

# Regional water availability report

Weekly edition  
4 March 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 March 2019 was 30.5% of the total active storage capacity. This was a decrease of 0.6% from last week.

The total storage level of urban water supplies on 4 March 2019 was 57.5% of the total storage capacity. This was a decrease of 0.6% since last week.

## 2. System risks

- Cease to flow conditions continue in the Barwon Darling system as it remains dry.
- 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 have ceased 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.
- 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 carryover has been available. The actual inflows to Burrendong Dam since the last AWD in August 2017 total about 85 GL. This is only 37% of the previous record low inflow of about 228GL for the 19 months ending in February.
- 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.

- Block releases have ceased in the Gwydir valley as delivery of the small volumes remaining in customer accounts is coming to an end.
- Cessation to deliveries in the western section of the Border rivers is underway.

### 3. Climatic Conditions

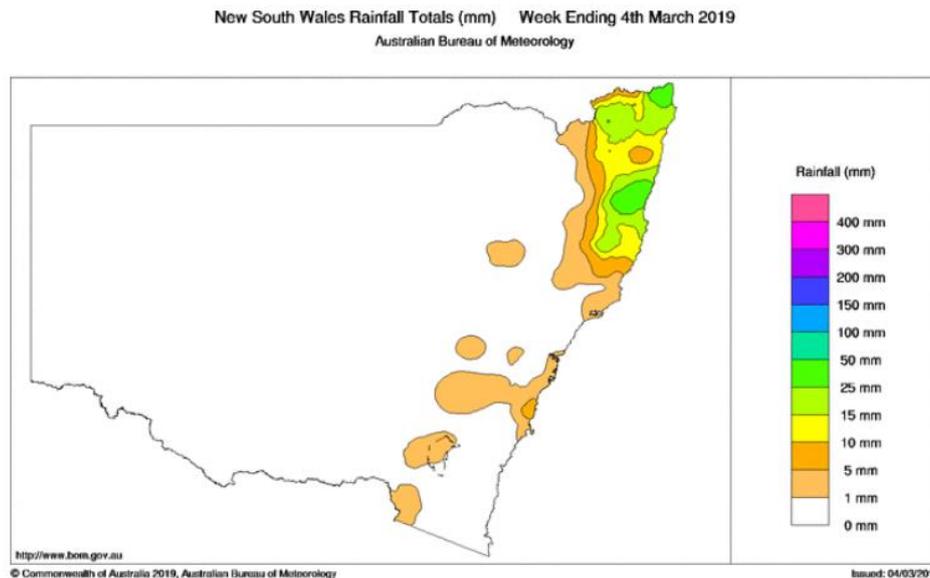


Figure 1 - Weekly rainfall totals for New South Wales

The Bureau of Meteorology stated that rainfall 15mm to 25mm was recorded in the Northern Rivers and Mid North Coast regions of New South Wales. The Illawarra and parts of the lower Central Tablelands received 1 – 5mm, the rest of the state remained dry.

The Bureau also states that a slow-moving high pressure system over the Tasman Sea is extending a ridge towards the northern New South Wales coast while a weak inland trough lingers near the Victorian border. Warmer than average conditions will remain over the state's south and west today, with a cold front set to bring cooler conditions to the south and west on Wednesday, extending to the northeast during Thursday. Increased shower and storm activity are likely today and on Wednesday with the passage of the front.

Rainfall of 1 – 5 mm is predicted across the eastern parts of the state in the first part of the week. Rainfall is predicted to increase during the second part of the week with 1 – 25mm being forecast for the central to eastern parts of the state. The coastal regions again should see the most rainfall. Lower and Upper Western regions are again predicted to remain dry.

For the beginning of the week, temperatures in the west of the state are predicted to reach around 39 degrees with the eastern parts of the state at around 35 degrees. This pattern should continue

until around Wednesday when temperatures are predicted to fall. Temperatures are again predicted to rise coming into the weekend.

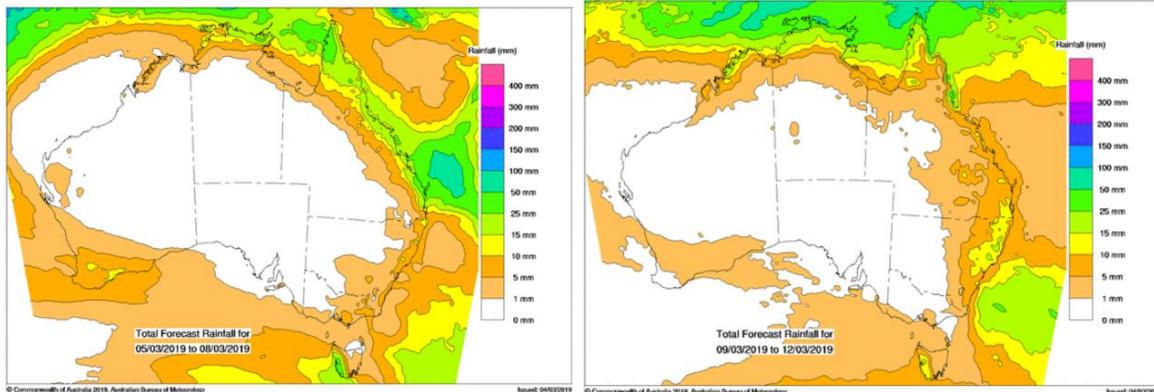


Figure 2a – First 4-day Forecast (5 – 8 Mar 2019)

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

Autumn is likely to be drier than average over NSW.

Historical outlook accuracy for March to May is moderate for NSW. See map for details.

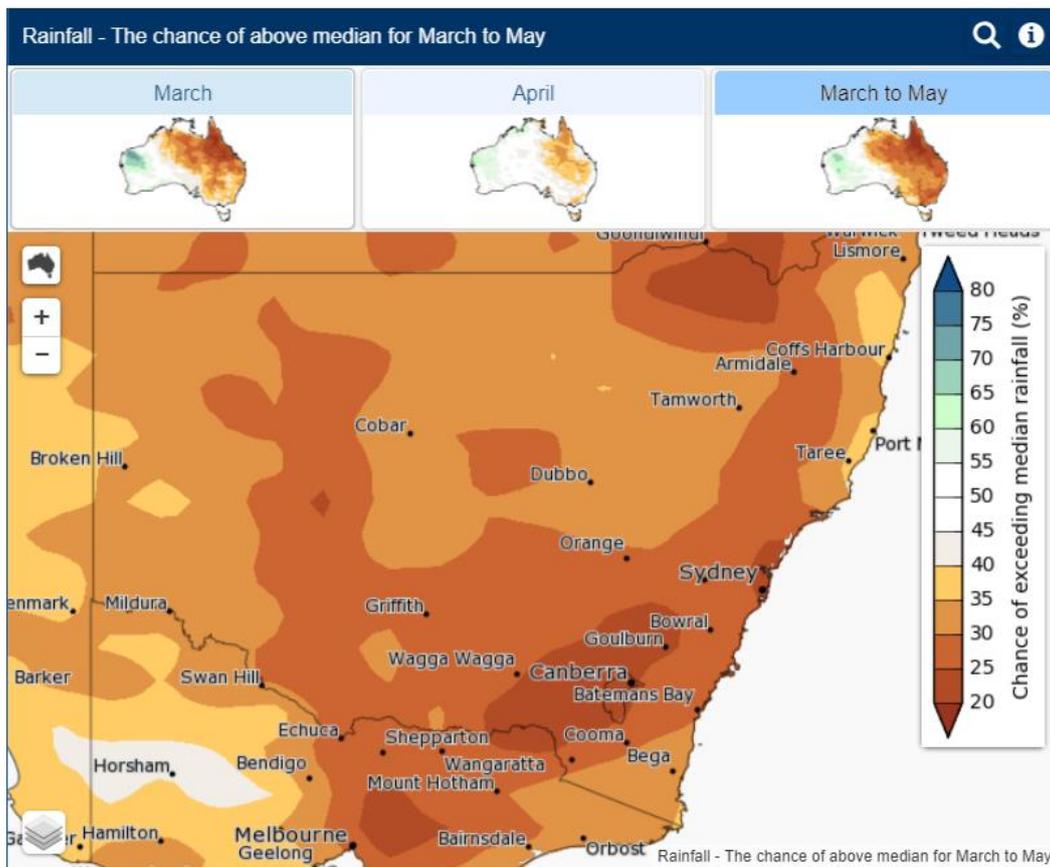


Figure 3 – 3-month rainfall outlook

## 4. Southern valley based operational activities

### 4.1 Murray valley



#### Storage and release status

- Hume Dam is currently 26% of active capacity, releasing about 9540ML/d. Releases from Hume Dam are likely to reduce marginally in line with system demands.
- Release downstream of Yarrawonga Weir is about 8,100ML/day and is likely to remain relatively steady.
- The Edward River Offtake is currently about 1,550ML/d and will remain below the channel capacity of 1,600ML/day.
- The Gulpa Creek Offtake is currently about 320ML/d and will remain below the channel capacity of 350ML/day.
- Stevens Weir level is about 4.4m to manage the level upstream of Wakool Canal offtake, which is about 1.71m. Flow downstream of Stevens Weir is about 1,173ML/day and is expected to decrease further during the week.
- Flows in the Colligen Creek (175ML/day), Yallakool Creek (245ML/day) are likely to remain steady to meet system demand.
- Wakool River offtake (23ML/day) is expected to remain relatively steady
- A small flow pulse is planned to reach Moulamein to cater for fishing competition during 9 and 10 March 2019, following which the flows will gradually decrease to about 900ML/day.
- Flow in Niemur River at Mallan School is currently about 300ML/d and is likely to gradually decrease over the next two weeks to about 70ML/day.
- Merran Creek flows upstream of its confluence with Wakool is about 100ML/day and is likely to gradually decrease over the next couple of weeks to about 80ML/day.
- Flow in Wakool River at Stoney Crossing is currently at about 790ML/day and is likely to gradually decrease over the next two weeks.
- Flows at Balranald are currently about 320ML/day and is likely to increase gradually to the about 400ML/day by the end of the week.
- Lake Victoria is currently holding about 316 GL or 37% of active capacity. The flow to South Australia is about 9,000ML/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 and is likely to restart in winter months.

