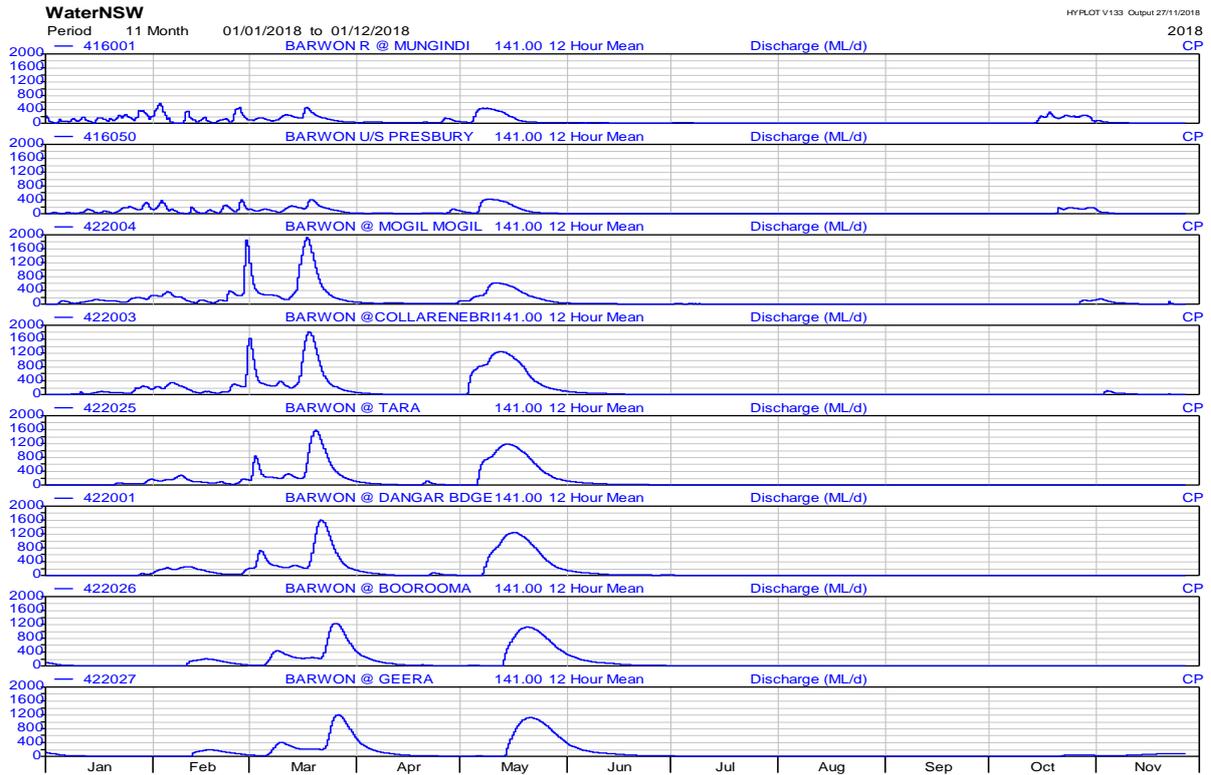
Predicted flow patterns

- Some rainfall was observed in the past week, mostly upper reach of Barwon-Darling catchment. Small flow was recorded in Mogil Mogil and Collarenebri.
- The small flow at Geera from Macquarie River environmental flow is expected to continue with the environmental releases to the Macquarie Marshes, at Marebone Weir, forecast to cease on 8 December 2018.
- Flows in the river system from Mungindi to Wilcannia (except Geera) are forecast to remain at cease to flow until there is a significant rainfall event.
- Weir pool levels are expected to continue to fall due to evaporation, town water use and Basic Landholder Rights extractions.

Operating conditions

- Below are 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.

River section	Gauging station	Classification						
		19-Nov-18	20-Nov-18	21-Nov-18	22-Nov-18	23-Nov-18	24-Nov-18	25-Nov-18
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 Mogil weir	416050 - 422004	No access	No access	No access	No access	No access	No access	No access
Mogil Mogil weir	422004	No access	No access	No access	No access	No access	No access	No access
D/S Mogil 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 junction 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 status

