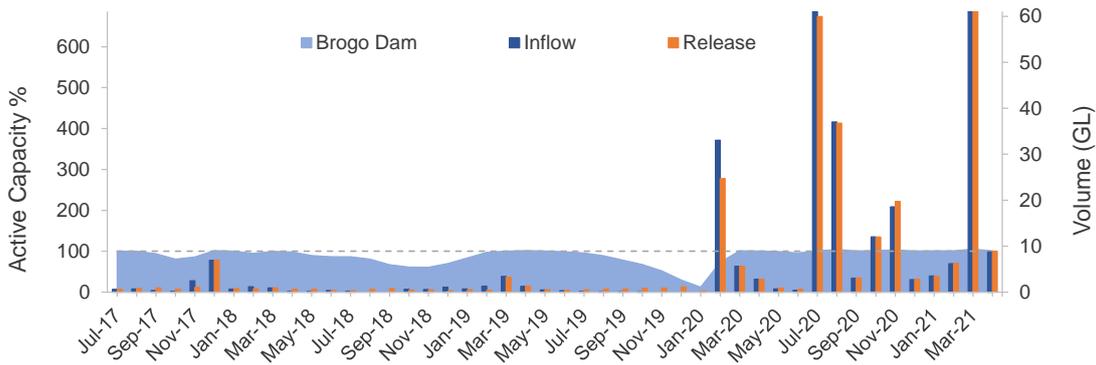


Was this the worst drought on record?

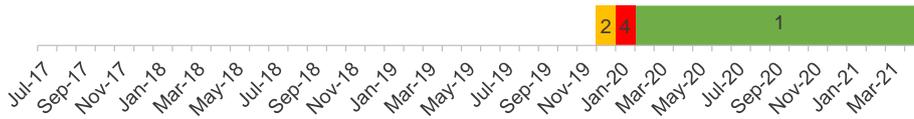
From 2017 to 2020, NSW experienced record-breaking drought that affected the whole state. Between January 2017 and December 2019, NSW temperatures were the warmest and rainfall was the lowest on record.

This drought was the worst in terms of storage inflows into Brogo Dam for any 24 month consecutive period over the historical record from the 1890's until now. The 24 month inflows into Brogo Dam for the period January 2018 to December 2019, were 19% less than the previous worst recorded period in 2008-2010. The 36 month inflows were also low, but worse in 1939-1942.

Dam Storage



Drought Stage



Allocations

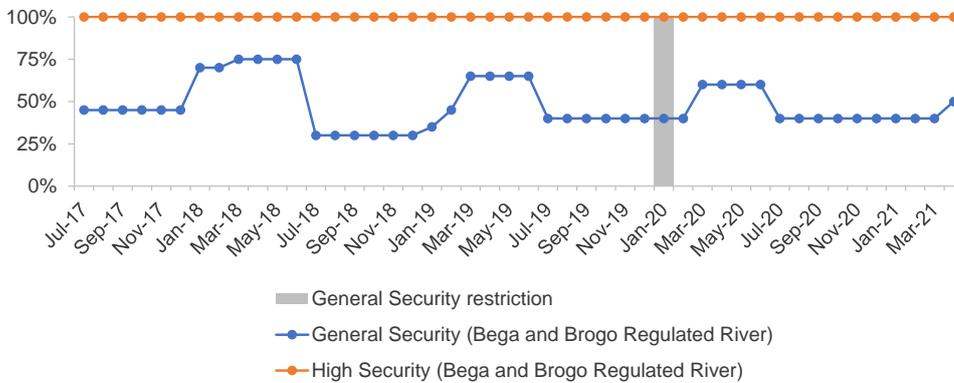


Figure 1 - Monthly storage, drought stage and water allocations for the Bega Brogo Valley

Measures implemented – July 2017 to March 2021

July 2017

High security allocations were 100% and general security allocations were 45%.



February 2019

General security allocations were increased to 65% following rainfall and subsequent inflows.



December 2019

Brogo Dam dropped to 30% capacity due to little inflows combined with high losses and high irrigation usage. The Bega Brogo Valley was declared to be in Stage 2 – Emerging Drought.



February 2020

Brogo Dam was at 10% capacity in the first week of February, its lowest level during the drought. 145 mm of rain was received over three days and Brogo Dam quickly filled and was spilling by 10 February 2020. Water carting to the Brogo-Bermagui communities commenced due to poor water quality which was a result of runoff from bushfires. General security allocations were increased to 60%. The Bega Brogo Valley was eased to Stage 1 – Normal Operations. The temporary water restriction on general security accounts was repealed.



March 2021

General security allocations were increased to 50%.



July 2018

High security allocations were 100% and general security allocations were 30%. Brogo Dam was at 87% capacity

July 2019

High security allocations were 100% and general security allocations were 40%. Brogo Dam was holding 95%.

January 2020

Brogo Dam dropped rapidly to 14% capacity (holding just 1.2 GL) and the Bega Brogo Valley was escalated to Stage 4 – Critical Drought.

A temporary water restriction was placed on all water remaining in general security accounts to conserve remaining supplies for town and domestic and stock supply.

Releases from Brogo Dam were reduced to 5 megalitres (ML) / day to supply water to the Bermagui offtake and to extend remaining supplies for critical human needs. Low river flows and irrigation access came close to triggering the water sharing plan restrictions on unregulated river and groundwater users in the Mid-Bega River sands water source. However, conditions improved just before the trigger was reached.

Boil Water Notices were in place for Eden, Bemboka and Brogo-Bermagui schemes due to the impact bushfires had on water quality. Bushfires had burnt 33% of the Bega River catchment.

July 2020

Brogo Dam was at 96% capacity. High security allocations were 100% and general security allocations were 40%.

Government assistance and funding

The following government assistance and funding was provided:

- \$106,250 in emergency funding to the Bega Shire Council for the installation of a temporary water treatment plant for the Brogo-Bermagui supply system.
- \$10.7 million through the NSW Safe and Secure Program to permanently upgrade the Brogo Water Treatment Plant.
- \$111,338 for water carting to communities supplied by the Brogo-Bermagui system.
- Fixed water charges for general security, unregulated rivers and aquifer access licences were waived from July 2018 to June 2021.

Drought information sessions

Drought information session 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 Extreme Events Policy is 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.