

Regional water availability report

Weekly edition
4 February 2019

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1. Overview

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

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

The total active storage percentage of rural water supplies on 4 February 2019 was 33.4% 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 4 February 2019 was 59.6% of the total storage capacity. This was a decrease of 0.4% since last week.

2. System risks

- Information sessions on drought outlook and water availability are being held by WaterNSW and department in early February. For more information click [here](#)
- Menindee Lakes continues to be below the 480/640GL trigger for NSW control, and four temporary block banks have been constructed to extend drought security beyond January 2019. Releases at Weir 32 will cease this week and cease to flow conditions between the banks has now commenced. The cease to flow conditions increase the possibility of decreasing water quality and fish kills, with increases in; salinity, pH and Algae, and reduced dissolved oxygen.
- Lower Murrumbidgee weirs (Maude and Redbank) are being lowered to improve water quality and fish habitat. The NSW environmental water holder has ordered additional flows at Balranald over the next few weeks to improve fish habitat and reduce algae with increased flow velocities in the lower Murrumbidgee system below Hay Weir.
- In the Lower Namoi, releases from Keepit Dam have ceased as the single block release strategy from October through to December 2018 is now complete. Cease to flow conditions now extend from downstream of Keepit Dam and for the majority of the Namoi River downstream to Walgett.
- In the Macquarie the temporary water restriction remains in place and only 70% of remaining carryover can be delivered with the current stored volumes and the new, lower inflows. The actual inflows to Burrendong Dam since the last AWD in August 2017 total about 70 GL. This is only 30% of the previous record low inflow of about 228GL for the 18 months ending in January.

- Due to drought conditions, end of system daily environmental flow requirements in the Belubula River are being met intermittently, and customers are regularly advised of rescheduling requirements.
- Cease to flow conditions continue in the Barwon Darling system as it remains dry.
- Block releases have ceased in the Gwydir valley as delivery of the small volumes remaining in customer accounts is completing.
- Grouping of water orders and an early cessation to deliveries in the western section of the Border rivers is underway.

3. Climatic Conditions

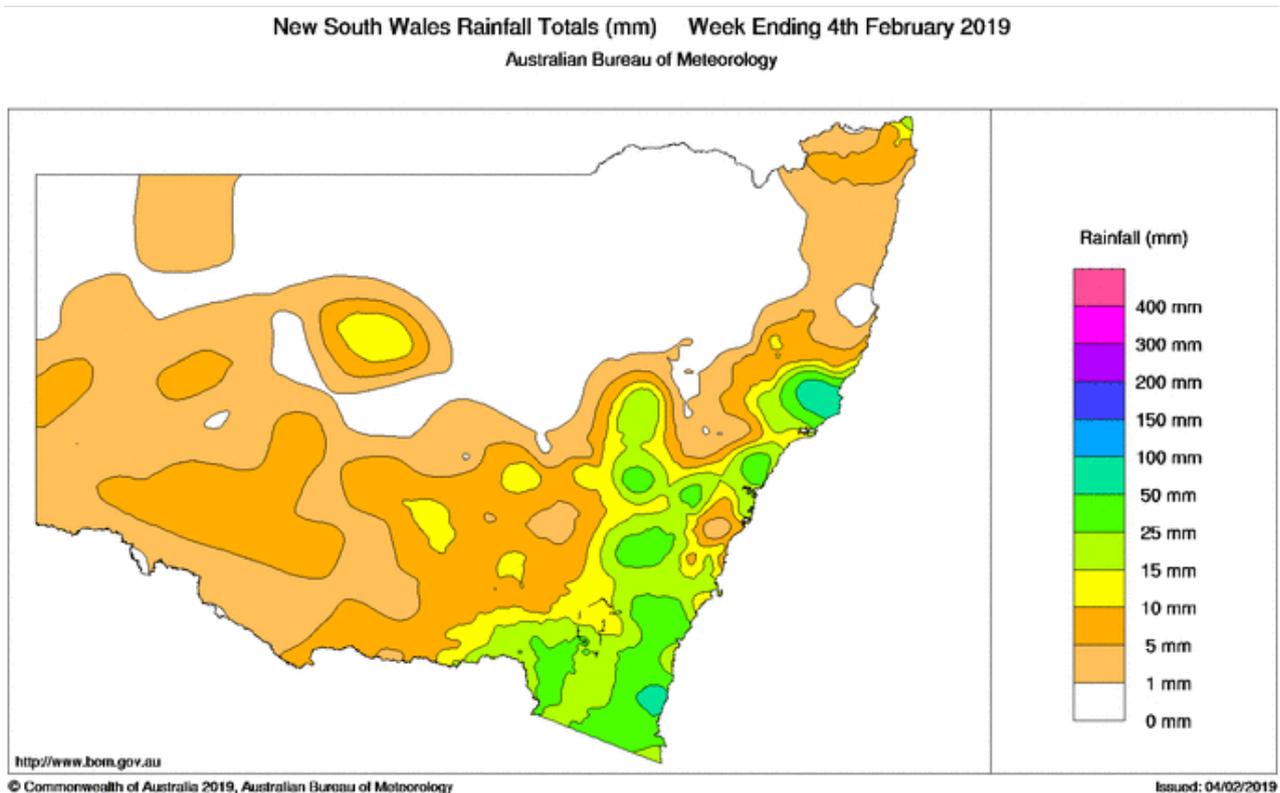


Figure 1 - Weekly rainfall totals for New South Wales

Rainfall of up to 50mm was recorded across the eastern parts of the state with the lower mid north coast, Sydney metro, Central Tablelands and the Snowy Mountains receiving around 25 – 50mm. Most other parts of the state received between 1 – 10 mm. The northern parts of the state remained dry.

A weakening high-pressure system near New Zealand extends a ridge to the northeast of the state, while another high pressure system lies south of Western Australia. A broad trough over western

New South Wales lies between these two systems. Both high pressure systems are moving east, and the second is expected to reach the southwestern Tasman Sea by Wednesday while the trough lingers in the west of the state.

For the first part of the week, the south coast, snowy mountains and the south west slopes regions are forecast to receive rainfall of up to 25mm. The Riverina and the Lower Western areas are also forecast to receive 1 – 5 mm. Again, the northern parts of the state are predicted to remain dry.

For the second part of the week, the rainfall is predicted to shift to the Northern Rivers area with up to 25mm predicted. The eastern parts of the state is forecast to receive 1 – 5mm. The rest of the state is forecast to remain dry.

Temperatures for the week will start very hot in the upper western reaches of the state. As the week progresses, temperatures will drop with the northern parts of the state seeing averages of 33 – 36 degrees, central regions 30 – 36 degrees and the southern areas reaching temperatures of up to 30 degrees. This pattern should continue through to next week.

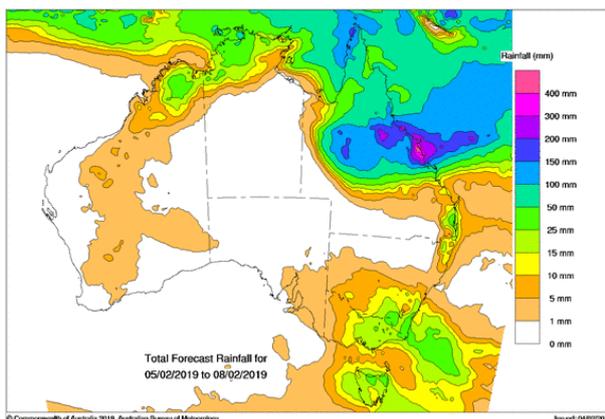


Figure 2a – First 4-day Forecast (5 to 8 Feb 19)

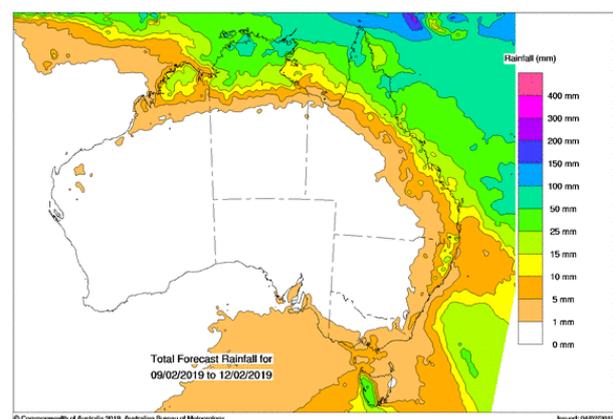


Figure 2b – Following 4-day forecast (9 – 12 Feb 19)

Most of central and eastern Australia shows no strong swing towards either wetter or drier than average conditions this February through April. In February, parts of Victoria and NSW over and near the Great Dividing Range have an increased chance of being wetter than usual.

Historical outlook accuracy for February to April is moderate for most of the country and high in some tropical areas.

