

Regional customer drought update

5 February 2019



Key messages

Rainfall was seen on the eastern parts of the state of up to 50mm. The lower parts of the state received up to 10mm with the northern regions remaining dry.

Overall, regional valley storages vary significantly in security, with the Namoi, Barwon-Darling and Lower-Darling at high risk due to extending cease to flow conditions. The Macquarie valley will be at high risk in autumn 2019 while the Gwydir, Border, Lachlan, Murrumbidgee and Murray valleys at risk mid 2019 if significant rainfall does not occur.

The drought conditions in the state's Central West, Far West and North West regions are the worst affected to date. As well as bringing hardship to local farmers and surrounding communities, the stressed river network is also impacting the riverine environment. These impacts are being felt most acutely in the form of declining overall water quality, blue-green algae outbreaks and fish kills. A third fish kills was reported last week in the Lower-Darling, downstream of Keepit and in Wyangala Dam.

Increased reports of red alerts are occurring for blue green algae with increasing temperatures and reduction in flows along the rivers due to the drought. On 2 February, 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.

Minister for Primary Industries Niall Blair and WaterNSW staff made a visit to Menindee last week. This came as tens of thousands more fish have turned up dead on the banks of the Darling River at Menindee in the far west of NSW.

WaterNSW will work with NSW fisheries and environmental water holders to deliver water to support the feeding, breeding, and movement needs of these native fish species when more water is available in the Darling River. WaterNSW is continuing to monitor water quality throughout the dams and river systems as the drought continues across the Murray-Darling Basin.

WaterNSW staff will be attending drought stakeholder engagement meetings with the Department of Industry facilitated by NSW Land and Water Commissioner Jock Laurie on 6-8 February, covering communities Moree, Narrabri, and Walgett.

In the Namoi, there will be no further releases to the Lower Namoi are possible until inflows occur as Keepit is practically empty and cease to flow conditions are extending from Keepit to Walgett.

In the Macquarie, there remains a restriction on access to 70% of carryover. Any improvements in resources to Burrendong Dam will need to consider high priority commitments for 2019-20, before this order is eased.

Bulk water transfer of 35 gigalitres from Windamere to Burrendong Dam commenced on 1 January 2019 and has been deferred due to small inflows to Burrendong. A second phase of the transfer is scheduled for mid-year, if conditions remain dry, leaving a minimum of 70 GL in Windamere.

Construction of Lower-Darling block banks is complete, and filling with the last remaining water in Pamamaroo was largely successful. Closing the pipes on these banks has resulted in cease to flow in some river sections, and a temporary water restriction order is now in place. Releases from Menindee to these banks has reduced as Lake Pamamaroo neared empty and its water quality declined. Releases from Wetherell for the Lower-Darling are reducing and flows at Weir32 are scheduled to cease this week. Confidence in the Wentworth to Broken Hill pipeline means the volume in Copi Hollow will be adequate for Broken Hill until pipeline commissioning is complete.

The temperature forecast for the week should again see temperature increase in the central and western parts of the state to around 42 degrees. Relief from these temperatures should be seen by the end of the week.

The central to southern regions of the state should receive 1 – 25mm with the Snowy Mountain regions forecast to receive around 50mm. The northern parts of the state is again forecast to remain dry.

Last week's weather

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.

This week's weather forecast

A high-pressure system in the Tasman Sea extends a ridge along the New South Wales coast as a trough of low pressure lingers over the inland west. By early in the week, the high is expected to be near New Zealand and in a weakening phase, with a cool change to affect southern districts which will extend through to central districts.

For the first part of the week, the southern parts of the state should receive between 1 – 10mm with heavier rain of up to 25mm expected across the south east parts of the state. It is forecast that the entire northern parts of the state will remain dry.

A similar pattern of rainfall is forecast to continue across the state in the latter part of the week with roughly the same amounts of rainfall forecast being predicted.

The temperatures across the central and western parts should remain around 39 – 42 degrees in the beginning of the week, with the eastern parts of the state forecast to see a maximum of around 36. This pattern should continue for most of the week with Friday forecast to see temperatures drop marginally. By Saturday, the state should see temperatures drop significantly.

Operational update

Lower-Darling: Releases from Pamamaroo have ceased on 14 January due to low water levels and poor water quality and the pipes in the banks have now been closed to store this water. This will lead to cease to flow conditions between the banks' pools. Releases from Wetherell will reduce this week to rate that will maintain the residual pool in Weir32.

Construction of all four temporary banks in the Lower-Darling is now complete and the upper block banks almost reached design capacity as the releases from the lakes ceased.

Several customers along the Lower-Darling obtained WaterNSW approval to install individual block banks (in locations between the four temporary banks). It is now unlikely that there will be sufficient water to fill all these banks, so arrangements are being made to share the remaining water to ensure as many customers as possible have some access to water.

A temporary water restriction order restricts the use of any available water to critical human needs and permanent plantings, plus the use of high security water from Copi Hollow.

High levels of blue green algae continue within the lakes and Lower-Darling river. This is having an impact on water quality and restricting access to the lakes, especially Copi Hollow, for recreational use.