### **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 was 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, meaning it can deliver all account water under normal river operations. Although next year's (2019-20) high priority commitments are not yet fully assured, inflows to satisfy them normally arrive over autumn and winter.

### **Water quality**

- Potential Blue Green Algae issues:
  - Recent Blue Green Algae (BGA) sampling at [Lake Hume](#) shows Lake Hume at amber alert level.
  - The Red Alert has been lifted effective from 28 February 2019 for [Mannus Lake](#) near Tumbarumba and downstream for Mannus Creek and in the Tooma River, which are being monitored by Snowy Valleys Council.
  - 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 27 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.
- The release from Wetherell reduced on 12 Feb 2019 and flows at Weir 32 have ceased from mid-February 2019.
- Current level at the block bank near Karoola is about 2.16m. The pipes in the Karoola bank remain closed but will be managed to maintain limited supplies downstream.
- Current level at the block bank near Jamesville is about 2.14m. 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 0.10m. The pipes at the bank remain closed.
- The average pan evaporation rate at Menindee over the last week was about 10.4 mm/d equivalent to about 1,800ML 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 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 2018 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 is now met from Copi Hollow, at reducing rates as the Wentworth to Broken Hill pipeline is being commissioned.
- The release to Lower Darling River from the storages have now ceased 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**

- Red alerts are current for the Darling River at Wilcannia (site N1242), Darling river at Weir 32 (site N1086), Darling River at Menindee pump station (site N1095), Court Nareen (site N1301) and Jamesville (site N1299).
- AMBER ALERT for Copi Hollow (site N1094) and Lake Wetherell (sites 1, 2,3 and 4), Lake Pamamaroo (site 10),
  - For more information visit: [Water Quality Algae](#).

### **Planned supply interruptions:**

- None.

### 4.3 Murrumbidgee valley



#### Storage and release status

- Burrinjuck Dam is currently at 32% of active capacity, releasing about 1,700 ML/d and is likely to remain steady.
- Blowering Dam is currently at 27% of active capacity, releasing about 3,000 ML/d. The release is likely to reduce over the week in line with system demands.
- The Beavers Creek Offtake is targeting a flow of about 100ML/day in March at Kywong.
- Berembed Weir is currently at about 5.03m and is likely remain relatively steady this week.
- Bundidgery storage is currently at 3.35m and will be actively used for re-regulation of flows.
- Gogeldrie Weir is currently at 6.07m. 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 0.59m and release from the storage has ceased in view of the algal report received on 18/1/2019. The use of Tombullen to capture future system surplus flows will be considered, if all other re-regulation structures are full.
- Hay Weir is currently at about 8.58m and is likely to remain relatively steady at full supply level for the next week.
- The current diversion into Yanco Creek is about 250 ML/d and is likely to remain steady.
- Delivery to Billabong system via Finley Escape has been restarted at 40ML/day.
- Delivery to Yanco-Billabong system via Coleambally Irrigation Escapes (CCD and DC800) is about 100ML/day.
- The release from Gogeldrie Weir has dropped to about 700ML/d and is likely to remain steady this week. 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 flow reduces below Gogeldrie Weir.

#### Environmental water operations

- In view of the emergent wider system need to target water quality issues, NSW environmental water holder is currently targeting additional flows at Balranald of about 200ML/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 320ML/day and is likely to increase gradually to the about 400ML/day by the end of the week.

#### **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 150 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**

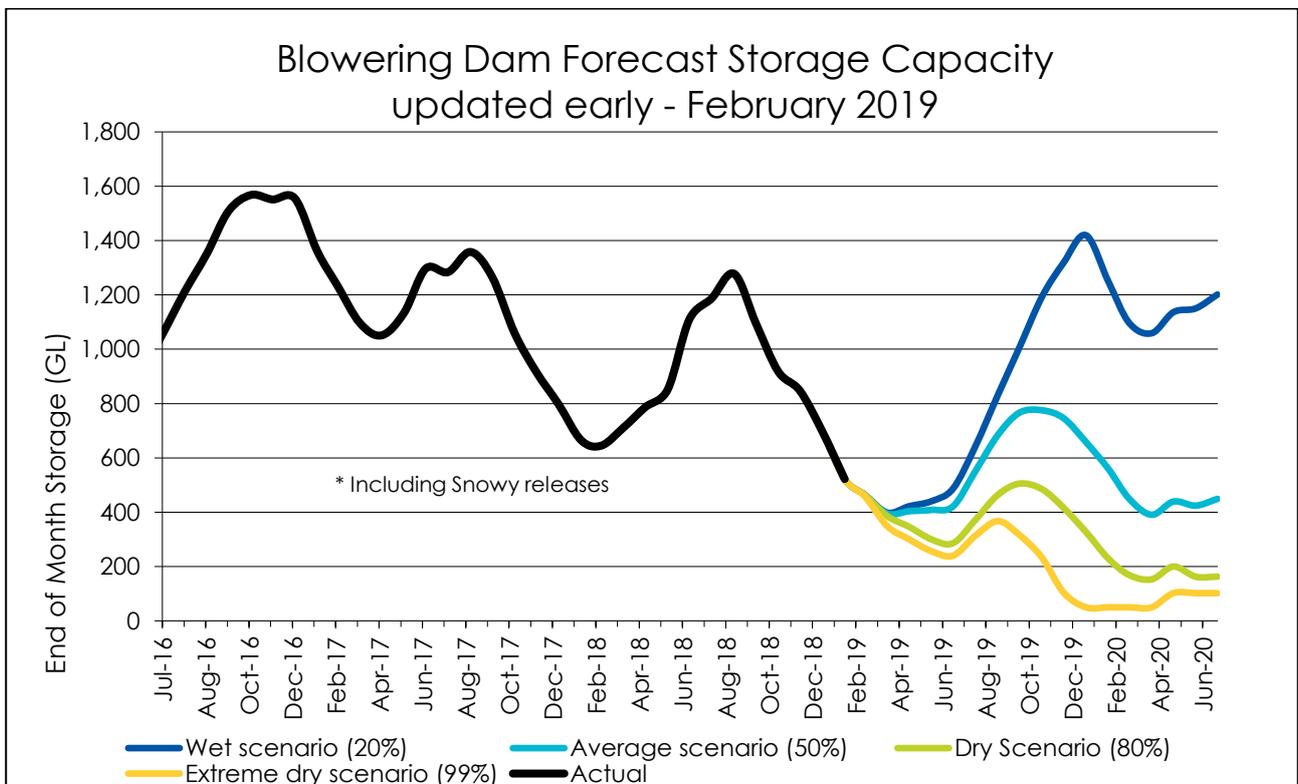
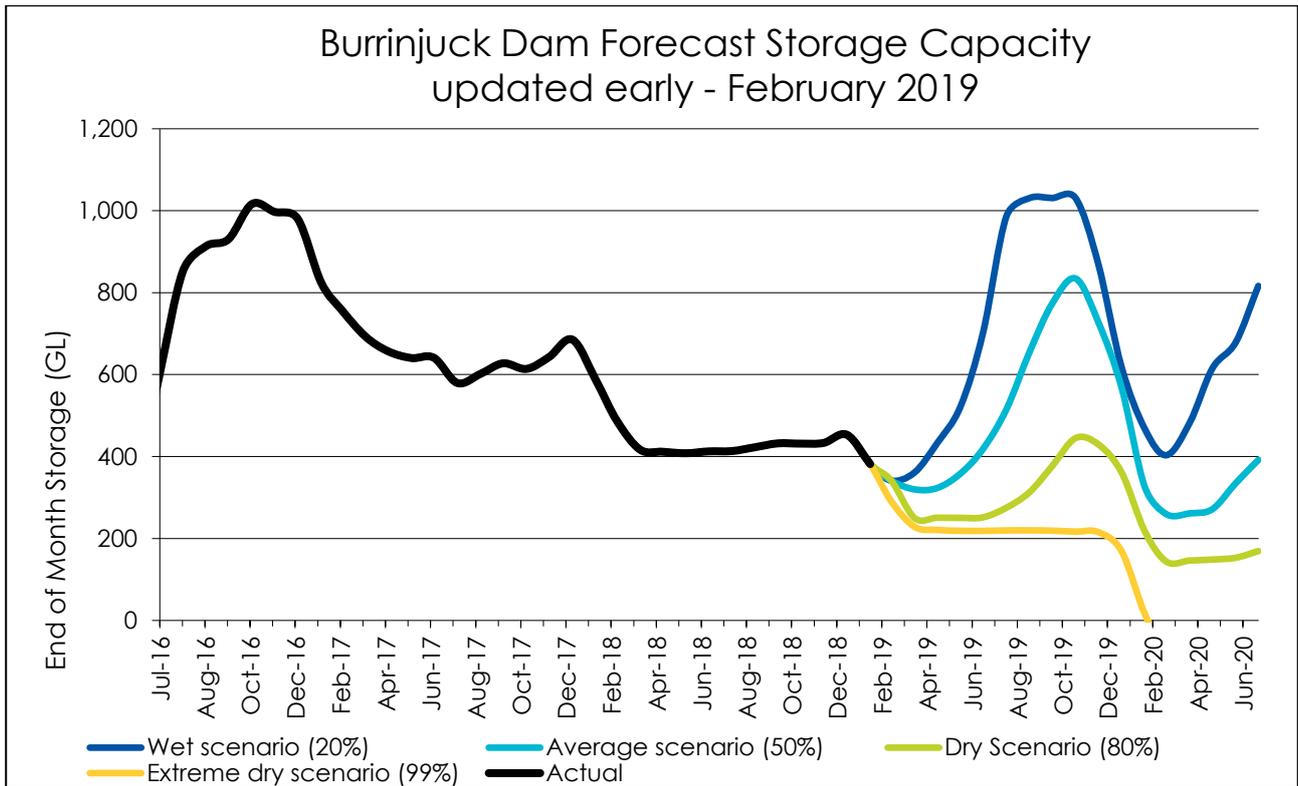
- Potential Blue Green Algae issues:
  - Tombullen outlet upstream is still on Red alert for blue-green algae.
  - Lake Albert in Wagga Wagga is on Red alert for blue-green algae. More information can be obtained from the following link: [Lake Albert - Wagga City Council](#)
  - Lake Wyangan South in Griffith also has a Red status for blue green algae. For more information select the following link: [Murrumbidge Irrigation](#).
  - The Hay weir pool has a Red alert status and Murrumbidgee River at Maude Weir Buoy have an Amber alert status. The Murrumbidgee River at Carrathool and Murrumbidgee River at Redbank Weir Buoy both remain on an Amber alert.
  - Lake Wyangan North in Griffith has an Amber status for blue green algae. For more information select the following link: [Lake Wyangan](#).
  - Green alerts are current for the four sites at Burrinjuck Dam as well as the Murrumbidgee River at Balranald.
  - 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. Most likely to be scheduled during April 2019. During the

