Barwon-Darling 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.

Between mid-2018 and early 2020, there was no significant natural inflow into the Barwon-Darling. By June 2019, there were 364 days of no flows recorded at Walgett. This was the longest cease to flow period on record for the Barwon-Darling River.

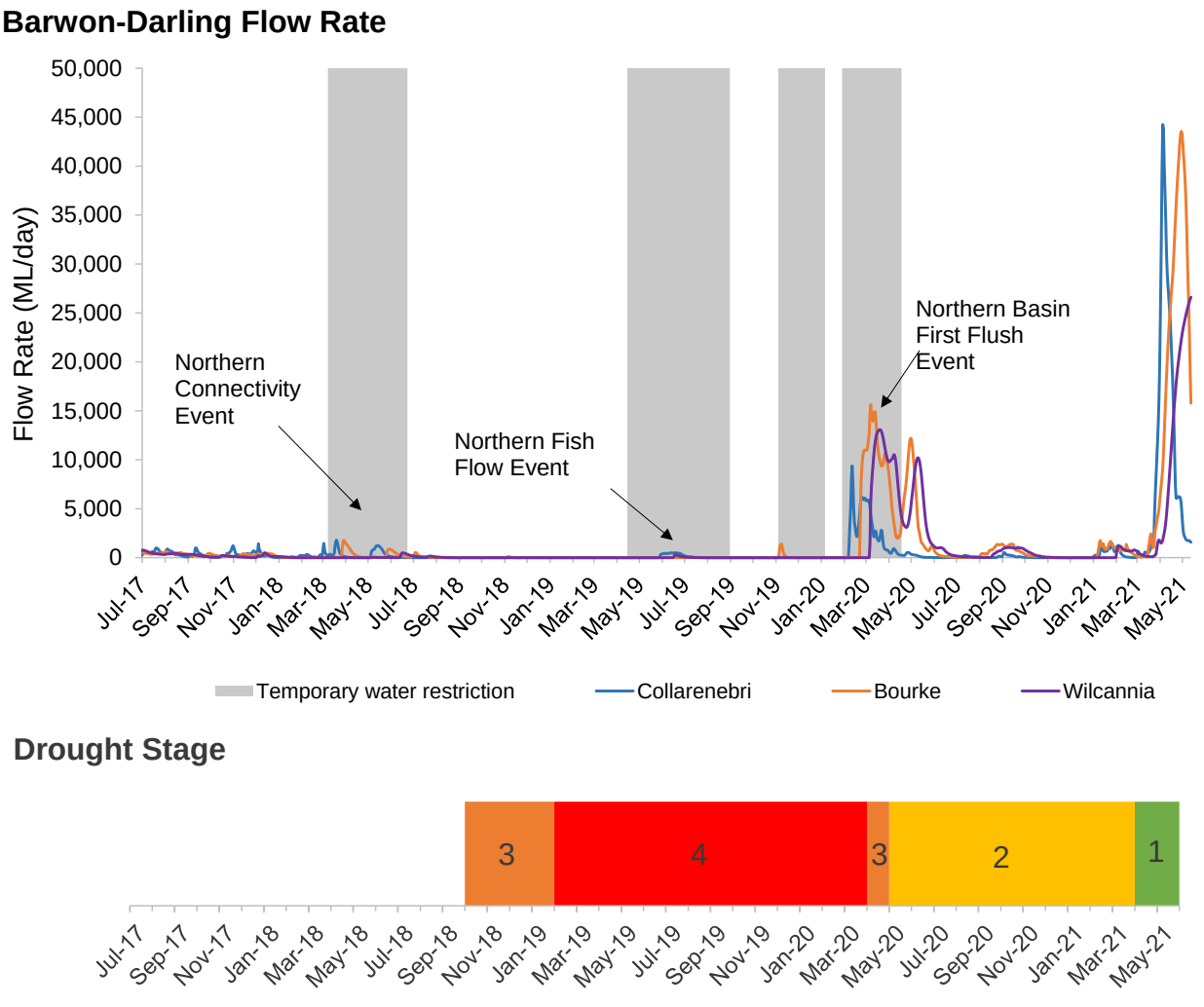


Figure 1 - Flow rate and drought stage for the Barwon Darling

Barwon-Darling snapshot

2017 2020 Drought

Impacts - January 2018 to December 2019

January 2018
Barwon-Darling irrigators had not been able to pump any significant volumes of water since mid-2017 because of continuing low or no flows.

March 2018
A temporary water restriction on A, B and C class licences along the Barwon-Darling River (except for permanent plantings) was applied until the end of April. This protected natural flows for the environment, towns, and domestic and stock supplies.

October 2018
With the introduction of the Extreme Events Policy Drought Stages, the Barwon-Darling was declared to be in Stage 3 – Severe Drought.

March 2019
A small fish death was reported between Collarenebri and Walgett.

A temporary water restriction in the Namoi Valley following heavy rainfall, saw Namoi flows reach Walgett's town weir pool.

November 2019
Rainfall provided flows down the Warrego River and over the Bourke Weir. A temporary water restriction was applied from the Culgoa junction to Menindee Lakes, to protect these flows for critical needs.

February 2018
Significant inflows were experienced following rainfall in southern Queensland.

April 2018
A release of held environmental water (Northern Connectivity Event) from upstream storages (Copeton and Glenlyon Dams), combined with the inflows from Queensland, resulted in flows along the full length of the Barwon-Darling River.

A further restriction on A, B and C class pumping until 22 June 2018 was imposed to protect flows from the environmental release.

February 2019
The Barwon-Darling River had not flowed for over 200 days and it was escalated to Stage 4 – Critical Drought.