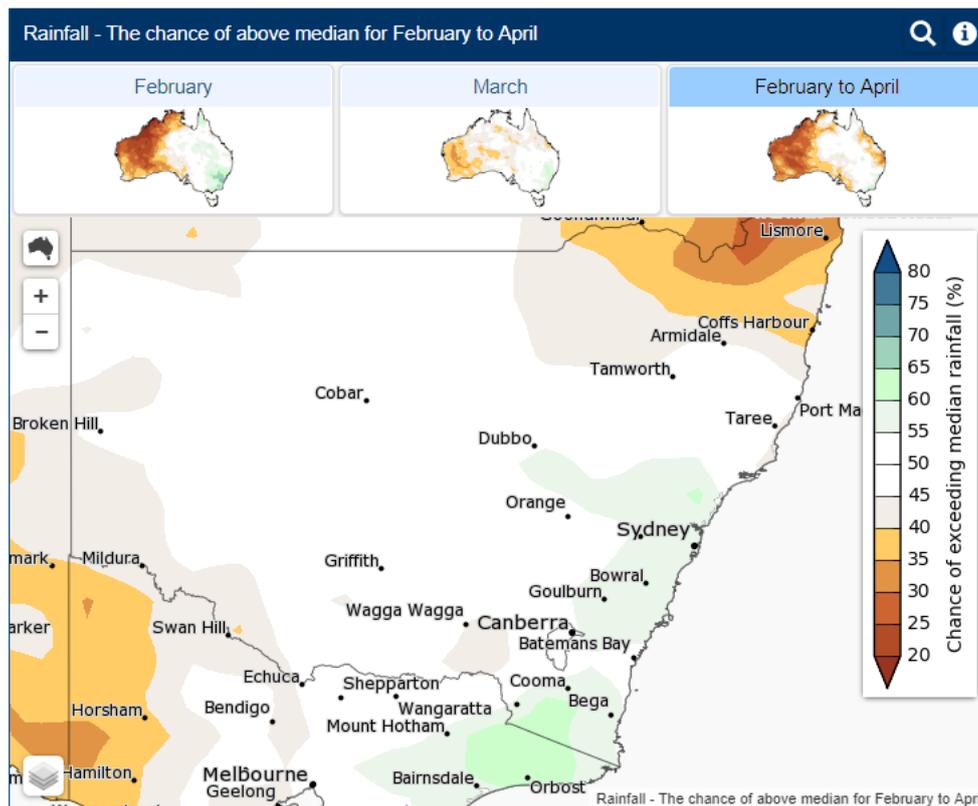


Figure 3 – 3-month rainfall outlook

4. Southern valley based operational activities

4.1 Murray valley



Storage and release status

- Hume Dam is currently 31% of active capacity, releasing about 11,900ML/d. Releases from Hume Dam are forecast to remain steady over the week.
- Release downstream of Yarrawonga Weir is within channel capacity at about 8,800ML/day and is likely to remain steady.
- The Edward River Offtake is currently about 1,540ML/d and will remain below the channel capacity of 1,600ML/day.
- The Gulpa Creek Offtake is currently about 330ML/d and will remain below the channel capacity of 350ML/day.
- Stevens Weir level is about 4.45m to manage the level upstream of Wakool Canal offtake, which is about 1.72m. Flow downstream of Stevens Weir is about 2,600ML/day and is expected to remain relatively steady.
- Flows in the Colligen Creek (400ML/day), Yallakool Creek (407ML/day) and Wakool River (48ML/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 being maintained at about 600ML/day in the Wakool system.
- Supply through Perricoota Escape (90ML/day) and Wakool Escape (100ML/day) are expected to continue for the next several weeks.
- Supply to Edward River is also augmented with Billabong Escapes at Finley, (250ML/day), which is likely to continue for the next several weeks.
- Flow at Moulamein is currently at about 2,650ML/day and is likely to remain relatively steady.
- Flow in Niemur River at Mallan School is currently about 326ML/d and is likely remain relatively steady over the week.
- Merran Creek flows upstream of its confluence with Wakool is about 85ML/day and is likely to vary marginally.
- Flow in Wakool River at Stoney Crossing is currently at about 790ML/day and is likely reduce marginally to about 750ML/day over the week.
- Flows at Balranald are currently about 730ML/day. The flow is likely to gradually reduce to about 550ML/day.

- Lake Victoria is currently holding about 387 GL or 50% of active capacity. The flow to South Australia is about 7,800ML/d.

Environmental water operations

- 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.

Water availability

- 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, 97% for high security, and 50% for Conveyance. Average carryover into 2018-19 is estimated to be about 31% of general security share components.

Drought operation measures

- As per the recently released NSW Extreme Events Policy for all surface and ground water sources in the NSW Murray Darling Basin, the NSW Murray regulated river water source is assessed to be in Stage 1. There are no account restrictions in force in the valley and water supplies are being managed according to the water sharing plan rules. There is currently a shortfall of about 200GL for delivery of next year's high priority needs, but recovery is highly likely through autumn and winter inflows.

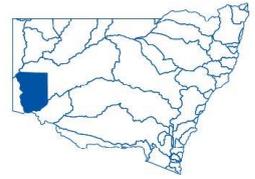
Water quality

- Potential Blue Green Algae issues:
 - The RED ALERT for [Lake Hume](#) continues until two lower results at all sites.
 - The RED alert continues for Mannus Lake near Tumbarumba and downstream for Mannus Creek and in the Tooma River, which are being monitored by Snowy Valleys Council.
 - The red alert warning (high alert) for blue-green algae in the Murray River has been lifted in the Wentworth weir pool from Merbein to Lock 10, including Wentworth, following regular monitoring by Lower Murray Water.
 - For more information visit: [Water Quality Algae](#)

Planned supply interruptions:

- None.

4.2 Lower Darling valley



Storage and release status

- The lakes currently hold about 1% of active capacity. The total storage is about 39 GL.
- Lake Cawndilla is currently dry, and Lake Menindee has been dry since 6 Feb 2018.
- Lake Tandure is below active storage levels from end of November 2018
- Releases from Lake Pamamaroo have now ceased due to water quality issues.
- The release from Wetherell is being reduced and flows at Weir 32 are likely to cease later this week. There will be some minimal releases from Wetherell to maintain the residual pool in Weir 32.
- Current level at the block bank near Karoola is about 2.69m. The pipes in the Karoola bank remain closed but will be managed to fill new private banks under construction.
- Current level at the block bank near Jamesville is about 2.71m. The pipes at the bank remain closed, except for minor releases to supply permanent plantings immediately downstream.
- Current level at the block bank near Ashvale is about 0.20m. The pipes at the bank are closed.
- The average pan evaporation rate at Menindee over the last week was about 10.6 mm/d equivalent to about 3,200ML 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 releases from 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](#).

Drought operation measures

- A temporary water restriction came into effect on 4 December limiting the take of water to; town water, domestic and stock, permanent plantings, and, from Copi Hollow, high security licences. [Gazette](#)
- As per the NSW Extreme Events Policy for all surface and ground water sources in the NSW Murray Darling Basin, the Lower Darling regulated river water source is assessed to be in [Stage 4](#), as restrictions limit access to water for critical needs only.

- Four temporary block banks viz. Karoola, Court Nareen, Jamesville and Ashvale have been constructed to extend supply to domestic, stock and permanent plantings.
- Pumping from Lake Pamamaroo to top-up Copi Hollow ceased on 10/12/18.
- Pumping by Essential Water to Broken Hill has now been shifted to Copi Hollow.
- The release to Lower Darling River from the storages will cease later this week and this will impact the river conditions below Weir32. River users are reminded to monitor the river levels, to look out for water quality alerts and be aware of snags and other obstructions that may appear while the river ceases to flow below Weir32.

Water quality

- The RED ALERT continues for Lake Wetherell, Lake Tandure, Lake Pamamaroo, Copi Hollow, Lake Cawndilla Outlet and for the Darling River from Louth downstream to Tolarno and at Burtundy
 - Media release: [Water Quality Algae](#).

Planned supply interruptions:

- None.

4.3 Murrumbidgee valley



Storage and release status

- Burrinjuck Dam is currently at 36% of active capacity, releasing about 3,050 ML/d. The release is expected to remain relatively steady this week
- Blowering Dam is currently at 31% of active capacity, releasing about 3,200 ML/d. The release is expected to remain relatively steady this week
- The Beavers Creek Offtake is targeting a flow of at least 60ML/day in January at Kywong.
- Berembred Weir is currently at about 5.13m and is likely to remain steady.
- Bundidgerry storage is currently at 4.2m and will be actively used for re-regulation of flows and hence the level is likely to fluctuate between 3.30m and 4.2m over this week.
- Gogeldrie Weir is currently at 6.1m. 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 0.68m and release from the storage has ceased in view of the algal report received on 18/1/2019.
- Hay Weir is currently at about 8.6m and is likely to remain relatively steady at full supply level for the next week.
- The current diversion into Yanco Creek is about 350 ML/d and is likely to remain steady.
- Delivery to Billabong system via Finley Escapes is about 250ML/day and is likely to remain at this maximum capacity for the next several weeks.
- Delivery to Yanco-Billabong system via Coleambally Irrigation Escapes (CCD and DC800) is about 135ML/day.
- Due to reduced downstream demands, the release from Gogeldrie Weir is likely to reduce from current 2,600ML/day to about 700ML/day from later this week. This would result in lower river levels in the sections below Gogeldrie Weir to Carrathool.

Environmental water operations

- Maude Weir is currently at 3.02m and will be steadily lowered until the gates are clear of water by later this week. The water in the weir is currently being used for downstream environmental demands,
- Redbank Weir is at about 5.35m and is likely to rise to operational full supply level of about 5.6m. Additional water arriving Redbank Weir will be used to deliver water to meet end of system

demands and into environmental assets in the Lowbidgee, viz. Yanga via 1AS and 1ES and to Lake Marimley via North Redbank Channel. The environmental delivery to Patterson's Pipe that commenced on 29 November is expected to continue for next few days. The Redbank Weir will be drawn down from mid-February.

- The lowering of both Maude and Redbank weirs are expected to improve fish connectivity between Hay weir and Balranald Weir and also improve the water quality in the lower reaches of the river.
- In view of the emergent wider system need to target water quality issues, NSW environmental water holder is currently targeting additional flows at Balranald to about 400ML/day and with a possible peak of about 700ML/day. The aim is to increase flow velocities for fish habitat and to reduce BGA counts in the lower Murrumbidgee system below Hay Weir.
- Flows at Balranald are currently about 730ML/day. The flow is likely to gradually reduce to about 550ML/day.

Water availability

- For Inter Valley Transfer (IVT) account from Murray to Murrumbidgee refer to WaterNSW website [IVT Ordering](#).
- 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 a volume equivalent to 22% of general security share components.
- Currently at least 30 GL more water is needed to assure 2019/20 commitments before further allocation can be made this year to general security licences.

Drought operation measures

- As per the NSW Extreme Events Policy the Murrumbidgee regulated river water source is assessed to be in [Stage 1](#). There are no account restrictions in force in the valley and water supplies are being managed according to the water sharing plan rules.