period the flows below Tarabah Weir is likely to be minimum, with the flows to the Yanco Creek met from CICL escapes (CCD and DC800).

- Planning is underway for installation a new gate at Spillers Regulator at the Washpen Creek; awaiting a suitable low flow condition.
- Planning is underway for the maintenance of Yanco Weir as the maintenance team is awaiting a suitable window of low flows. This is more likely to be in early April, subject to watering requirements in the Colombo Creek – Billabong systems.
- Planning is underway for a series of maintenance tasks along the North Redbank Channel scheduled from mid-March to early June 2019. During the outage the offtake regulators into the North Redbank Channel will remain fully closed. The project teams will undertake works on several sites along the North Redbank Channel.
  - Redbank Road Regs 109 and 108a: Gate removals from site, modified and return to site (March to April 19).
  - Redbank Reg 116, Lake Marnley Reg 120, and Splitter Reg 107: Gate replacements and walkway installations (March to April 2019).
  - Wynburn Escape Regs (3x off): Replace regulators (April to May 2019).
  - Baupie Escape Regulators 134/134a: Regulator and gate replacements (April to May 2019).



## 5. Central valley based operational activities

### 5.1 Lachlan valley



#### Storage and release status

- Carcoar Dam is currently 29% of capacity and currently releasing 110ML/d. Releases are forecast to be between 85-100ML/d later in the week.
- Wyangala Dam is currently 34% of capacity and currently releasing 1,000ML/d. Releases are forecast to remain around 900ML/d during the week.
- Lake Cargelligo is currently 89% 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 400-450ML/d this week.

#### Environmental water operations

- As of 25 July 2018, Lake Brewster main storage was effectively empty. From the 27 September environmental water was 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 Water Quality Allowance (WQA) water is being delivered to reduce the likelihood of a Blue Green Algal bloom from forming in the lower Lachlan. These flows should break up stratification in weir and river pools by targeting a flow of 100ML/d at Booligal. Any flows in excess of operational target of 60 ML/d in March 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.
- There were 13 days of environmental flows into Booberoi Creek commencing on 12 February ceasing on the 25 February.

#### Water Availability

- The 14 February 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 was about 369GL, equivalent to about 62% of general security share components.

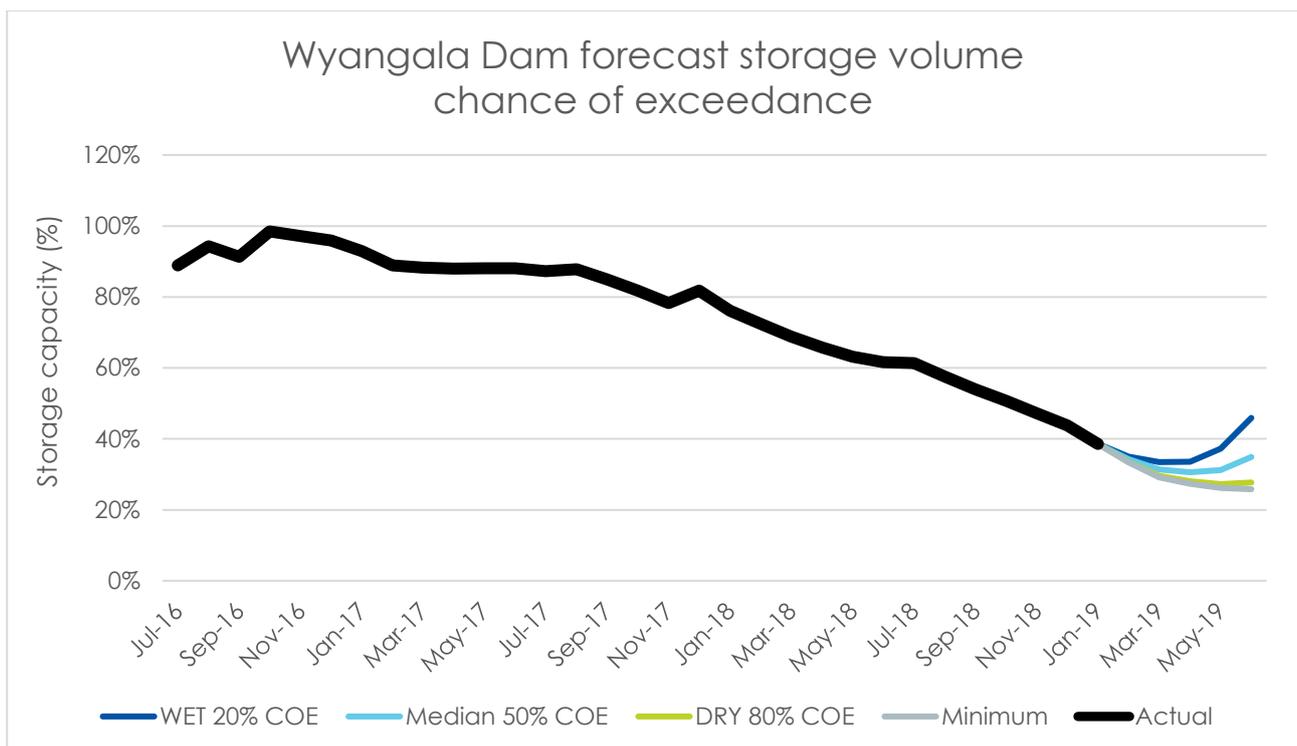
- It is estimated that a combined dam and tributary inflow volume of more than 201,000 ML was required in February before a further allocation could be made in the Lachlan River. Inflows received in February were about 8,000ML.

### Water Quality

- Latest BGA samples show that Willandra Weir, Lake Brewster outlet channel, Lake Brewster Regulator C are all on Green alert. Lake Cargelligo Outlet, Lake Cargelligo TWS, Boatshed and Lachlan River at Corrong are all on Amber 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 7.4% of capacity and currently releasing 400ML/d. Releases are forecast to be around 400ML/d this week to meet the reducing irrigation demand.
- The level in Burrendong Dam is expected to drop steadily to about 7% by the end of summer and to about 4% by end of the water year. 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 34% of capacity and releasing 80ML/d. Releases are forecast to reduce to 70ML/d later this week. Releases for the bulk water transfer to Burrendong Dam ceased on 25 Jan 2019. More info on WaterNSW website [Link](#)
- There have been inflows of about 35,000 ML into Burrendong Dam since 1 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 late 2019, leaving a minimum of 70GL in Windamere Dam, which provides a very secure supply for local demand for the next five to seven years.
- Flows into Duck and Crooked Creeks have now been reduced at the offtake from Gunningbar Ck as flows have reached the end of the regulated reaches in the creeks. On Friday 22 February the flows have reached Murrawombie in the Duck Creek and reached Mumblebone Dam in the Crooked Creek on 1 February.