- Brogo Dam: 59%



Predicted release patterns

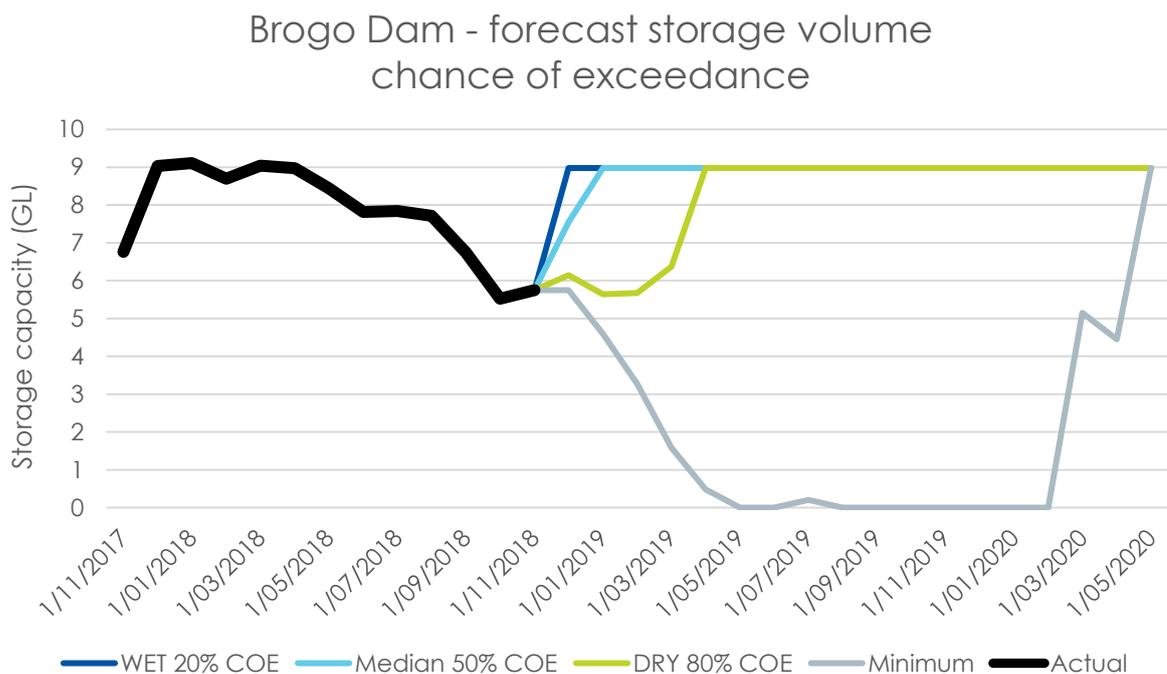
- Releases are currently at 25 ML/day via valves and likely to remain around this level during the week.

Operating conditions

- Regulated conditions are present throughout the system.
- Around 10 mm rainfall has been observed in Bega in the last week and around 15 to 40 mm rainfall is forecasted on Tuesday and Wednesday in this week.
- Maximum temperatures are forecast to be around mid-20 degrees and minimums around late single digit.
- Recent BGA sampling at Brogo indicates a green alert level is maintained.

Planned supply interruptions:

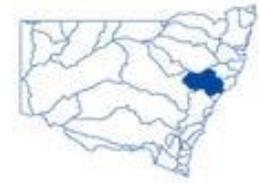
- Nil



7.2 Hunter valley

Storage status

- Glenbawn Dam: 62%
- Glennies Creek Dam: 63%
- Lostock Dam: 99%



Predicted release patterns

- Glenbawn Dam releases are currently around 300 ML/d and are likely to remain around this rate during the week.
- Glennies Creek Dam releases are currently around 150 ML/d and are likely to remain around this rate during the week.
- Lostock Dam is currently releasing 20 ML/d.

