Murrumbidgee Valley snapshot

2017 2020 Drought

Was this the worst drought on record?

From 2017 to 2020, NSW experienced record-breaking drought that affected the whole state. Between January 2017 and December 2019, NSW temperatures were the warmest and rainfall was the lowest on record.

This drought was the not the worst in terms of combined storage inflows into Burrinjuck and Blowering dams for any 24 month or 36 month consecutive periods over the historical record from the 1890's until now.

The Millennium Drought (2002-2010) remains the longest and most severe drought for the Murrumbidgee Valley. However, the 24 month inflows for the period February 2018 to January 2020 into Burrinjuck Dam were the lowest for any 24 month consecutive period. The 24 month inflows were 17% less than the previous worst recorded period in 2008-2010.

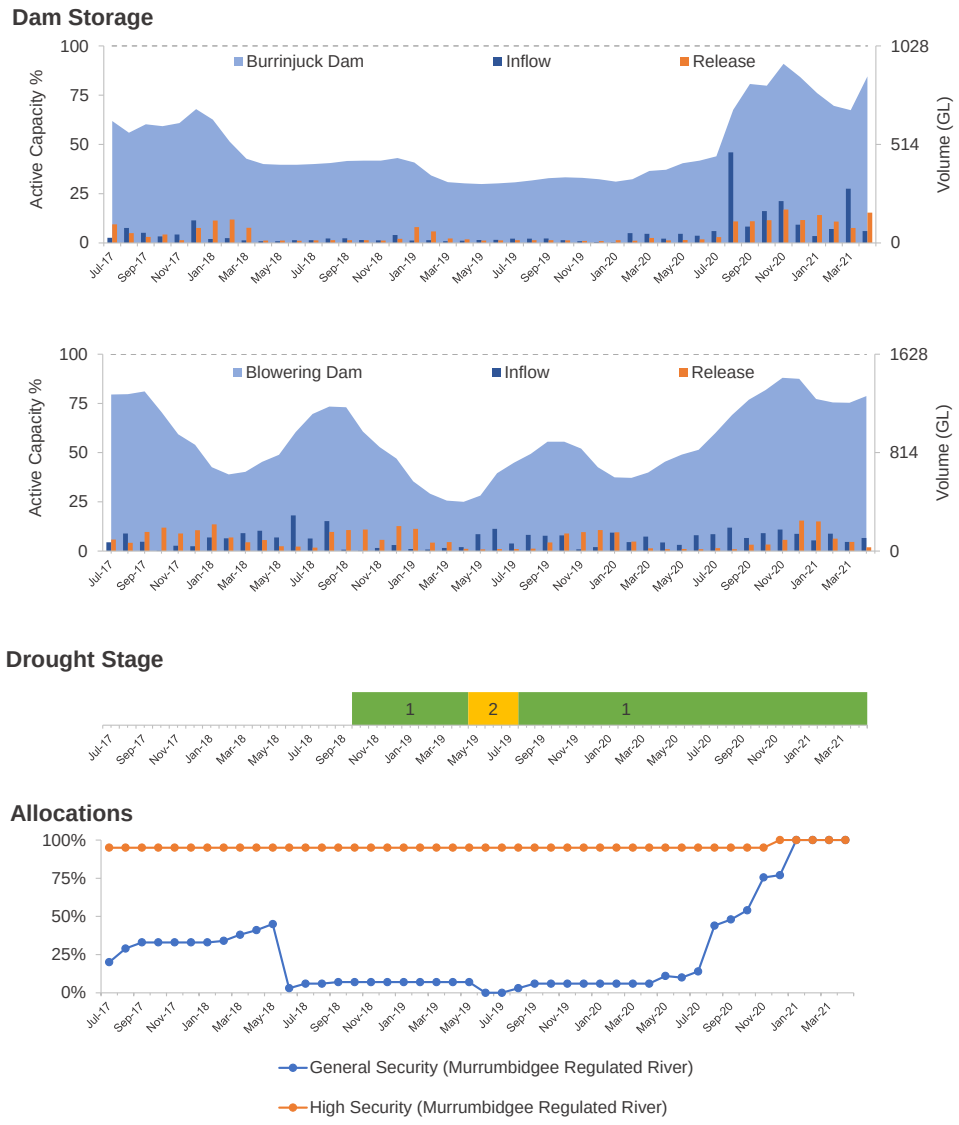


Figure 1 - Monthly storage, drought stage and water allocations for the Murrumbidgee Valley

Murrumbidgee Valley snapshot

2017 2020 Drought

Measures implemented – July 2017 to May 2019

July 2017
Blowering Dam was at 80% capacity and Burrinjuck Dam was at 63% capacity. High security allocations were 95% and general security were 17%. Later in the month, general security allocations were increased to 20% due to some rainfall.