### 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.
- Translucent environmental water from Windamere Dam is deliverable all through the year. In January 2019 there were two inflow events to Windamere Dam that were delivered to downstream as translucent environmental flows totalling 2,600 ML.
- Translucent environmental water from Burrendong Dam is deliverable from 15 March if flow triggers are met as provided for in the Water Sharing Plan.

### 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.
- It is estimated that inflows of around 296 GL was required in February before an increment in Available Water Determination could be made. Inflows received in February were around 9GL.

### **Drought operation measures**

- Information sessions on drought outlook and water availability were held by WaterNSW and department in early February.
- 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 February 2019 has 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.
- Any inflows received will be used to improve the drought management operations in 2019-20 from stage 4 to stage 3 prior to easing the current restrictions and drought management operations further. The Macquarie–Castlereagh incident response guide can be viewed at [Incident response guide Macquarie](#).

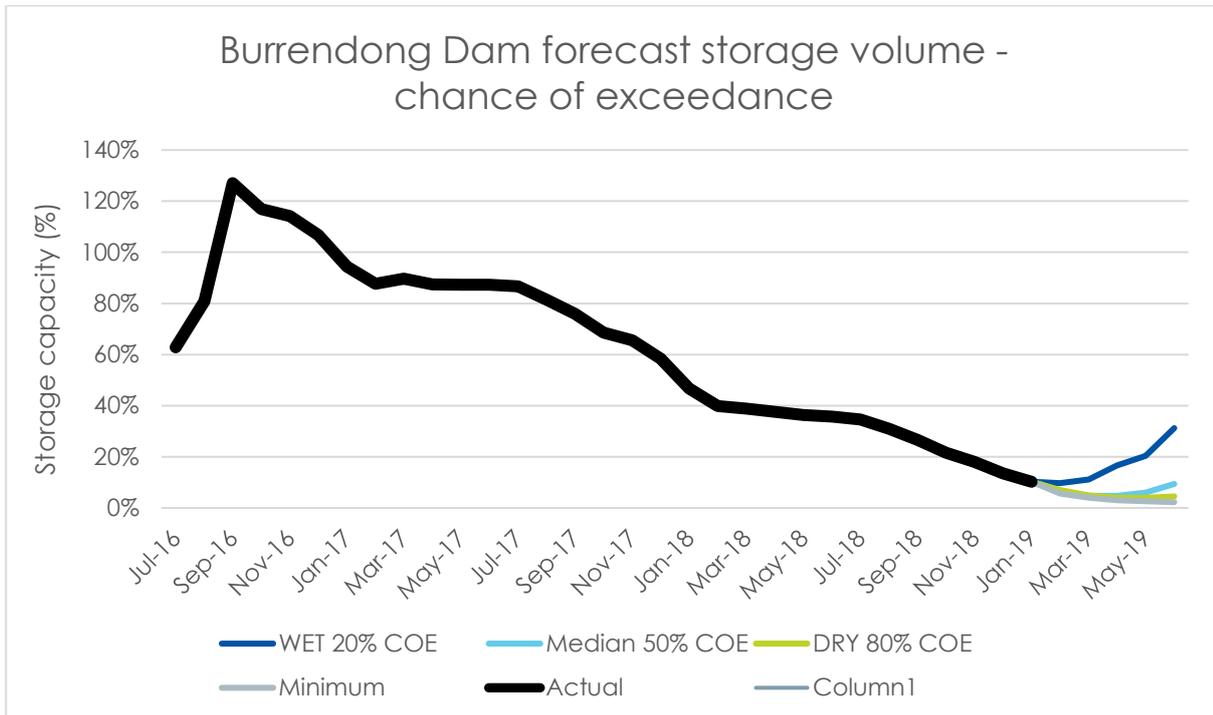
- The actual inflows to Burrendong Dam since the last AWD in August 2017 total about 85 GL to end of Feb 2019. This is only 37% of the previous record low inflow of about 228 GL for the 19 months ending in February.
- This drier than historical minimum inflow confirms that the system has entered into 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 12<sup>th</sup> February continue to 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 18 February shows BGA presence has receded to amber alert levels. Downstream results show significant biomass of cyanobacteria at red alert levels. Windamere is at red alert based on downstream results only.
- Due to presence of toxic BGA in downstream below Windamere Dam, the position of the trash rack is further lowered and the trash rack is currently at 12.69m – 15.69m below the water surface.
- Works to reinstate the temperature curtain at Burrendong Dam have been completed and the commissioning phase has commenced. The curtain is fully lowered due to low storage levels.

### **Planned supply interruptions:**

- Nil



## 6. Northern valley based operational activities



### 6.1 Namoi valley

#### Storage and release status

- Split Rock Dam is at 3% of active capacity and is currently releasing around 85 ML/d for the Upper Namoi. The earlier 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 32% of active capacity and currently releasing 118ML/d.
- Flows from Keepit Dam and the Namoi weirs reached Walgett at a very low rate in January. Prior to this small flow arriving, no flow had 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 November and December.
- 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

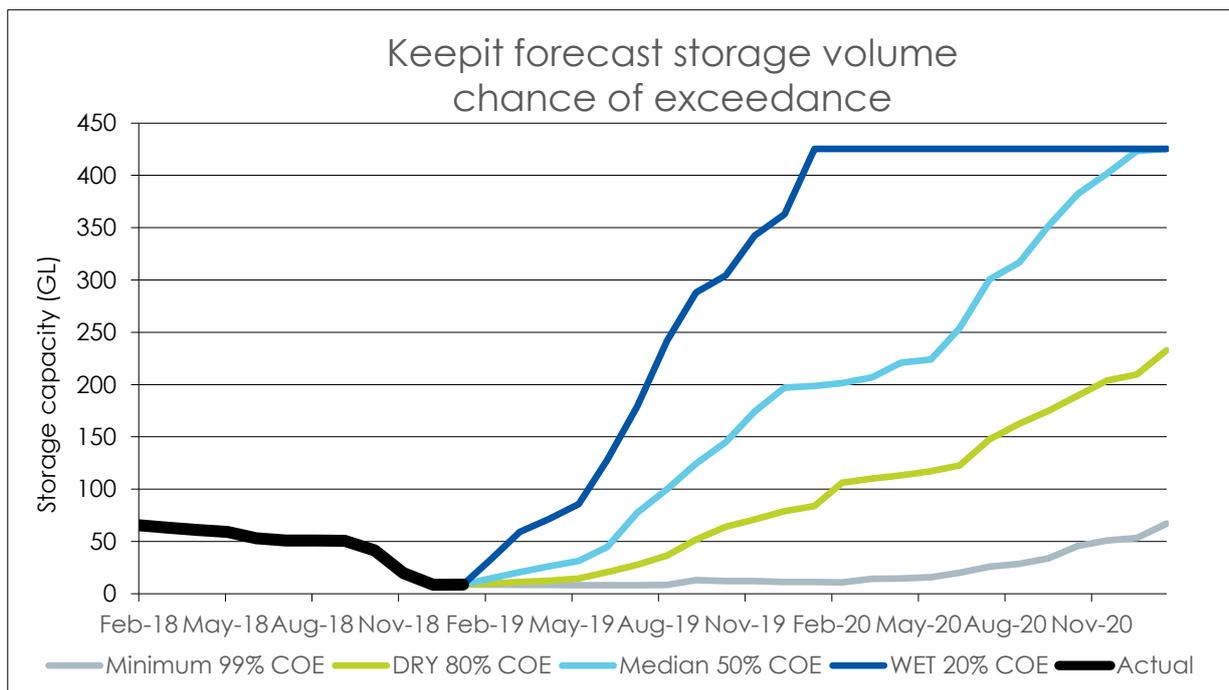
- No further block releases are planned for the Lower Namoi until inflows occur.