April 2019
A release of held environmental water (Northern Fish Flow) was made from Copeton and Glenlyon Dams. Due to very dry river conditions the flow only made it to downstream of Brewarrina.

To protect this environmental release, a temporary water restriction was applied to A, B and C class pumpers from Mungindi to Tilpa until August 2019.

December 2019
The temporary water restriction from the Culgoa junction to Menindee Lakes was extended to January 2020.

Impacts - January 2020 to December 2020

January 2020
Fish deaths near Brewarrina were reported. Deaths were a result of no inflows and drying refuge pools.

Following widespread rainfall across the northern valleys, temporary water restrictions on most commercial pumping were applied across all of the Northern Basin. This restricted pumping in the northern valleys and A, B and C class licence holders along the Barwon-Darling. This was to allow for replenishment of town, domestic and stock supplies and to ensure flows into the Menindee Lakes, following the first significant flows since the drought commenced.

March 2020
Flows reached Menindee Lakes and enabled the release of water into the Lower Darling connecting the entire system down to the River Murray.

May 2020
The Barwon-Darling was further eased to Stage 2 – Recovering from Drought.

December 2020
The Barwon-Darling had again ceased to flow.

A release of environmental water (Northern Water Hole Top Up Release) from the Gwydir and Border Rivers was made, supplemented by natural high flows from the Gwydir and Namoi Valleys. This water provided flow in the upper sections of the river and was protected from extraction under the Barwon-Darling active management provisions.

February 2020
The restrictions were extended to the Barwon-Darling Floodplain however some temporary exemptions were permitted to manage reported risks to infrastructure assets located on the floodplains.

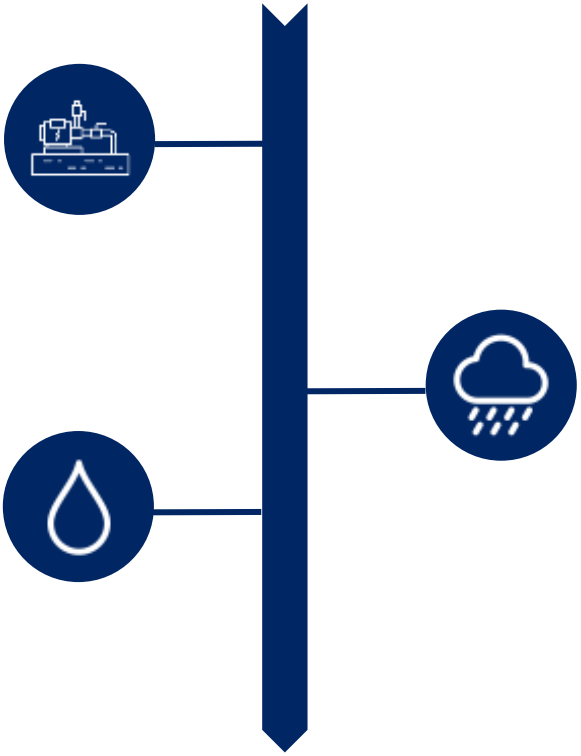
Further fish deaths near Brewarrina were reported. The suspected cause was destratification of the weir pool as the natural flows from the January rainfall arrived.

April 2020
The Barwon-Darling was eased to Stage 3 – Critical Drought.

July 2020
The amended Barwon-Darling water sharing plan commenced. Amendments included an increase in most commence to pump thresholds for A class licences, introduction of the resumption of flow rules, implementation of active management to protect environmental releases, and an individual daily extraction limit on licence holders.

Impacts - January 2021 to April 2021

January 2021
The resumption-of-flow rule was triggered on 12 January 2021 as flows at Wilcannia had been below 200 megalitres (ML)/day for 90 days. This restricted pumping for some 2 to 3 weeks until sufficient flows were forecast to pass Bourke and reach Wilcannia.



April 2021
The Barwon-Darling was moved to Stage 1 – Normal Operations.

March 2021
A significant rainfall event across northern NSW and southern Queensland catchments provided substantial flows along the Barwon-Darling and into Menindee Lakes. Continued access has been available for river pumpers under the normal water sharing plan classes.

Government assistance and funding

The following government assistance and funding was provided:

- $750,000 for an artesian bore to secure water supply for the Collarenebri community.
- $30 million has been committed to the upgrade of Wilcannia Weir (jointly funded by the NSW and Commonwealth Governments).
- $101,000 to install a temporary water kiosk at Brewarrina.
- $970,000 for bores at Angledool, Brewarrina and Gongolgon.
- $700,000 for bottled water supplies for communities in far west NSW.
- $205,000 for emergency works and water carting to Tibooburra.
- $100,000 for water carting in Packsaddle.
- $77,322 for water carting to Byrock.
- $8.25 million for the Walgett Weir and Fishway project and $1 million for an additional bore and a temporary Reverse Osmosis Plant at Walgett.
- $14.15 million for Bourke for additional bores, pipelines, a new water treatment plant and upgrade of the town reservoir, plus funding for dredging the river during the drought to enable flow into the Bourke and Louth town weir pools.

Drought information sessions

Drought information sessions were in held in Walgett in February and June 2019, in Bourke in May 2019 and Wilcannia in October 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.
- The department commissioned an independent assessment of the extent to which the "resumption of flow rule" in the Barwon-Darling was implemented according to the water sharing plan and if any improvements can be made in the future.
- 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.
- A number of additional provisions are being applied along the Barwon-Darling to protect flows, including increased A class pumping thresholds, resumption of flow rules, review of North-West Flow Management Plan targets and active management to protect environmental water and improve connection to Menindee Lakes.
- A review of targets and principles for restricting commercial access when first flows occur after a prolonged drought and improved communication processes is underway.
- 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.