A third fish kill on 28 January has occurred at the same site at Menindee as the previous fish kills. The trigger for this fish kill is also likely to be the result of a rapid change in air temperature and low dissolved oxygen. Dissolved oxygen levels were high in the top 1m of the water column but when the temperature dropped this water mixed with the anoxic lower water and oxygen levels dropped to close to zero.

Namoi: Cease to flow for the whole river from Keepit Dam to Walgett.

The block release from Keepit to deliver all orders placed by 5 November ceased on 16 December 2018, with Keepit Dam now at 0.4% of active capacity.

Delivery of these orders, and a small amount of additional orders from the expression of interest are now complete. No further block releases are planned without further inflow, and Keepit is now practically empty at 0.5% of active capacity.

WaterNSW worked with Roads and Maritime Services (RMS) to place a marine order on Keepit Dam to limit motor boating access to the dam due to the increase public safety risk

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with very low water levels and limited area available for activities. Navigational warning was put in place by RMS advising potential visitors of the public safety limitations on the 19 December 2018.

Macquarie: WaterNSW is continuing to monitor water quality throughout the dams and river systems as the drought continues across the Murray-Darling Basin.

WaterNSW has suspended the Windamere Bulk Water Transfer (BWT) that commenced on 1 January 2019 after two rain events produced good inflows into Burrendong.

Burrendong is still planned to be drawn down to about 4% by end of summer. Deliveries to town water and stock and domestic supplies will be maintained from this volume in Burrendong Dam to at least the end of 2018-19 in the Macquarie. The second parcel of BWT may be released in spring 2019, if conditions remain very dry, to extend critical supplies in the Macquarie for 2019/20. This second stage of the BWT will leave 70GL in Windamere which is a very secure supply for that valley for at least seven years.

The level in Burrendong Dam is expected to drop steadily to about 4% by end of summer. Burrendong Dam had been drawn below 10% on five similar occasions (June 1995, Jan 1998, Apr 2003, May 2004 and Jan 2007).

Details

Valley		Storage volume (GL)	Weekly inflows (GL)	Releases ML/d	Comment	GS % AWD	AWD inflows required
Valley	Dams						
Border	Pindari	38	0.8	1,837	Releases are being made to meet d/s irrigation demand for both NSW and QLD customers including Boomi replenishment flow.	2.7	18.3
	Glenlyon	48	0.9	1,115			
Gwydir	Copeton	168	1.3	974	Releases are being made to meet d/s irrigation and environmental demand.	0	36
Namoi	Split Rock	18	0	96	Split Rock bulk water transfer complete. Keepit releases for Lower Namoi block release ceased 16 Dec with Keepit now at 0.4% of capacity. No further releases to Lower Namoi until inflows occur.	0	80
	Keepit	8.8	0	0			
Peel	Chaffey	34.5	0	165	Chaffey Dam releases for Tamworth and irrigation demand, in roughly 35:65 ratio. Level 1 water restriction for Tamworth.	38	N/A***
Macquarie	Burrendong	149	11.7	2,085	Current releases from Burrendong Dam are for reducing irrigation demand. Delivery of 127GL environmental flows between 12 July 2018 and 11 Dec 2018. Current release from Windamere Dam are for Cudgegong demand as the bulk water transfer has been deferred.	0	317
	Windamere	131	0.2	110			

Valley		Storage volume (GL)	Weekly inflows (GL)	Releases ML/d	Comment	GS % AWD	AWD inflows required
Valley	Dams						
Lachlan	Wyangala	458	1.9	3,200	Current releases from Wyangala Dam are for irrigation, TWS and S&D demand.	0	224
	Carcoar	13	0.15	75	Current releases from Carcoar Dam are for irrigation and S&D demand. Due to drought conditions, end of system daily environmental flow requirements is only met intermittently.		
Murrumbidgee	Burrinjuck	376	3.0	3,050	Release for: irrigation, planned environmental water (186ML/d at Balranald and 50ML/day at Darlot) and planned/held environmental water to Lowbidgee and Balranald.	7	30
	Blowering	522	6.0*	2,700			
Murray	Hume	951	66*	11,320	Transfers from Dartmouth & Hume for South Australia continues at lower rates.	0	125
Barwon-Darling			0	N/A	Cease to flow conditions: Walgett – no flow since 21 July 2018; Bourke – no flow since 27 August; Wilcannia – no flow since 8 September	N/A	N/A
Lower-Darling	Menindee	48	0	50	Four block banks have been constructed and (almost) filled, pipes closed. Supply to Broken Hill is being met from Copi Hollow, and water from W2BH pipeline commissioning.	0	N/A

* Includes inflows from Snowy Hydro, already budgeted.

** Includes inflows from Dartmouth and Snowy Hydro, already budgeted.

More information

Stay up-to-date with storage levels, system risks and climate conditions across NSW. You can also find valley-specific information about storage status, predicted release patterns and operating conditions. Subscribe to have the report emailed to you each week. Please visit our website at waterNSW.com.au/subscribe for more information.

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