Water quality

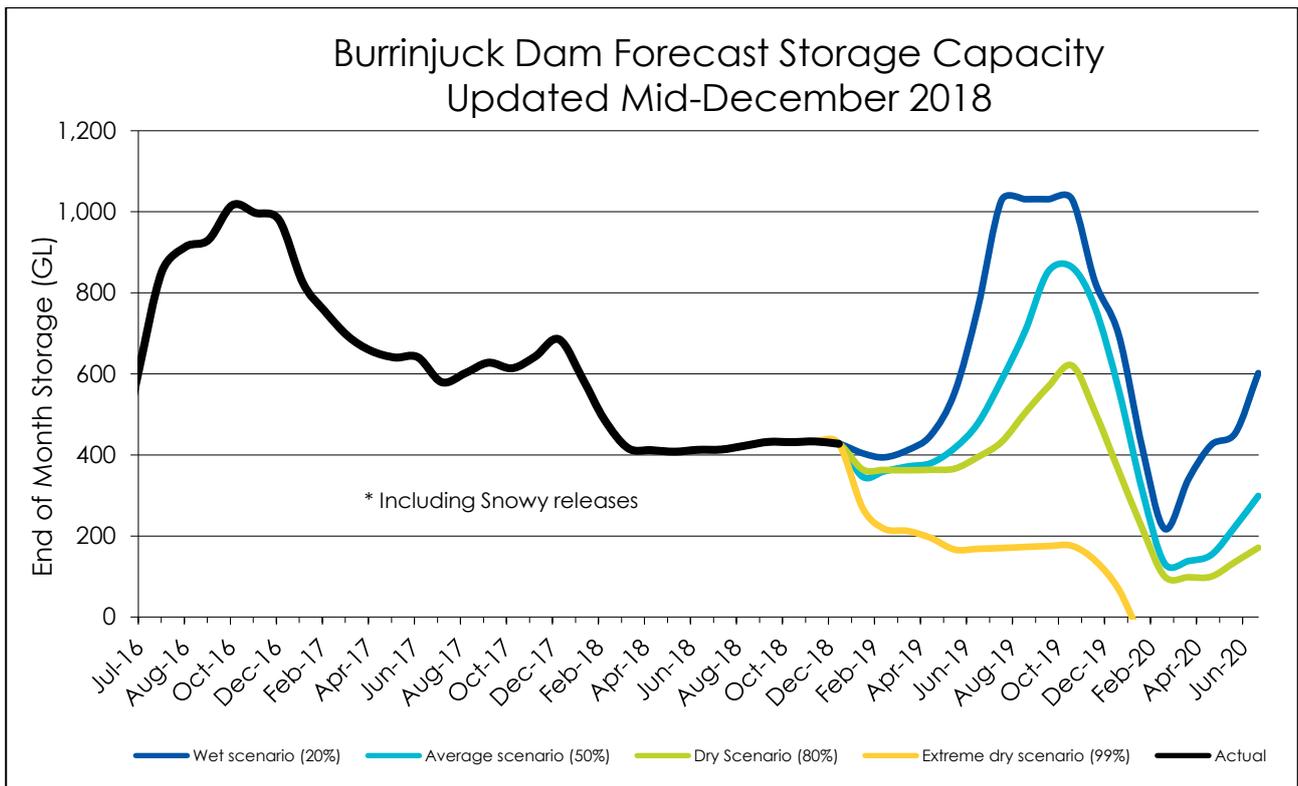
- Potential Blue Green Algae issues:
 - Green alerts are current for Burrinjuck Dam at Woolgarlo and Burrinjuck Downstream sites.
 - Tombullen outlet upstream in weir, the whole of the Hay weir pool at Hay, Murrumbidgee River at Maude Weir Buoy and Murrumbidgee River at Redbank Weir Buoy have a Red alert status.
 - [Lake Wyangan North](#) in Griffith and [Lake Albert in Wagga Wagga](#) also have a Red alert status.

- The Murrumbidgee River at Balranald has an amber alert status.
- Other sites have no alerts.
- For more information visit: [Water Quality Algae](#).

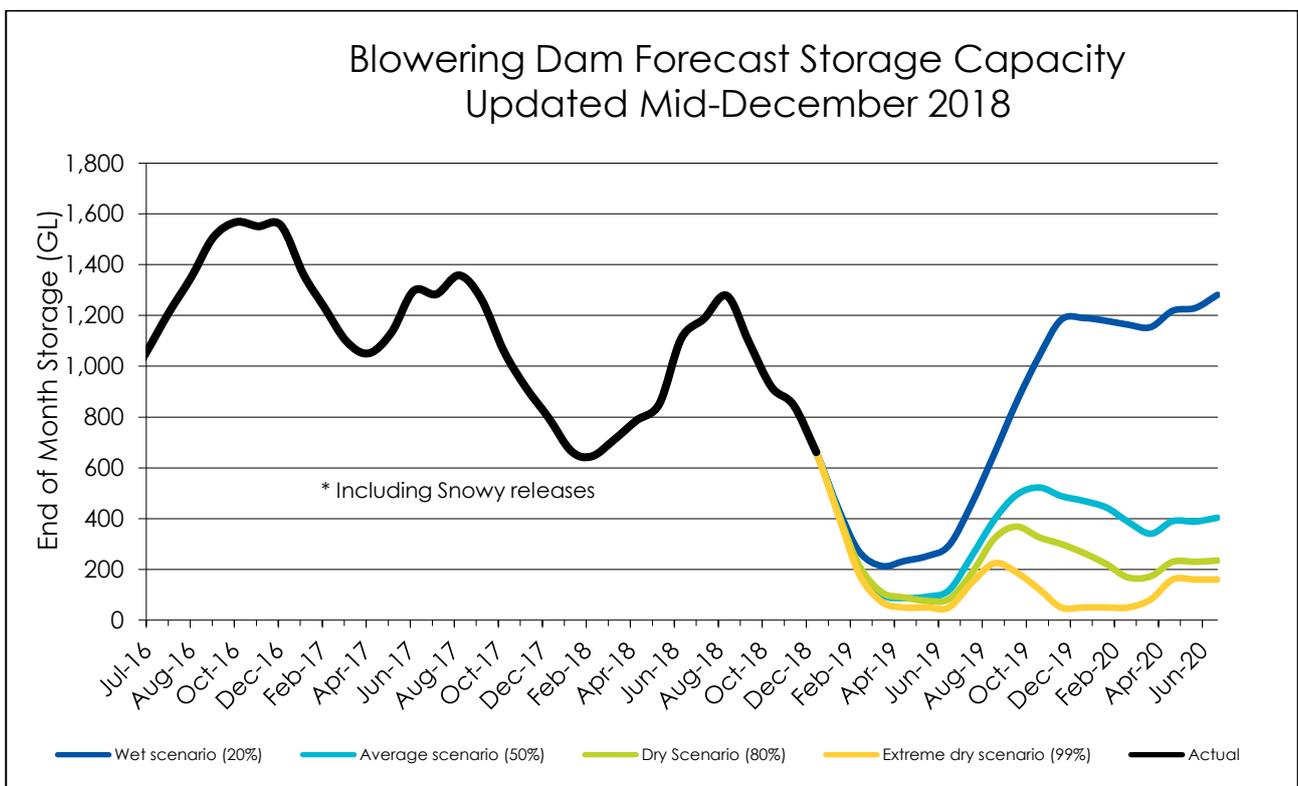
Planned supply interruptions:

- Planning is underway for the maintenance of Tarabah Weir as the maintenance is team is awaiting a suitable window of low flows.
- Planning is underway for installation a new gate at Spillers Regulator at the Washpen Creek; awaiting a suitable low flow condition.

Burrinjuck Dam Forecast Storage Capacity Updated Mid-December 2018



Blowering Dam Forecast Storage Capacity Updated Mid-December 2018



5. Central valley based operational activities

5.1 Lachlan valley



Storage and release status

- Carcoar Dam is currently 36% of capacity and currently releasing only 60ML/d. Releases are forecast to be in between 70-90ML/d later in the week.
- Wyangala Dam is currently 37% of capacity and currently releasing 2,700ML/d. Releases are forecast to reduce to around 2,300ML/d during the week.
- Lake Cargelligo is currently 56% of capacity and the level is likely to remain between 40% and 80% during the irrigation season. Media release on Lake Cargelligo operation can be accessed at [Link](#)
- Releases downstream of Brewster Weir are currently 600ML/d. Releases are forecast to remain around 600-700ML/d this week.

Environmental water operations

- The tributary inflows from the earlier rain totalled about 4,000 ML and this is being delivered as Environmental Water Allowance (Wyangala), supplemented by an additional 3,000 ML of releases from Wyangala Dam. This small fresh event, when in the Upper Lachlan consisted of about 7,000 ML over 10 days and will become a large fresh below Booligal of 18 to 20 days. This water is currently downstream of Booligal.
- As of 25 July 2018, Lake Brewster main storage is effectively empty. From 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. This delivery ceased on 4 February.
- Currently WQA is being delivered to mitigate BGA bloom from forming in the lower Lachlan by breaking up stratification in weir and river pools by targeting a flow of 100ML/d at Booligal. Any flows in excess of operational target of 70 ML/d at Booligal will be accounted as WQA.
- Due to drought conditions, end of system daily environmental flow requirements in the Belubula River are being met intermittently.

Water Availability

- The 15 January 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.

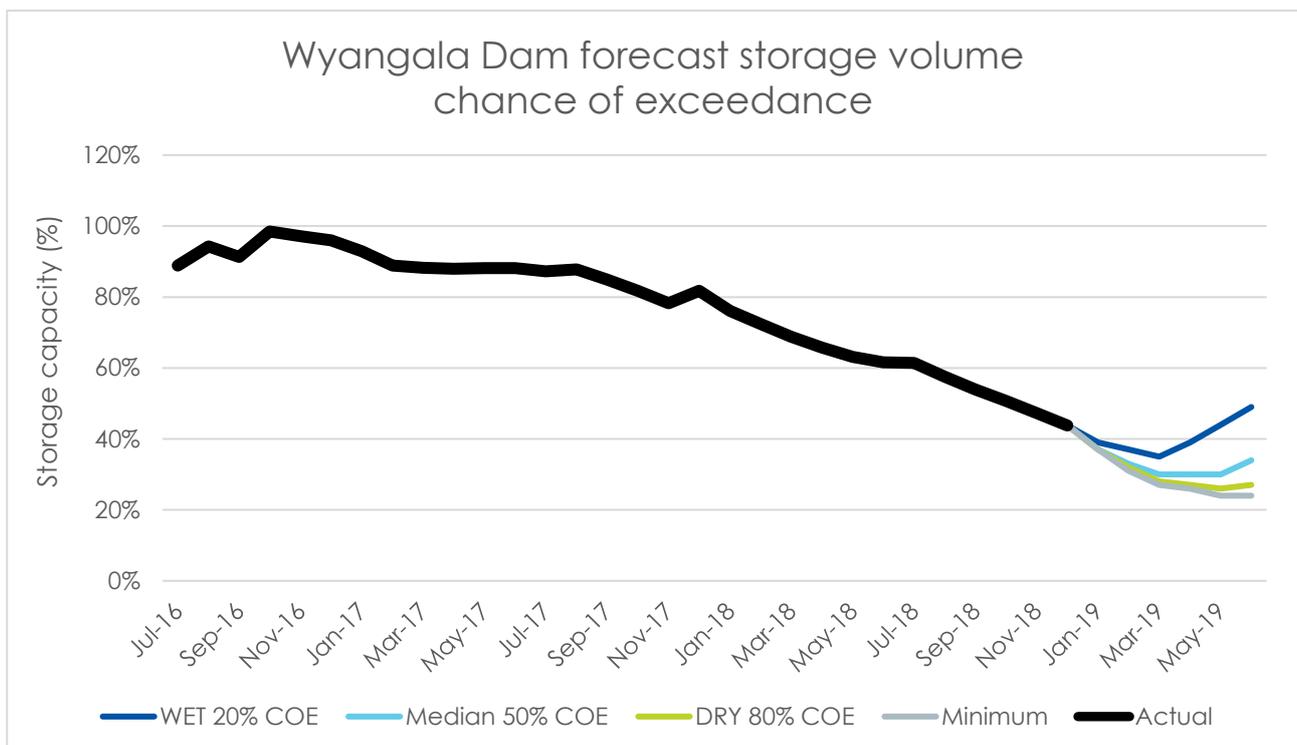
- It was estimated that a combined dam and tributary inflow volume of more than 224,000 ML is required in January before a further allocation could be made in the Lachlan River. Inflows received in January were about 25,000ML.