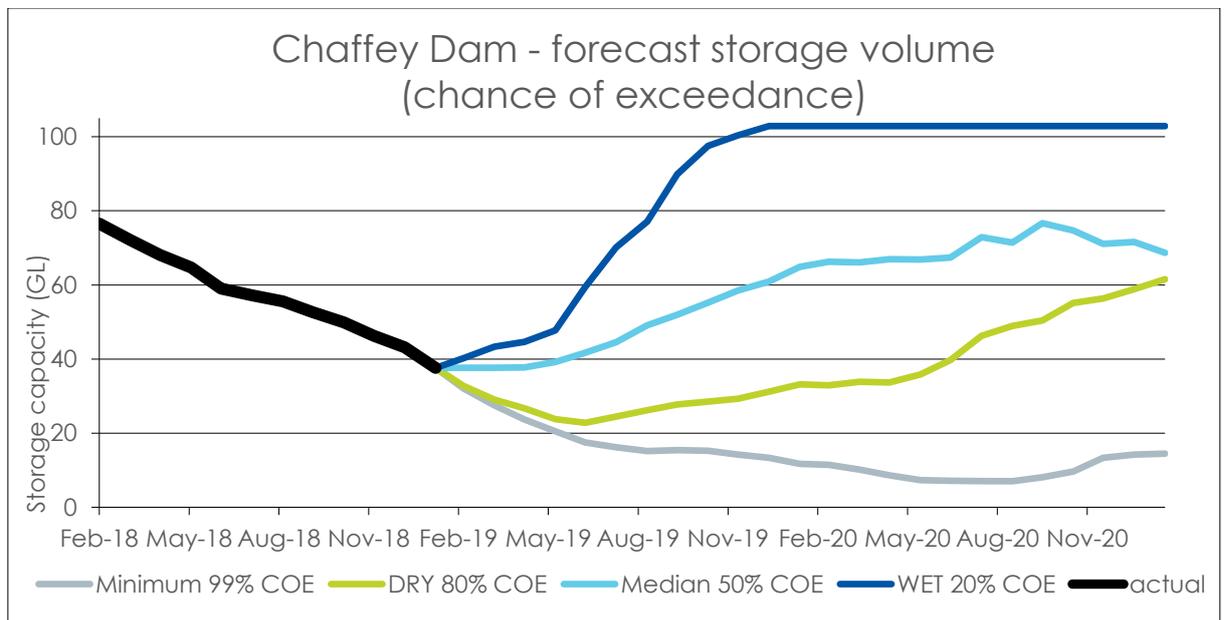
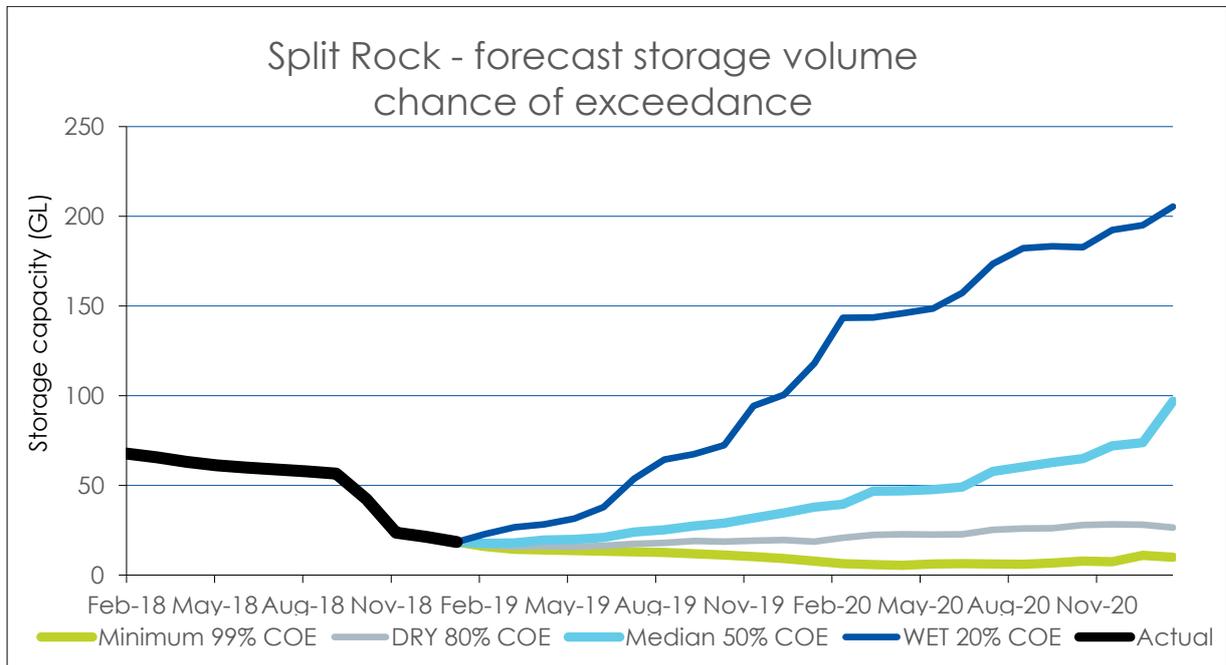
#### Water quality

- 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 125 ML/d.
- Block releases for the western effluent streams are now complete.

### Environmental water operations

- Around 60 GL (in total) of environmental water has been delivered to the Gwydir and 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 CEWO's environmental water is now complete.

### Water availability

- Inflows of about 50GL are required to refill the Essential Requirements and Delivery Loss accounts before any increase in general security AWD is possible.
- The 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).

### Water quality

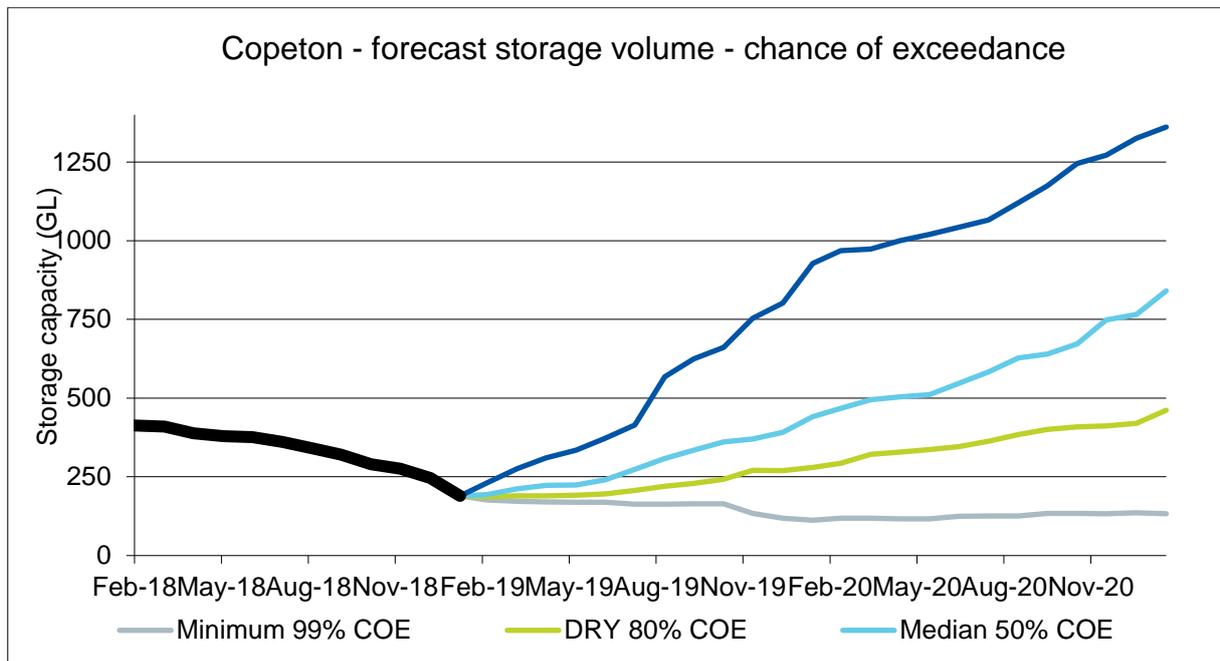
- Recent Blue Green Algae (BGA) sampling at Copeton shows Copeton at amber alert level.

### 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 6% of capacity and releasing 340ML/d. Releases are forecast to cease later this week.
- Glenlyon Dam is at 13% of capacity and releasing 123ML/d. Releases are forecast to cease later this week.
- Releases from Boggabilla Weir are currently around 230ML/d. Releases are forecast to continue 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 now complete.