The delivery of 270 gigalitres (GL) of environmental water to wetlands along the Murrumbidgee catchment commenced. Over 2017/18 this water was delivered for a whole of system wetland connection as well as for maintaining refuge habitats for native fish, frogs, turtles and waterbirds.

July 2018
Blowering Dam was at 69% capacity and Burrinjuck Dam was at 40% capacity. High security allocations were 95% and general security were 3%. Later in the month, the Murrumbidgee received some rainfall and general security allocations were increased to 5%.

The delivery of 195 GL of environmental water commenced. Over the 2018/19 water year, this water was used to inundate thousands of hectares of wetlands, lakes, and red gum forest in the Yanga National Park and to maintain refuge habitats

January 2019
Up to 10,000 fish died in Redbank Weir due to destratification causing extremely low oxygen levels throughout the weir pool.

May 2018
General security allocations were increased to 45%.

September 2018
General security allocations were increased to 7%.

May 2019
The Murrumbidgee was declared to be in Stage 2 – Emerging Drought after Blowering Dam dropped to 24% capacity and Burrinjuck Dam to 30% – their lowest levels during this drought.

Murrumbidgee Valley snapshot

2017 2020 Drought

Measures implemented – July 2019 to March 2021

July 2019
High security allocations were 95% and general security allocations were 0%.

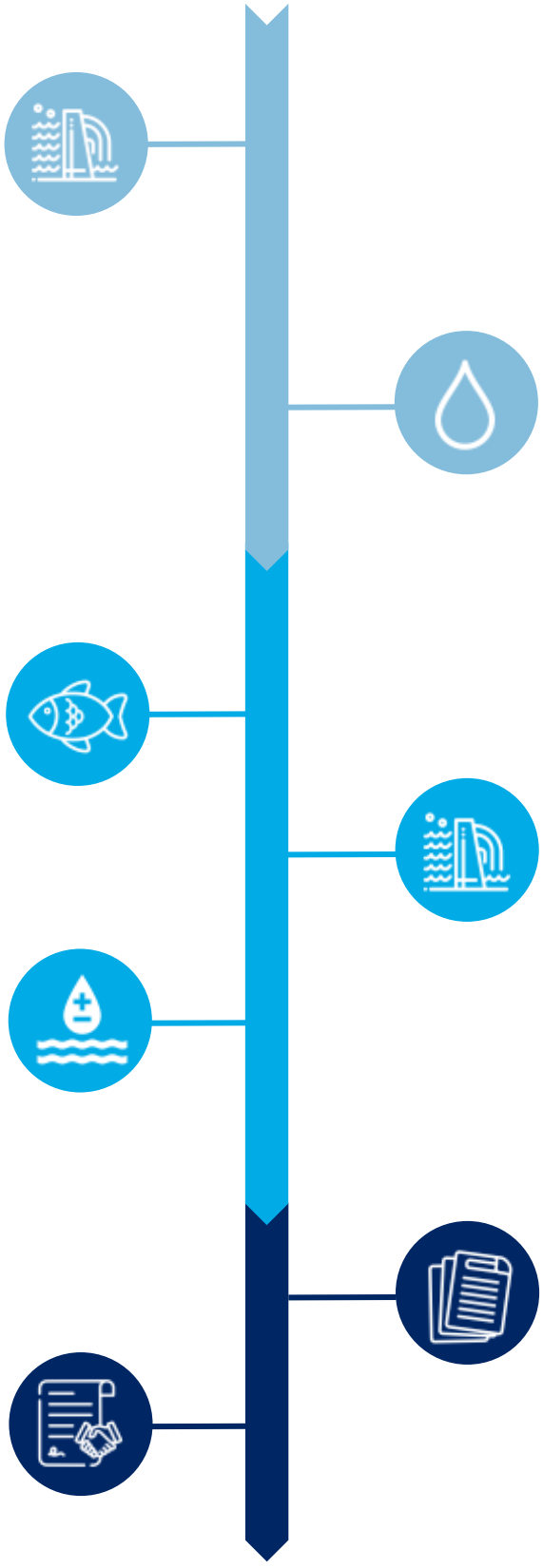
During the 2019/20 water year a total of 73 GL of environmental water was delivered to maintain key wetland sites including the Gayini and North Redback Wetlands. This comprised of environmental water allowance, general security carryover, high and general security allocations (when available).