Water Quality

- 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.
- 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 10% of capacity and currently releasing 1,600ML/d. Releases are forecast to be between 1,200 to 1,500ML/d this week to meet irrigation demand.
- The level in Burrendong Dam is expected to drop steadily to about 7% by the end of summer. 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 35% of capacity and currently releasing 100ML/d. Releases for the bulk water transfer to Burrendong Dam ceased on 25 Jan 2019. More info on WaterNSW website [Link](#)
- Recent rain has produced an inflow of about 26,000 ML into Burrendong Dam in January. The combination of Windamere releases and Burrendong inflows has resulted in Burrendong Dam being higher than previously forecast for this stage of the drought planning.
- If conditions remain dry, a second phase of the transfer will occur mid-year 2019, leaving a minimum of 70GL in Windamere Dam, which provides a very secure supply for local demand for the next five to seven years.
- Flows into Duck and Crooked Creeks at the offtake from Gunningbar Ck have been increased to restore flows in the creeks. On Wednesday 23 Jan the flows have reached Canonba Road bridge in the Duck Creek and reached Mumblebone Dam in the Crooked Creek on 1st Feb. Flows from the Gunningbar Creek are also being directed via the Bena Billa Channel to restore the flows in the lower Duck Creek.

Environmental water operations

- Delivery of environmental flows commenced at Burrendong Dam on 12 July 2018 and have been completed from the dam with the recession ending the deliveries on 11 December at Marebone.

Water availability

- 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 the Cudgegong River was about 102% of share component.
- The reduction for storage evaporation has been applied to accessible carryover balances as of 31 Dec 2018 in Macquarie and Cudgegong Rivers for the second quarter of 2018-19 (end Dec) on both General and High Security Licences and to accessible EWA accounts. Evaporation reduction is not applied to the suspended portion of the carryover accounts. Macquarie River at 4.2% and Cudgegong River at 1.5% of balances.
- It was estimated that inflows of around 317 GL were required in January before an increment in Available Water Determination could be made. Inflows received in January (aside from Windamere bulk water transfers) were around 21GL.

Drought operation measures

- Information sessions on drought outlook and water availability are being held by WaterNSW and department in early February. For more information click [here](#)
- The Temporary Water Restriction Order restricts access to 70 per cent of the 1 July 2018 balance of general security and environmental accounts (including EWA) in the Macquarie. The resources in Burrendong Dam plus minimum expected inflows, and planned bulk water transfer from Windamere Dam, only provide for this 70 per cent.
- 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.
- Deliveries in 2018-19 required water conservation initiatives to reduce losses. This involved 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: [Fact Sheet](#).
- DOI (Water) in their Water Allocation Statement (WAS) for January 2019 stated that dam Inflows in excess of 60,000 ML are required by the end of January 2019 to secure higher priority needs for the 2019/20 water year before the current restrictions on carryover will begin to be eased. The WAS has also referred to the NSW Extreme Events Policy, which introduces a staged approach to managing extreme events such as severe droughts or poor water quality events, and to the associated Incident Response Guides (IRGs). The Macquarie regulated river water source is

assessed to be in Stage 3 of the drought stages with stage 4 the highest level under the Incident Response Guides.

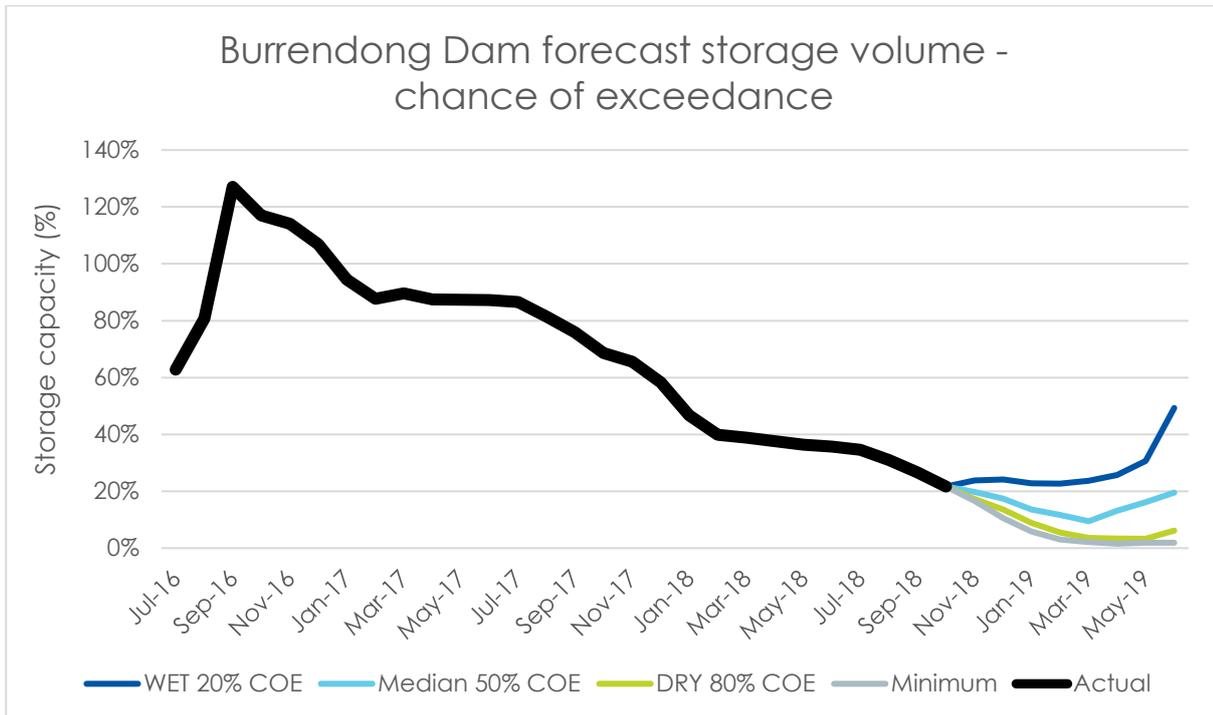
- Inflows in excess of 60,000 ML by the end of January 2019 was required to secure higher priority needs under Stage 4 drought management operations during the 2019/20 water year. Should sufficient inflow volume arrive before the end of February 2019, any additional resources will then be used to ease some of the current account restrictions on carryover and EWA active accounts. Further inflows will then 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 76 GL to end of Jan 2019. This is only 33% of the previous record low inflow of about 228 GL for the 18 months ending in January.
- 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 next season's operations.

Water quality

- Burrendong algal results for the 16th Jan show highly variable assemblages across the storage. Assemblage at Station 1 has a minor benign cyanobacterial presence. Mookerawa has large presence of toxic species. The Cudgegong arm appears to have reset to mainly green alga. Therefore, the storage is now at Amber alert.
- Windamere algal results for the 22nd Jan shows High concentrations of potentially toxic species present at station 4, as a result Windamere is on Red Alert.
- As the BWT has ceased the second trash rack which was installed at Windamere Dam has been removed. Releases are made through one trash rack to achieve better water temperature downstream. The position of the trash racks is currently 7-10 m below the surface.
- Works to reinstate the temperature curtain at Burrendong Dam have been completed and the commissioning phase has commenced. The curtain is fully lowered due to low storage levels.

Planned supply interruptions:

- Nil



6. Northern valley based operational activities



6.1 Namoi valley

Storage and release status

- Split Rock Dam is at 4% of active capacity and is currently releasing around 95 ML/d for the upper Namoi. The recent bulk water transfer to Keepit Dam is complete.
- Keepit Dam is at less than 0.5% of active capacity and releases have ceased. Cease to flow conditions now extend downstream of the dam and for the majority of the Namoi River downstream to Walgett.
- Chaffey Dam is at 35% of active capacity and currently releasing 190ML/d.
- Flows from Keepit Dam and the Namoi weirs reached Walgett at a very low rate. Prior to this small flow arriving, no flow has been present in the Namoi River at Walgett (Station No 419091) since March 2018.
- The Pian Creek replenishment flow was not able to be delivered in the usual manner so unless conditions improve, other supply arrangements may need to be made.
- Supply on demand applies for the Upper Namoi and the Peel Valley.

Environmental water operations

- Environmental water was delivered as part of the lower Namoi block release. This water was ordered and delivered downstream of Gundigergera Weir in Decemeber and January.
- In the Peel valley there is currently 1.9GL of planned environmental water plus a small amount of held environmental water. There are not any current orders for the release of water from either of these accounts.

Water availability

- There is currently a shortfall of more than 80GL before there is likely to be an AWD increment in the Lower Namoi valley.
- The Available Water Determinations (AWD) for the Lower Namoi are 100% for towns and high security, while general security is zero. Carryover into 2018-19 was estimated to be approximately 19% of general security share components.

- The Available Water Determinations (AWD) for the Upper Namoi are 100% for towns, high security, and general security.
- 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%.