### 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

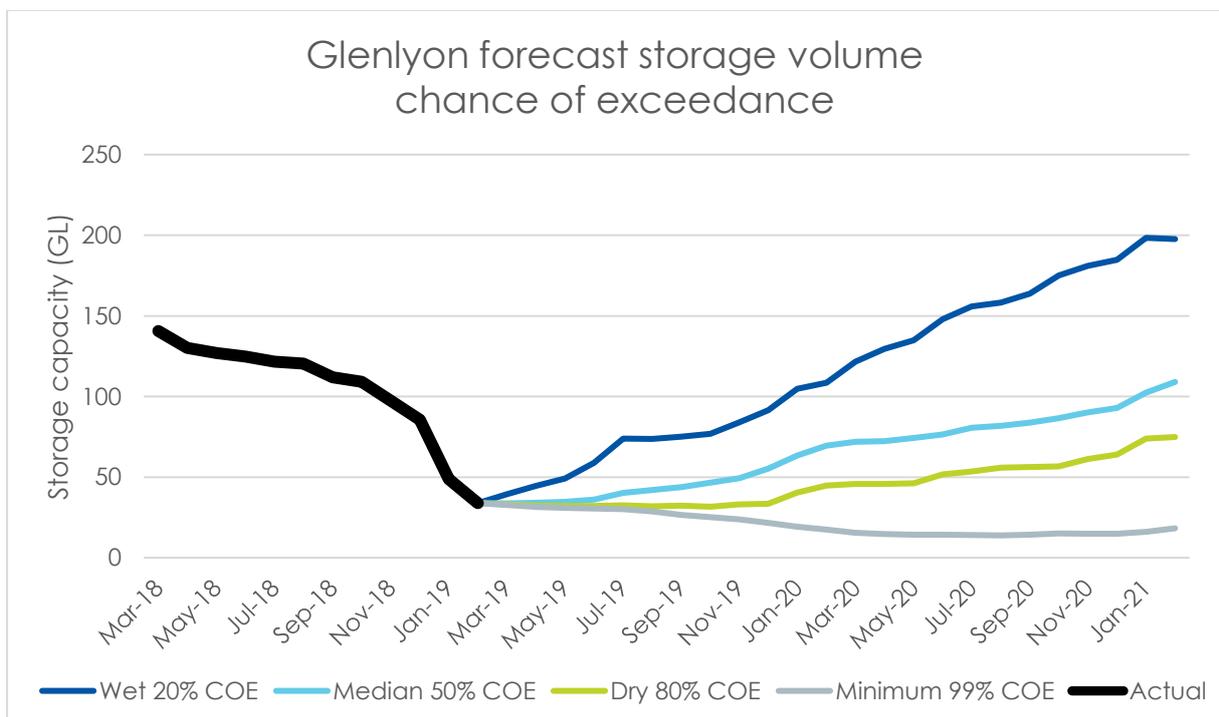
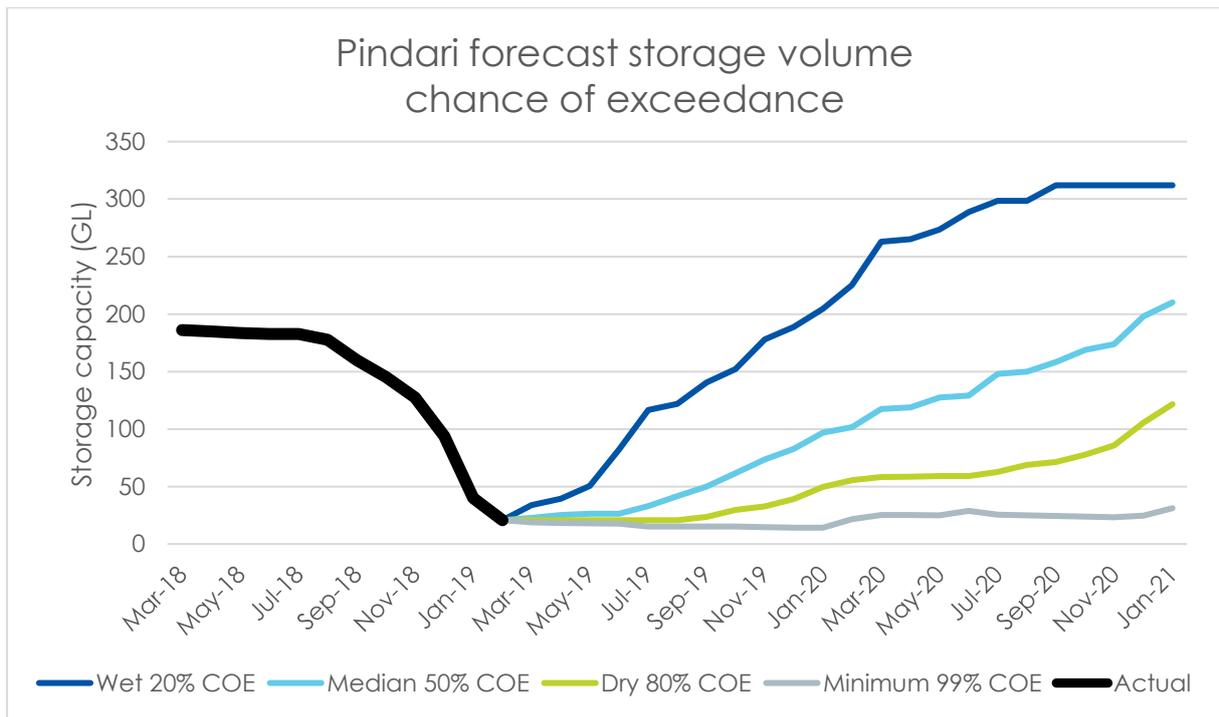
- Deliveries west of Boomi have ceased.

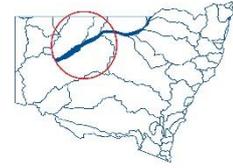
### Water quality

- 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.
- The minor flows at Mungindi are a small amount of operational surplus from the Border Rivers regulated river system.
- 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.

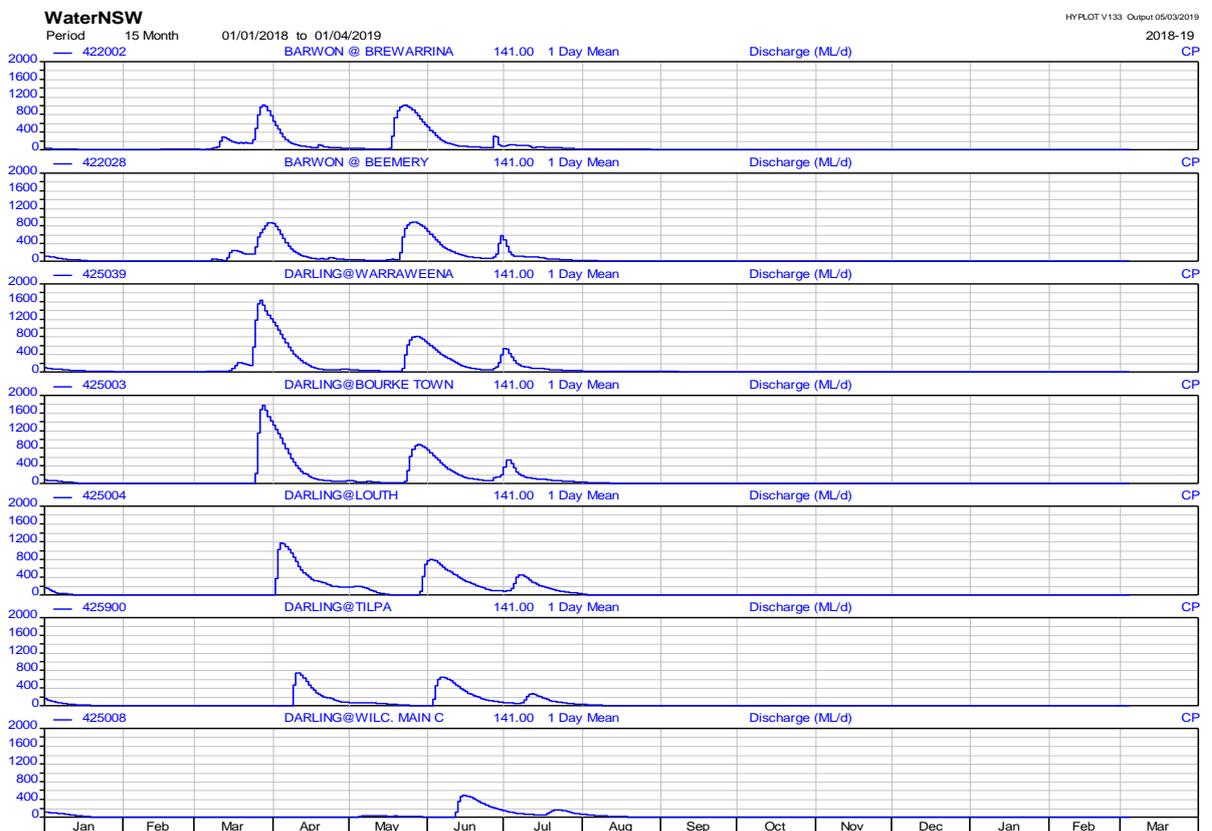
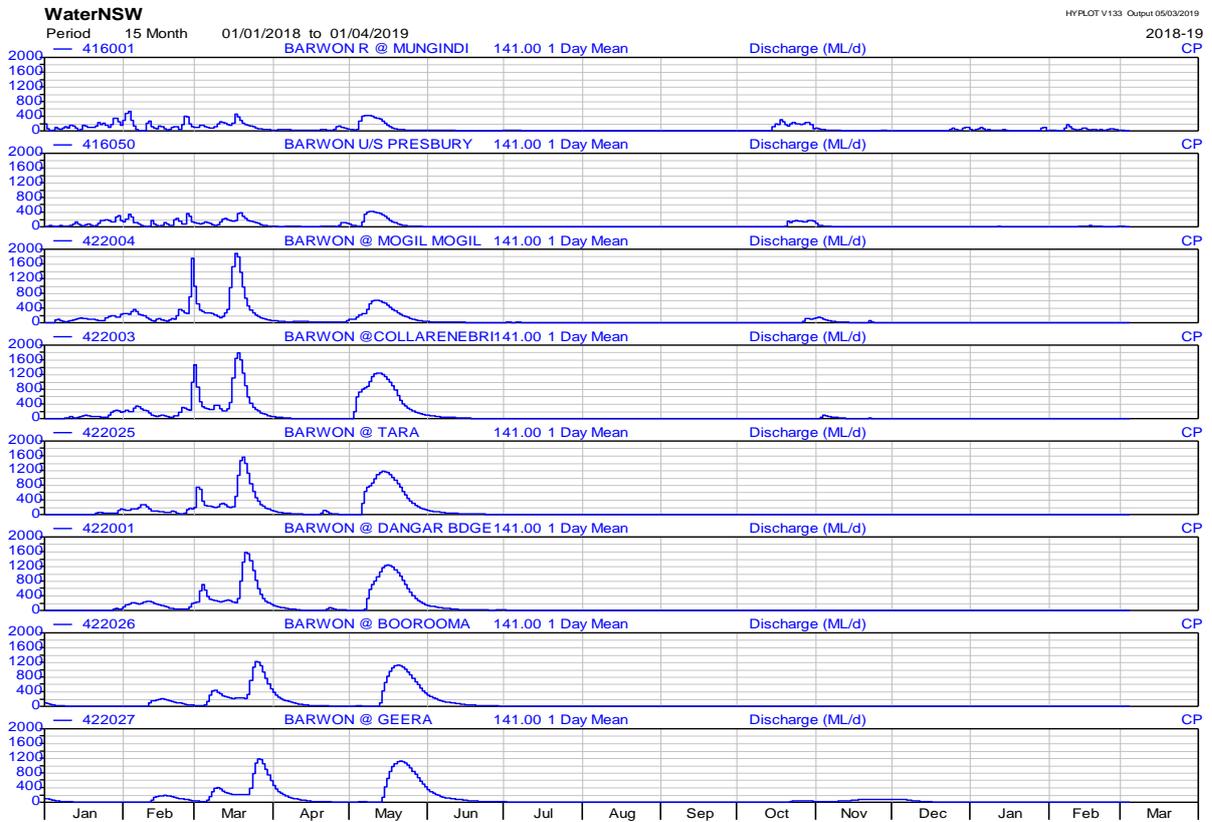
### Water Availability