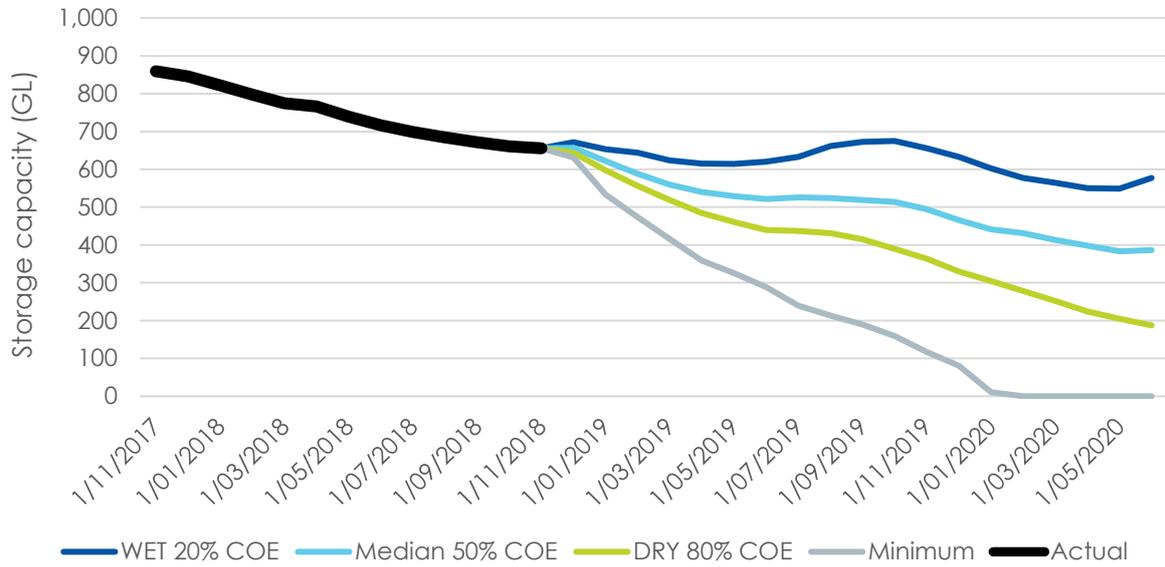
Operating conditions

- No significant rain has been observed in the last week and around 5-20 mm rain is forecasted on Wednesday in this week.
- Maximum temperatures are forecast to be around mid-20 degrees and minimums around early-10 degrees.
- Recent BGA sampling at Hunter storages indicates a green alert is maintained at Glenbawn and Glennies Creek and Lostock.

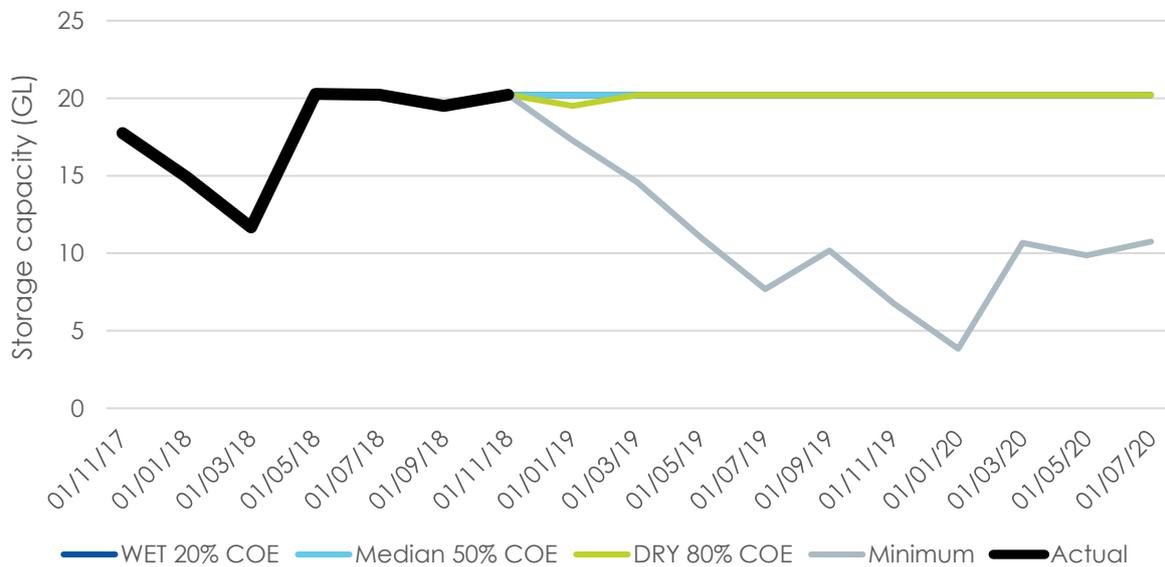
Planned supply interruptions:

- Nil

Hunter Dams - forecast storage volume chance of exceedance



Lostock Dam - forecast storage volume chance of exceedance



7.3 Toonumbar Dam

Storage status

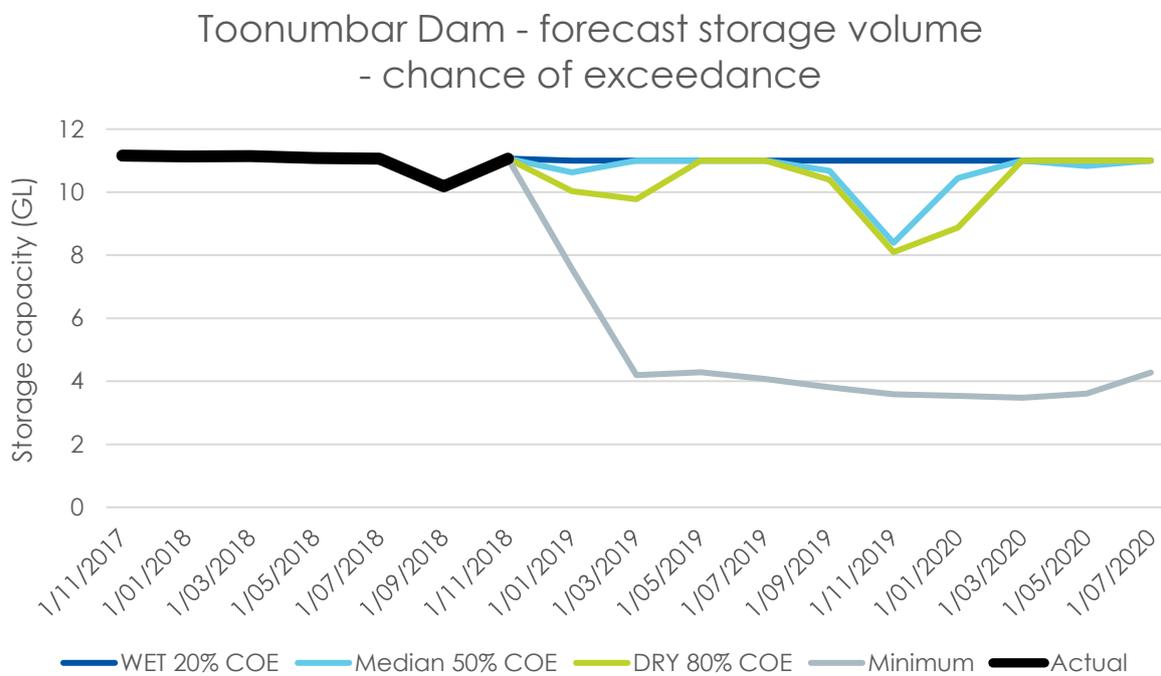
- Toonumbar Dam: 98%

Predicted release patterns

- Toonumbar Dam is currently releasing 16 ML/d.

Operating conditions

- Recent BGA sampling at Toonumbar indicates that a green level is present.



Planned supply interruptions:

- Nil

7.4 Rural dam levels

The following table shows the status of water supplies at 26 November 2018.

River Valley	Capacity (GL)	Current Status		Weekly change (GL)	Comments Supply Issues	Likelihood of fill and spill	Allocations for 2018/19		
		% of active capacity	Active (GL)				High Security	Gen. Security	Est Carry- over @ 1/7/18
Border Rivers									
Glenlyon Dam, Stanthorpe	254	39%	99	-3	Regulated releases	<20%	100%	2.7%	53%
Pindari Dam, Inverell	312	42%	130	-5	Regulated releases	<20%	100%	2.7%	53%
Gwydir Valley									
Copeton Dam, Inverell	1346	19%	259	-3	Regulated releases	<5%	100%	0%	22%
Namoi Valley									
Split Rock Dam, Manilla	394	4%	17	-7	Bulk water transfer to Keepit	<5%	100%	100%	N/A
Keepit Dam, Gunnedah	419	6%	22	-1	Regulated releases	<20%	100%	0%	19%
Chaffey Dam, Tamworth	98	45%	44	-0	Regulated releases	<50%	100%	38%	N/A
Macquarie Valley									
Burrendong Dam, Wellington	1155	18%	213	-11	eWater & irrigation releases, restricted c/over	<20%	100%	0%	52%
Windamere Dam, Mudgee	367	39%	143	-1	Irrigation deliveries	<5%	100%	0%	102%
Lachlan Valley									
Wyangala Dam, Cowra	1216	48%	578	-8	Irrigation releases	<20%	100%	0%	62%
Carcoar Dam, Carcoar	36	45%	16	-0	Regulated releases	10%	100%	0%	67%
Murrumbidgee Valley									
Burrinjuck Dam, Yass	1025	42%	429	2	Transparent releases	20%	95%	7%	22%
Blowering Dam, Tumut	1604	51%	824	-27	Irrigation & eWater	20%	95%	7%	22%
Murray Valley									
Dartmouth, Mitta Mitta (Vic)	3837	74%	2840	-53	Transfers to Hume	N/A	N/A	N/A	N/A
Hume Dam, Albury	2982	43%	1280	-27	Irrigation & eWater & L Vic deliveries	<25%	97%	0%	31%
Lower Darling									
Menindee Lakes, Broken Hill	1684	3%	58	-10	Releases to fill temporary block banks	N/A	100%	0%	15%
Hunter Valley									
Glenbawn Dam, Scone	750	62%	462	-2	Regulated releases	20%	100%	100%	21%
Glennies Ck Dam, Singleton	282	63%	179	-2	Regulated releases	20%	100%	100%	21%
Lostock Dam, Gresford	20	99%	20	-0	Regulated releases	90%	100%	100%	N/A
Coastal Area									
Toonumbar Dam, Kyogle	11	98%	11	-0	Regulated releases	100%	100%	100%	N/A
Broggo Dam, Bega	9	59%	5	-0	Regulated releases	80%	100%	30%	N/A
TOTALS	17,798	42.9%	7629	-158					

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.