Drought operation measures

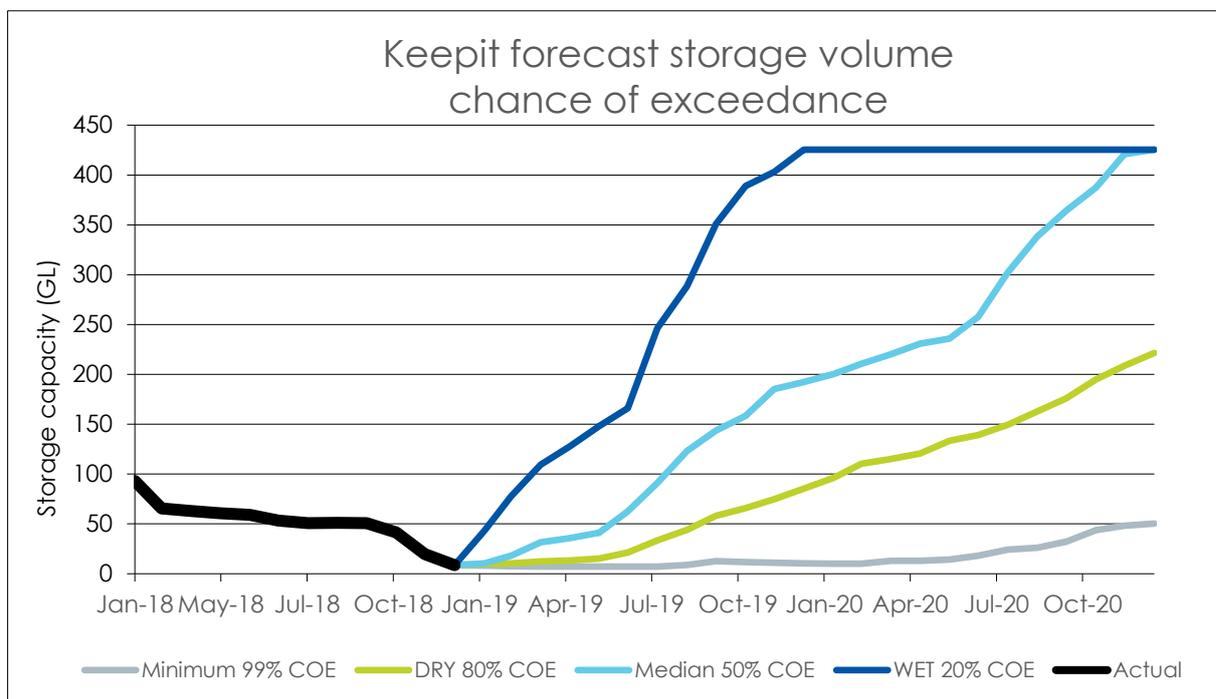
- No further block releases are planned for the Lower Namoi until inflows occur.

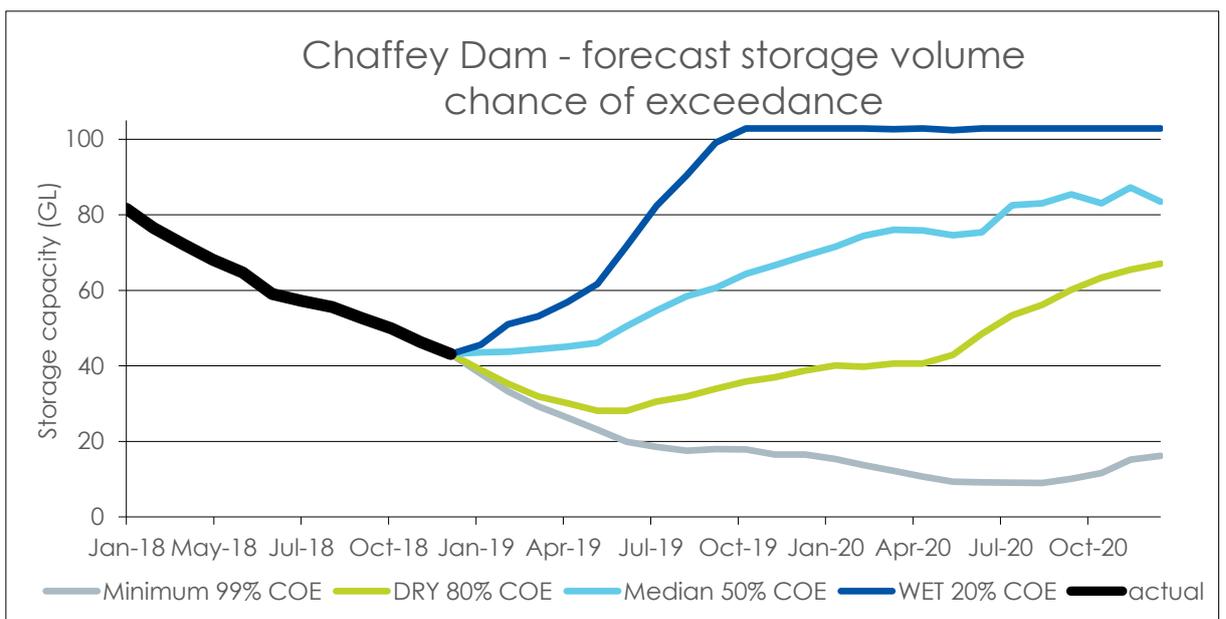
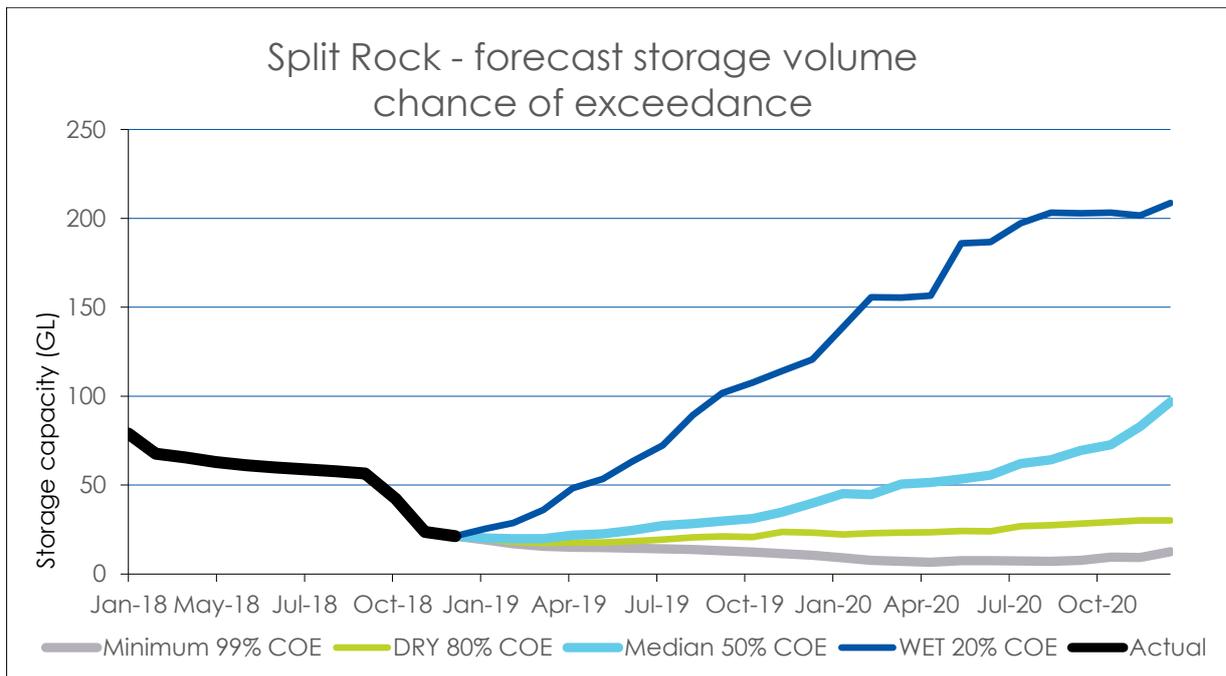
Water quality

- 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.







6.2 Gwydir valley

Storage and release status

- Copeton Dam is at 12% of active capacity and is currently releasing around 975 ML/d.
- Block releases for the western effluent streams are now complete.

Environmental water operations

- Around 60 GL (in total) of environmental water is being delivered to the Gwydir and Gingham, with the final 10 GL currently being delivered to the Gingham.
- Of this 60 GL of environmental water, about half is being supplied from the ECA and half from the CEWO (Commonwealth Environmental Water Office)
- In the Mallowa Creek, the delivery of the second batch of 10GL of CEWO's environmental water is underway and flow has reached the targets at the end of system.

Water availability

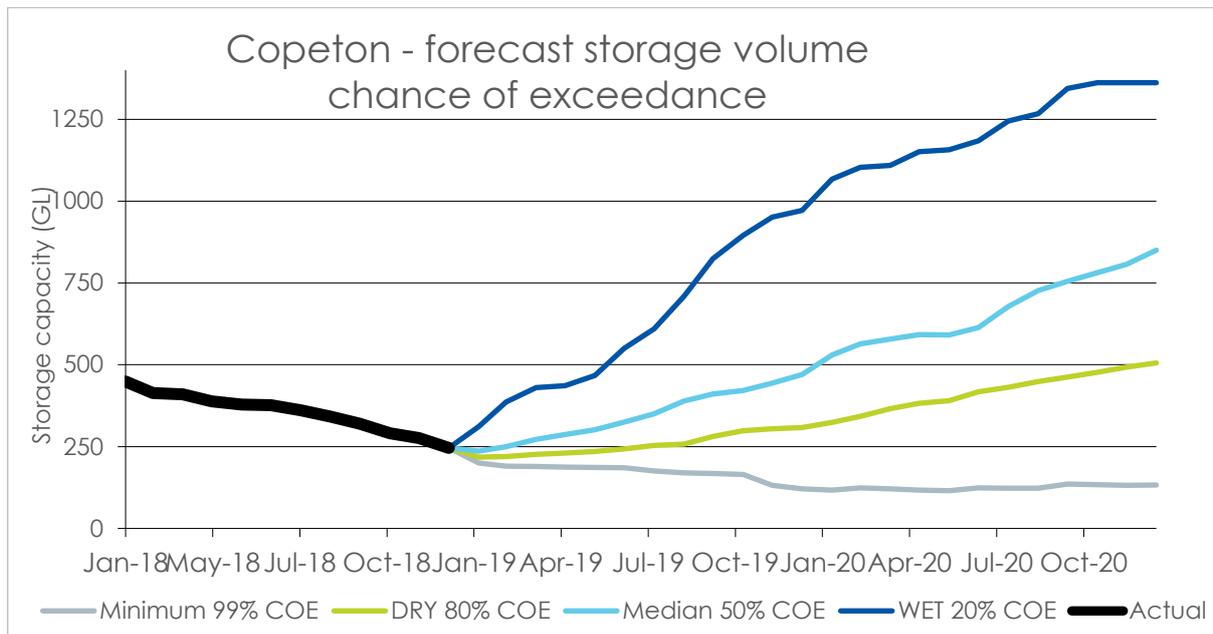
- Inflows of about 32GL are required to refill the Essential Requirements and Delivery Loss accounts before any increase in general security AWD is possible.
- The initial Available Water Determinations (AWD) are 100% for towns and high security, while general security is zero. Total carryover into 2018-19 was estimated to be up to 22% of general security share components.
- Carryover of general security for industry production was limited to roughly 40 GL (about 8% of all general security share components).
- Carryover of general security for environmental use is roughly 71 GL (about 14 % of all general security share components), in addition roughly 45 GL is still available in the Environmental Contingency Allowance (ECA).
- Recent Blue Green Algae (BGA) sampling at Copeton shows Copeton at amber alert level.