- 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 4. Temporary water restrictions may be required to ensure critical water needs.

River section	Gauging station	Classification						
		25-02-19	26-02-19	27-02-19	28-02-19	01-03-19	02-03-19	03-03-19
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 99% of capacity and currently releasing 5 ML/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

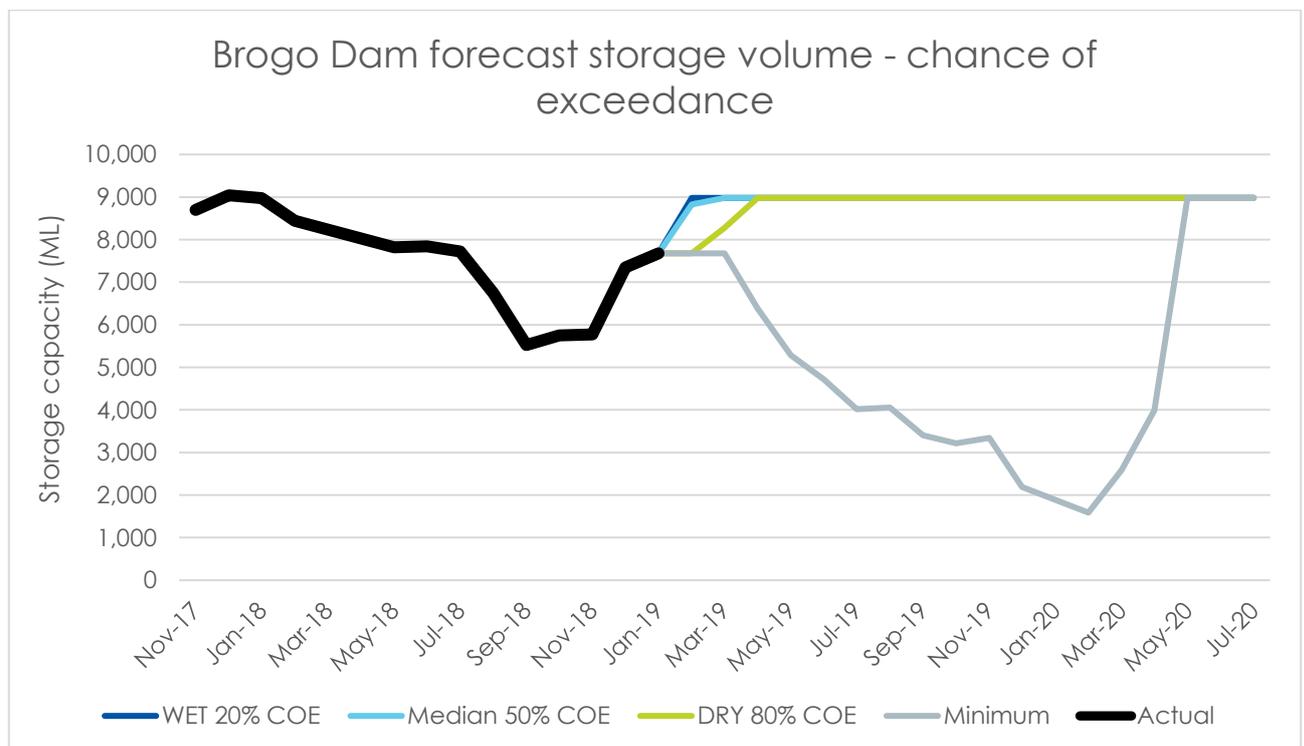
- An AWD increment of 20% announced on 19 Feb 2019 and takes the total availability for the general security licences for the year to 65%.

#### 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 55% of capacity and releasing around 300ML/d. Releases are forecast to remain around this rate during the week.
- Glennies Creek Dam is at 57% of capacity and releases are currently around 175 ML/d. Releases are forecast to remain around this rate during the week.
- Lostock Dam is at 85% of capacity and releasing 40 ML/d. Releases are forecast to remain around this rate.



### Environmental water operations

- No current additional operations.

### Water availability

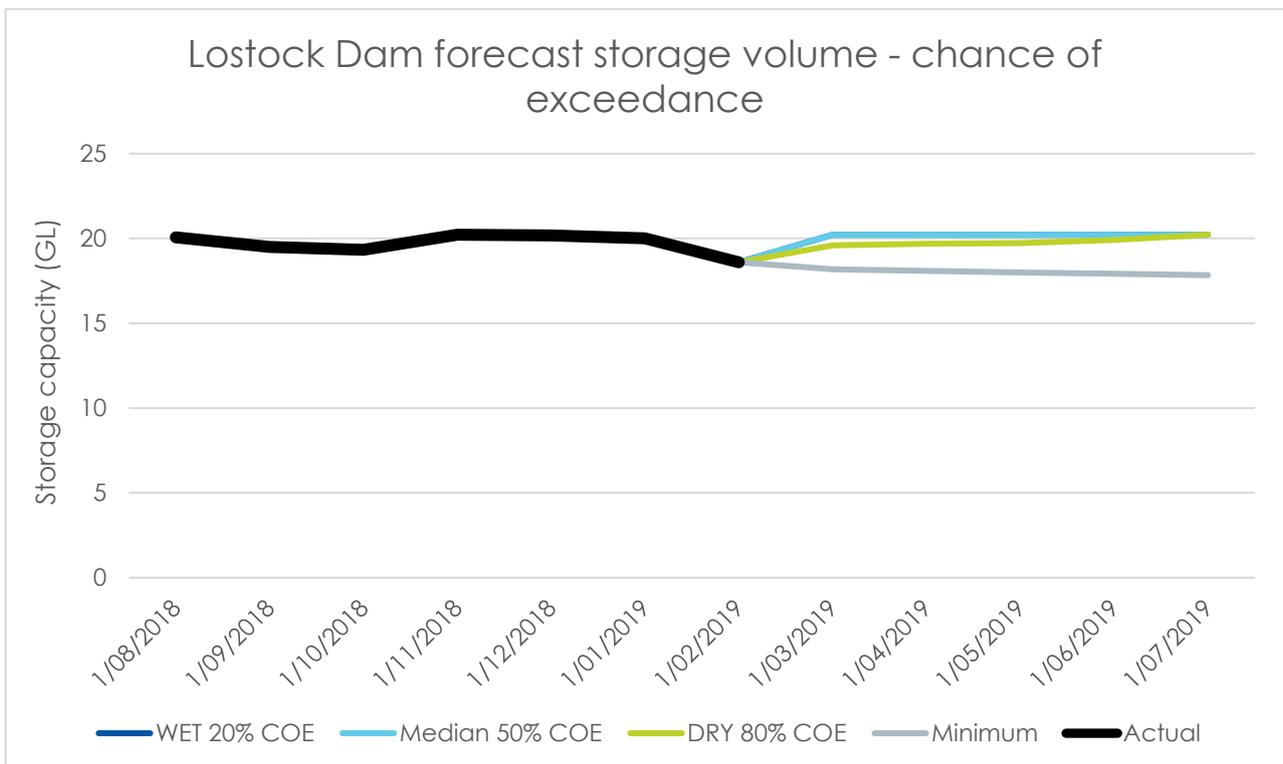
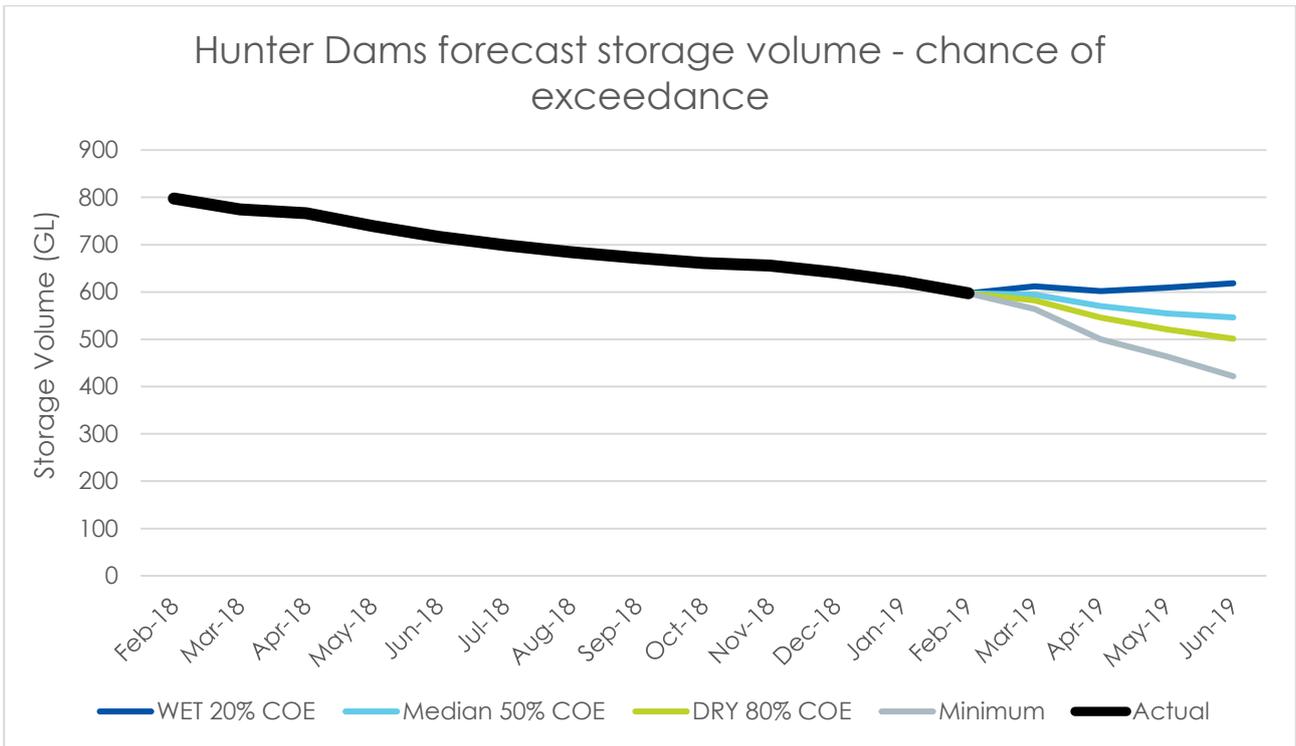
- All licence categories have 100% availability