May 2020
General security allocations were increased to 11%.

100,000 fish died in Lake Wyangan. The most likely cause was the disturbance of sulfidic sediments from inflows into the lake.

September 2020
Regular monitoring and updates on the dissolved oxygen levels in the southern valleys were provided as there was concern that a blackwater event could emerge with a return to high flood flows over spring and summer. This did not eventuate.

March 2021
A memorandum of understanding was signed by Wagga Wagga City Council and the NSW Government providing an interim licence to allow Lake Albert to be topped up with 1,800 megalitres (ML) for recreational purposes in recognition of the 5,000 ML per year of treated sewerage returned to the river.



August 2019
With continuing improvements in storage levels, the Murrumbidgee was de-escalated to Stage 1 – Normal Operations.

General security allocations were increased to 3%.

July 2020
Blowering Dam was at 60% capacity and Burrinjuck Dam was at 44% capacity. High security allocations were 95% and general security were 10%.

Lower Murrumbidgee Deep (groundwater) general security allocations were reduced to 65% because extractions were exceeding the compliance limit.

The delivery of 311 GL of environmental water to the Yanga National Park and North Redbank systems commenced. This assisted with fish spawning and bird breeding events.

January 2021
Both high security and general security allocations were increased to 100%.

Government assistance and funding

The following government assistance and funding was provided:

- Fixed water charges for general security, unregulated rivers and aquifer access licences were waived from July 2018 to June 2021.
- Funding for water carting to the village of Bredbo due to poor water quality from its bores.

Drought information sessions

Drought information sessions were held in Hay and Coleambally in June 2019 and in Griffith in June and November 2019. Webinars were held in December 2019 and May 2020. Further information can be found at: www.industry.nsw.gov.au/water/allocations-availability/droughts-floods/drought-update/information-sessions

Lessons learnt

Changes being implemented

- The NSW Government is committed to earlier communication with communities when conditions indicate that we may be approaching drought. Clear and early communication will allow landholders and water users to better prepare for potential restrictions and ensure that applications for groundwater approvals and drought infrastructure are in place early.
- To better identify when we are moving into drought (or flood) WaterNSW is developing a framework for measuring risk. This framework will use a variety of indicators such as rainfall deficit, soil moisture and streamflow conditions to provide an early warning of drought or flood to enable the community to be better prepared.
- During the drought, the WaterNSW Insights Portal was launched to provide more specific information to water users on allocations, notices, and measures in their area. This is being further updated to include groundwater. Further information at: waterinsights.waternsw.com.au/
- The department is developing Regional Water Strategies that use climatic modelling to understand the risks associated with more severe climate conditions. These long-term strategies will assess and prioritise policy, operational and infrastructure options that will ensure regions are better prepared for future droughts and a more variable climate. Further information at: www.industry.nsw.gov.au/water/plans-programs/regional-water-strategies
- The NSW Water Strategy sets the strategic direction for water service delivery and resource management in NSW over the long-term. Actions for improving drought planning, preparation and resilience are set out in the NSW Water Strategy Implementation Plan. Further information at: www.dpie.nsw.gov.au/water/plans-and-programs/nsw-water-strategy
- The individual valley Incident Response Guides and the Extreme Events Policy are being updated by reviewing the measures that were applied during the drought, this will improve our future response to drought.
- The Town Water Risk Reduction Program has been developed to enable Local Water Utilities to manage town water risks more effectively. The program will reduce water quality, water security and environmental risks in town water systems in regional NSW. More information can be found at: www.industry.nsw.gov.au/water/plans-programs/risk-reduction

- The department, WaterNSW and the Natural Resource Access Regulator are working together to align the licencing and approvals process to make it easier, quicker and consistent for applicants.