Drought operation measures

- Block releases for the western effluent streams are now complete.

Planned supply interruptions:

- No supply interruptions are expected.



6.3 Border rivers

Storage status

- Pindari Dam is at 11% of capacity and releasing 1,450ML/d. Releases are forecast to decrease later this week.
- Glenlyon Dam is at 18% of capacity and releasing 400ML/d. Releases are forecast to remain similar throughout this week.
- Releases from Boggabilla Weir are currently around 2,160ML/d. Releases are forecast to begin reducing as the summer irrigation season draws to an end.

Environmental water operations

- No current held environmental water orders, nor triggers for planned environmental water releases.
- Boomi replenishment flow is currently ongoing.

Water availability

- The Available Water Determinations (AWD) are 100% for towns and high security, while general security A-class is 32.8% and general security B-class is zero. Total carryover into 2018-19 was around 53% of general security share components.

Drought operation measures

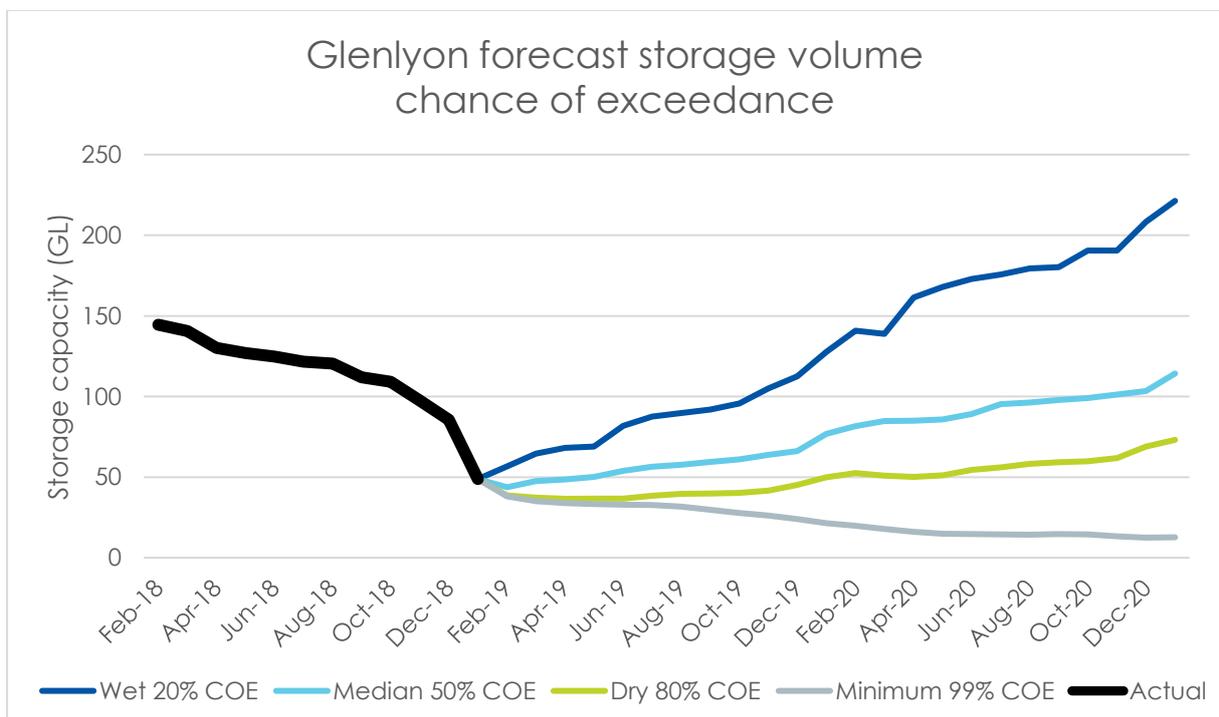
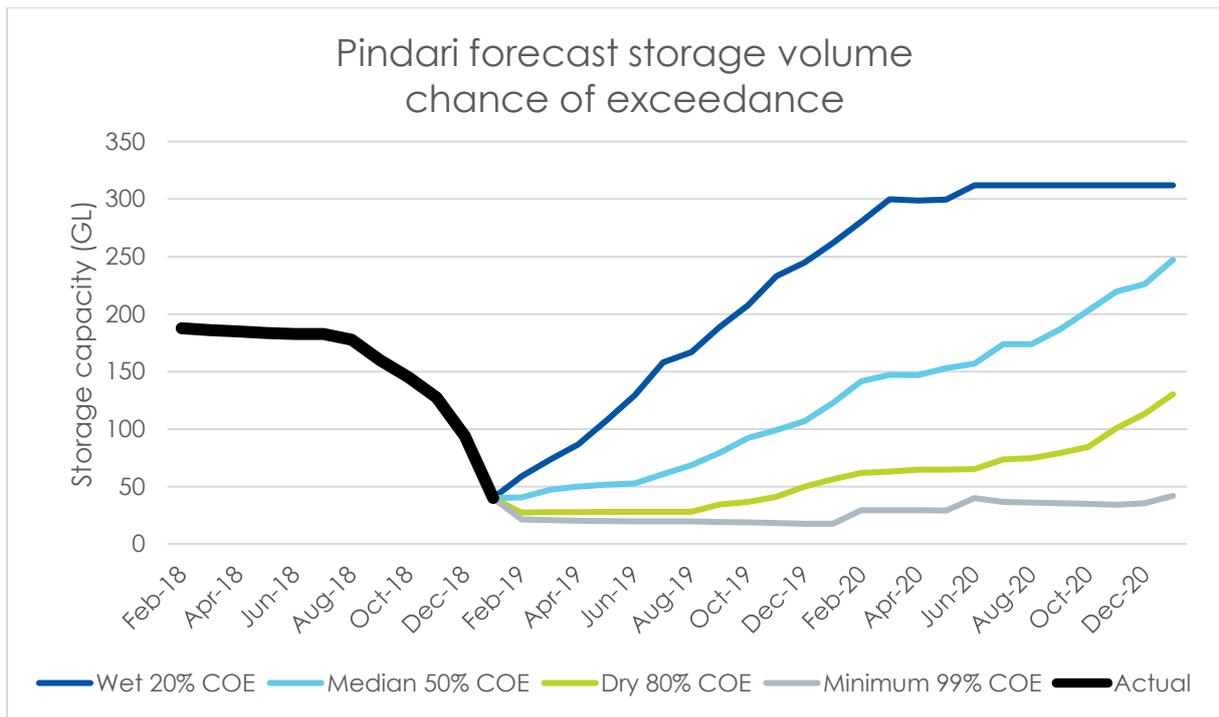
- Deliveries west of Boomi will be grouped together and undertaken in distinct blocks throughout the 2018/19 growing season.

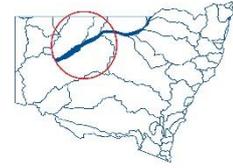
Water quality

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

Planned supply interruptions:

- No supply interruptions are currently forecast.





6.4 Barwon-Darling River system

River flow status

- The river system from Presbury to Wilcannia is currently at cease to flow condition and is forecast to remain this way until there is a significant rainfall event.
- Minor flows at Mungindi is for regulated delivery immediately downstream of the weir.
- Weir pool levels are expected to continue to fall due to evaporation, town water use and Basic Landholder Rights extractions.

Environmental water operations

- There are no current Held Environmental Water (HEW) flows in the Barwon Darling system.
- Planned Environmental Water (PEW) is water in the system that is below the commence to pump conditions for access licences.