### Water quality

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

### Planned supply interruptions:

- Nil



### 7.3 Toonumbar Dam

#### Storage and release status

- Toonumbar Dam is at 76% of capacity and releasing 20 ML/d. Releases are forecast to remain steady for the week ahead.

#### Environmental water operations

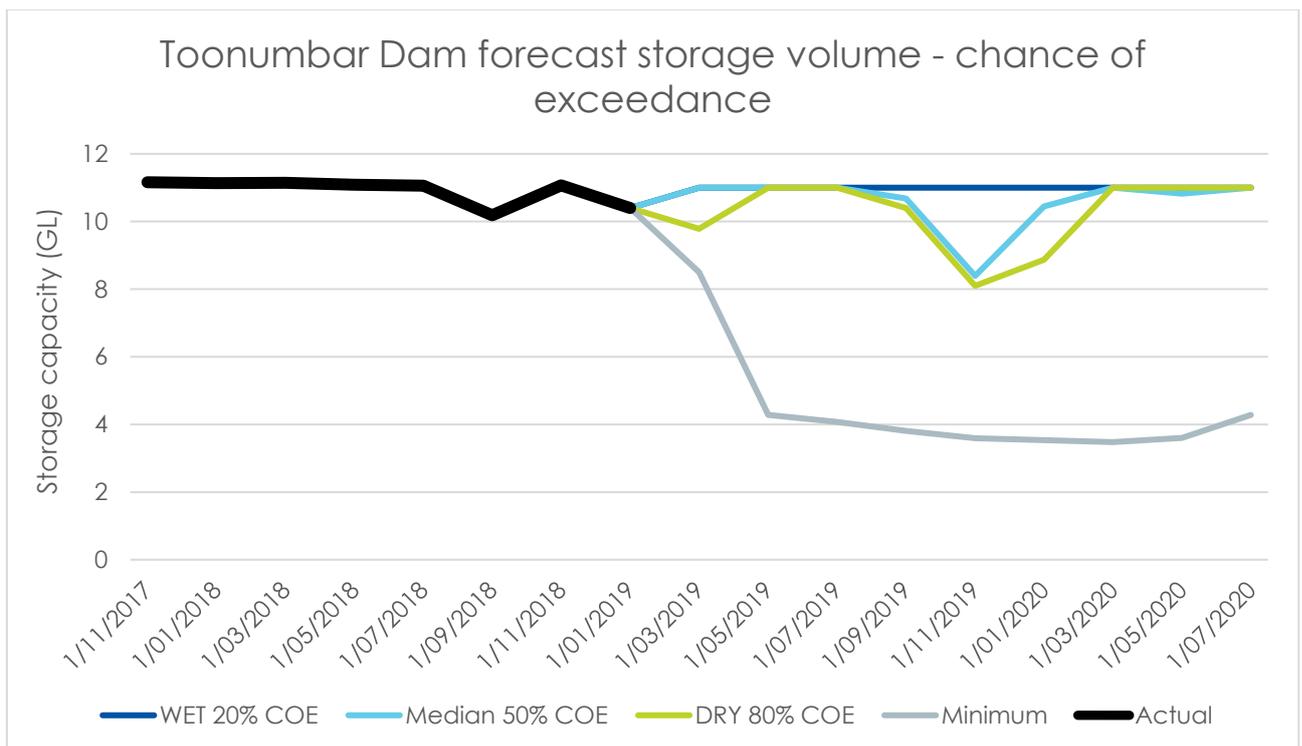
- No current additional operations.

#### Water availability

- All licence categories have 100% availability.

#### Water quality

- Recent BGA sampling at Toonumbar indicates a red alert.



#### Planned supply interruptions:

- Nil

## 8. Rural Dam Levels

The following table shows the status of water supplies at 4 March 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
<b>Border Rivers</b>									
Glenlyon Dam, Stanthorpe	254	13%	33	-1	Releases ceasing	<20%	100%	2.7%	53%
Pindari Dam, Inverell	312	6%	19	-2	Releases ceasing	<20%	100%	2.7%	53%
<b>Gwydir Valley</b>									
Copeton Dam, Inverell	1346	12%	160	-1	Minimum releases	<5%	100%	0%	22%
<b>Namoi Valley</b>									
Keepit Dam, Gunnedah	419	1%	2	0	Releases ceased	<20%	100%	0%	19%
Split Rock Dam, Manilla	394	3%	12	-0	Regulated releases	<5%	100%	100%	N/A
Chaffey Dam, Tamworth	98	31%	30	-1	Regulated releases	<50%	100%	38%	N/A
<b>Macquarie Valley</b>									
Burrendong Dam, Wellington	1155	7%	87	-5	Regulated releases, restricted c/over	<20%	100%	0%	52%
Windamere Dam, Mudgee	367	34%	126	-1	Regulated releases. BWT ceased	<5%	100%	0%	102%
<b>Lachlan Valley</b>									
Wyangala Dam, Cowra	1216	34%	418	-10	Regulated releases	<20%	100%	0%	62%
Carcoar Dam, Carcoar	36	29%	11	-1	Regulated releases	10%	100%	0%	67%
<b>Murrumbidgee Valley</b>									
Burrinjuck Dam, Yass	1025	32%	326	-5	Irrigation & eWater	35%	95%	7%	22%
Blowering Dam, Tumut	1604	27%	436	-15	Irrigation & eWater	<10%	95%	7%	22%
<b>Murray Valley</b>									
Dartmouth, Mitta Mitta (Vic)	3837	62%	2382	-23	Transfers to Hume	N/A	N/A	N/A	N/A
Hume Dam, Albury	2982	26%	785	-32	Irrigation & SA	<25%	97%	0%	31%
<b>Lower Darling</b>									
Menindee Lakes, Broken Hill	1684	0.6%	8	-2	Releases ceased	N/A	100%	0%	15%
<b>Hunter Valley</b>									
Glenbawn Dam, Scone	750	55%	415	-3	Regulated releases	20%	100%	100%	21%
Glennies Ck Dam, Singleton	282	57%	161	-2	Regulated releases	20%	100%	100%	21%
Lostock Dam, Gresford	20	85%	17	-0	Regulated releases	100%	100%	100%	N/A
<b>Coastal Area</b>									
Toonumbar Dam, Kyogle	11	76%	8	-0	Regulated releases	100%	100%	100%	N/A
Broggo Dam, Bega	9	99%	9	-0	Regulated releases	80%	100%	65%	N/A
<b>TOTALS</b>	<b>17,798</b>	<b>30.5%</b>	<b>5444</b>	<b>-105</b>					

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

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

## More information

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