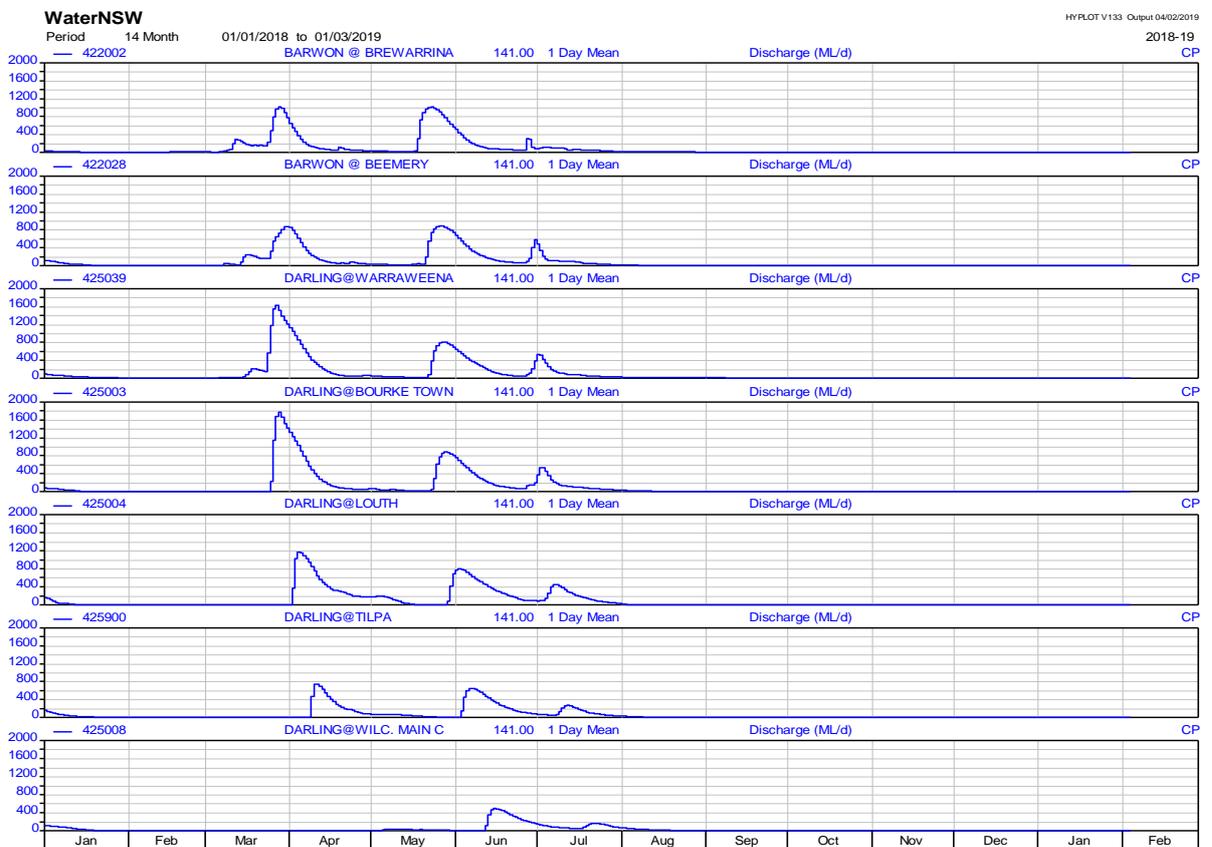
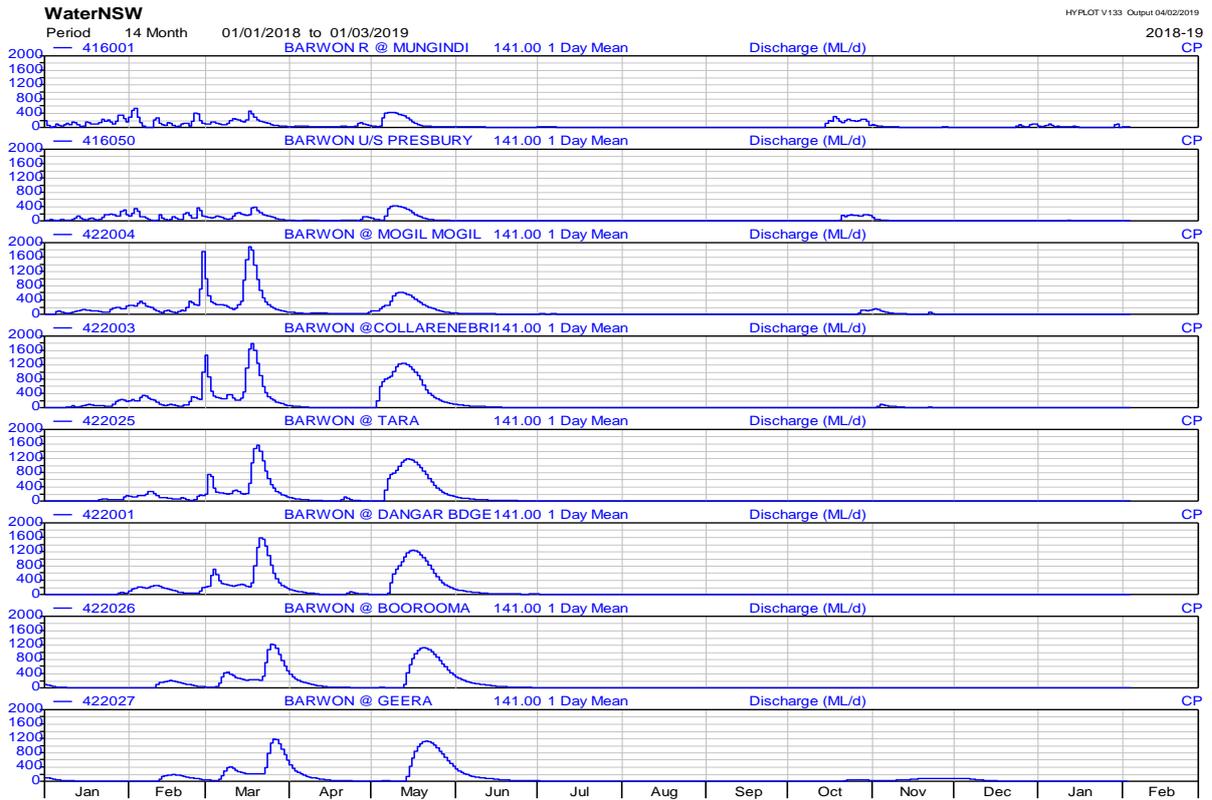
Water Availability

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

Drought operation measures

- As per the NSW Extreme Events Policy for all surface and ground water sources in the NSW Murray Darling Basin, the Barwon Darling unregulated river water source is assessed to be in Stage 3. Temporary water restrictions may be required to ensure critical water needs.

River section	Gauging station	Classification						
		28-01-19	29-01-19	30-01-19	31-01-19	01-02-19	02-02-19	03-02-19
Mungindi to Boomi river conf	416001 - 416050	No access	No access	No access	No access	No access	No access	No access
Boomi river confluence to U/S Mogil 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 junc to Bourke	425039- 425003	No access	No access	No access	No access	No access	No access	No access
Bourke to Louth	425003- 425004	No access	No access	No access	No access	No access	No access	No access
Louth to Tilpa	425004- 425900	No access	No access	No access	No access	No access	No access	No access
Tilpa to Wilcannia	425900- 425008	No access	No access	No access	No access	No access	No access	No access
Wilcannia to U/S Lake Wetherell	425008	No access	No access	No access	No access	No access	No access	No access



7. Coastal valley based operational activities

7.1 Bega river

Storage and release status

- Brogo Dam is at 88% of capacity and currently releasing 5ML/d. Releases are forecast to remain around this rate this week.
- Regulated conditions are present throughout the system.



Environmental water operations

- No current additional operations.

Water availability

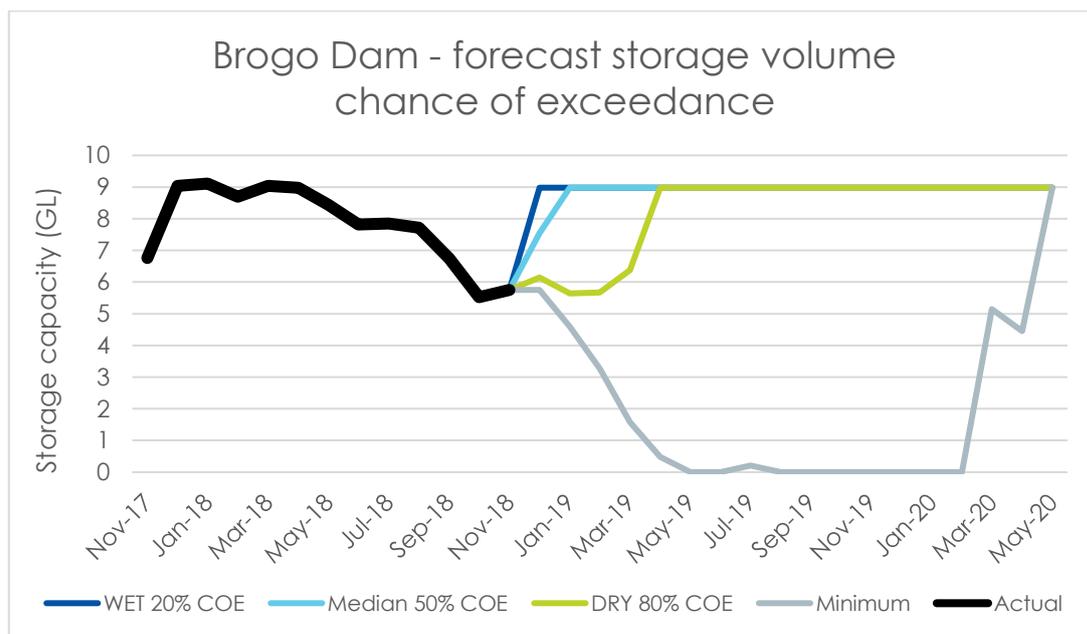
- An AWD increment of 10% announced on 16 Jan 2019 takes the total availability for the general security licences for the year to 45%.
- General security availability is likely to increase with further inflows to Brogo Dam.

Water quality

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

Planned supply interruptions:

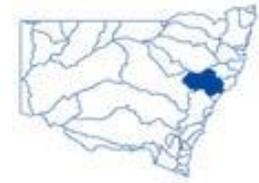
- Nil



7.2 Hunter valley

Storage and release status

- Glenbawn Dam is currently at 57% of capacity and releasing around 260ML/d. Releases are forecast to remain around this rate during the week.
- Glennies Creek Dam is at 59% of capacity and releases are currently around 125 ML/d. Releases are forecast to remain around this rate during the week.
- Lostock Dam is at 91% of capacity and releasing 30 ML/d. Releases are forecast to remain around this rate.



Environmental water operations

- No current additional operations.

Water availability

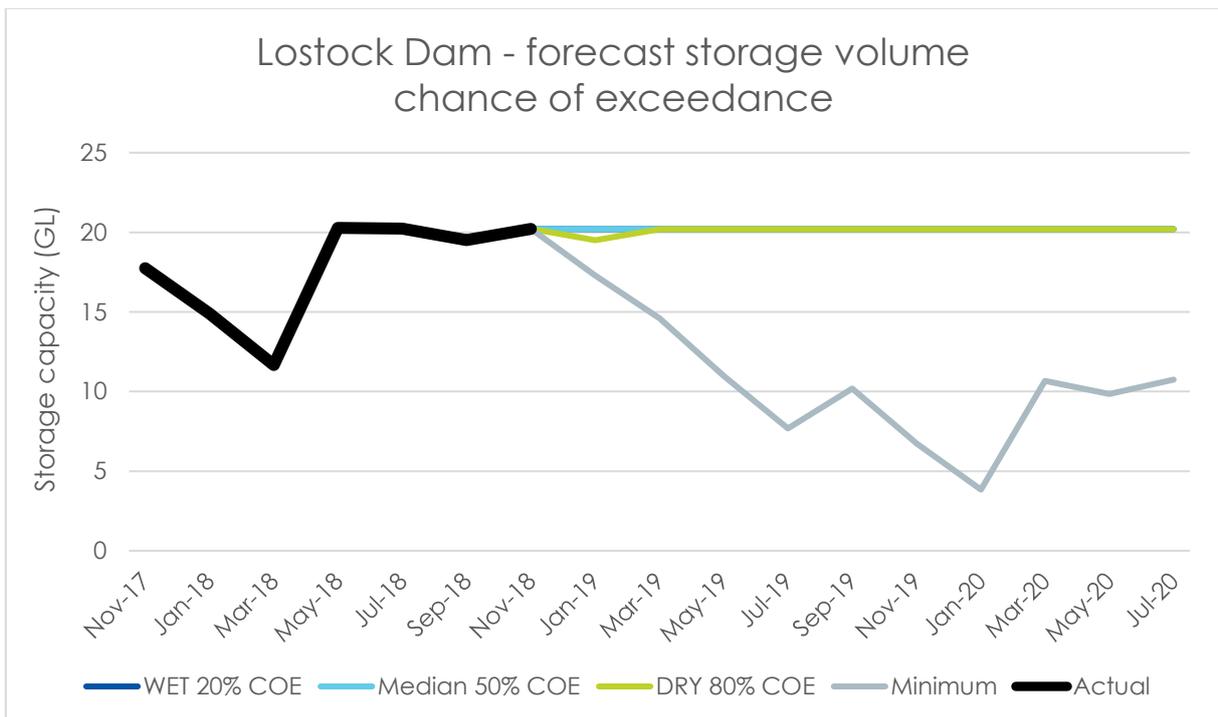
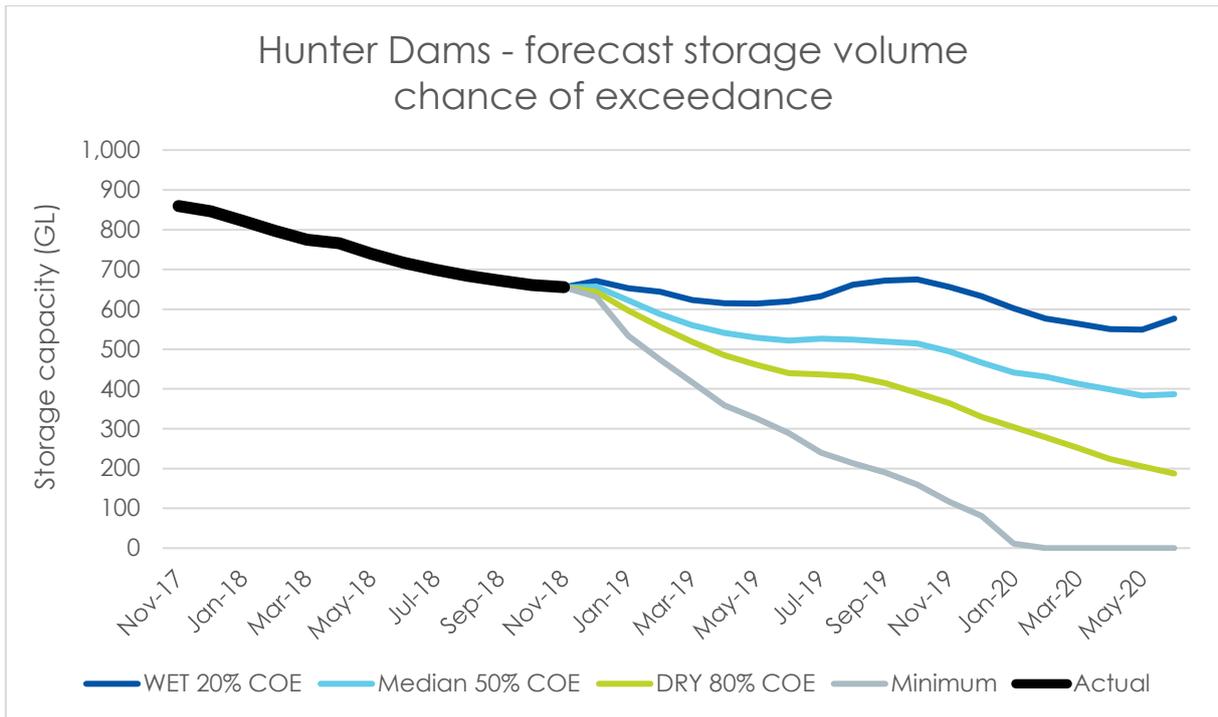
- All licence categories have 100% availability

Water quality

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

Planned supply interruptions:

- Nil



7.3 Toonumbar Dam

Storage and release status

- Toonumbar Dam is at 84% of capacity and releasing 29 ML/d. Releases are forecast to remain steady for the week ahead.

Environmental water operations

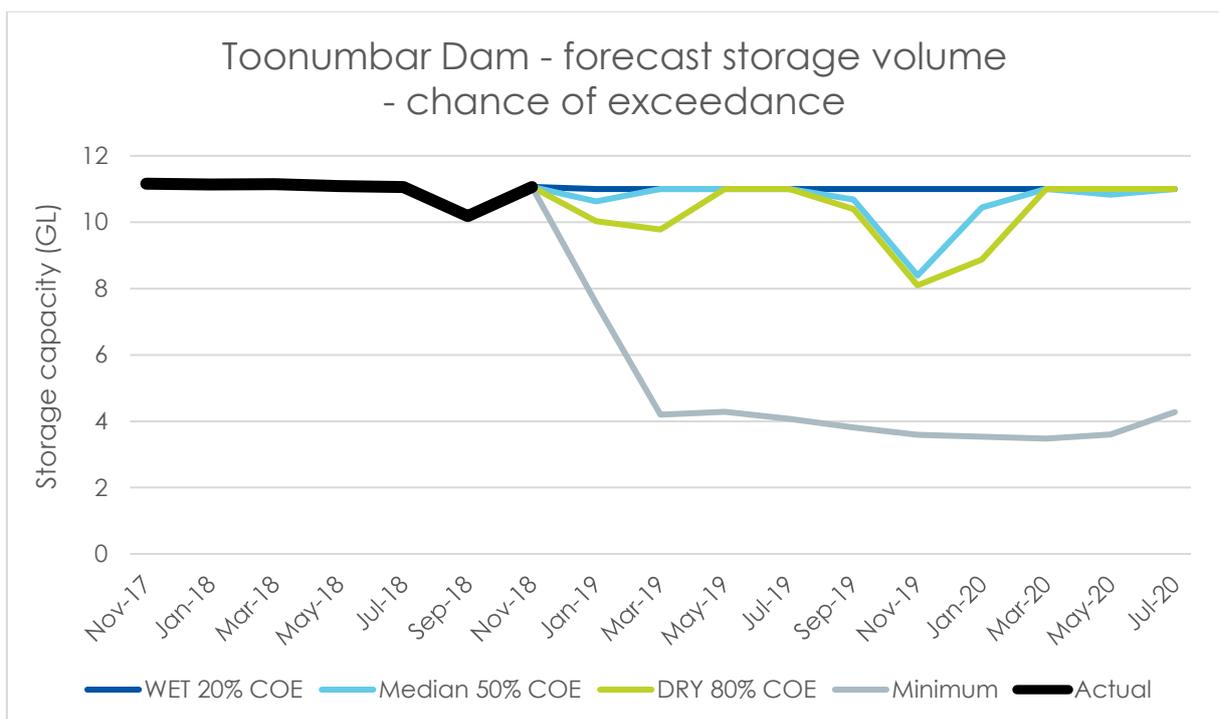
- No current additional operations.

Water availability

- All licence categories have 100% availability.

Water quality

- Recent BGA sampling at Toonumbar indicates that an amber level is present.



Planned supply interruptions:

- Nil

8. Rural Dam Levels

The following table shows the status of water supplies at 4 February 2019.

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	18%	46	-6	Regulated releases	<20%	100%	2.7%	53%
Pindari Dam, Inverell	312	11%	34	-11	Regulated releases	<20%	100%	2.7%	53%
Gwydir Valley									
Copeton Dam, Inverell	1346	12%	167	-6	Regulated releases	<5%	100%	0%	22%
Namoi Valley									
Keepit Dam, Gunnedah	419	1%	2	0	Releases ceased	<20%	100%	0%	19%
Split Rock Dam, Manilla	394	4%	15	-1	Regulated releases	<5%	100%	100%	N/A
Chaffey Dam, Tamworth	98	35%	34	-1	Regulated releases	<50%	100%	38%	N/A
Macquarie Valley									
Burrendong Dam, Wellington	1155	10%	113	-2	Regulated releases, restricted c/over	<20%	100%	0%	52%
Windamere Dam, Mudgee	367	35%	130	-1	Regulated releases. BWT ceased	<5%	100%	0%	102%
Lachlan Valley									
Wyangala Dam, Cowra	1216	37%	454	-21	Regulated releases	<20%	100%	0%	62%
Carcoar Dam, Carcoar	36	36%	13	-0	Regulated releases	10%	100%	0%	67%
Murrumbidgee Valley									
Burrinjuck Dam, Yass	1025	36%	367	-26	Irrigation & eWater	35%	95%	7%	22%
Blowering Dam, Tumut	1604	31%	490	-14	Irrigation & eWater	<10%	95%	7%	22%
Murray Valley									
Dartmouth, Mitta Mitta (Vic)	3837	65%	2492	-36	Transfers to Hume	N/A	N/A	N/A	N/A
Hume Dam, Albury	2982	31%	938	-31	Irrigation, eWater & SA	<25%	97%	0%	31%
Lower Darling									
Menindee Lakes, Broken Hill	1684	1.4%	21	-4	Releases reducing	N/A	100%	0%	15%
Hunter Valley									
Glenbawn Dam, Scone	750	57%	427	-2	Regulated releases	20%	100%	100%	21%
Glennies Ck Dam, Singleton	282	59%	168	-1	Regulated releases	20%	100%	100%	21%
Lostock Dam, Gresford	20	91%	18	-0	Regulated releases	100%	100%	100%	N/A
Coastal Area									
Toonumbar Dam, Kyogle	11	84%	9	-0	Regulated releases	100%	100%	100%	N/A
Broggo Dam, Bega	9	88%	8	0	Regulated releases	80%	100%	45%	N/A
TOTALS	17,798	33.4%	5947	-164					

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.