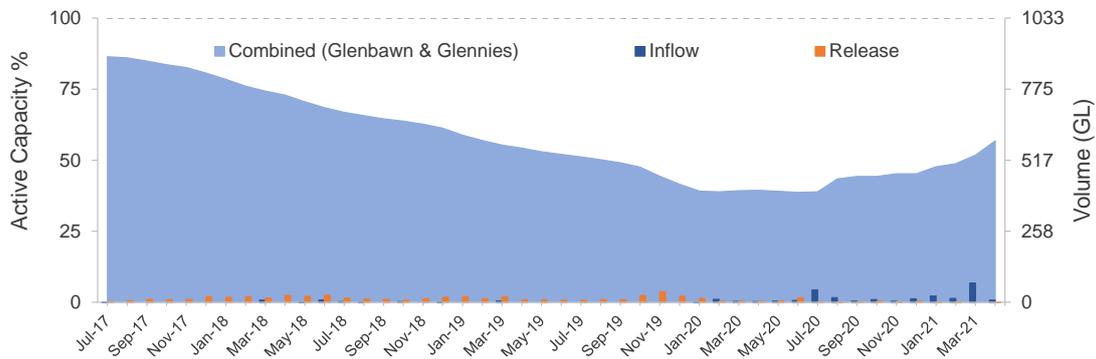


### Was this the worst drought on record?

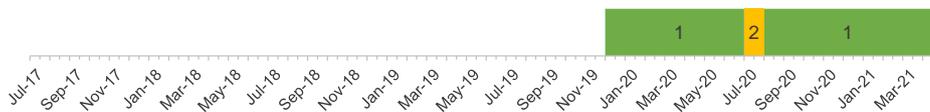
From 2017 to 2020, NSW experienced record-breaking drought that affected the whole state. Between January 2017 and December 2019, NSW temperatures were the warmest and rainfall was the lowest on record.

This drought was the worst in terms of storage inflows for any 24 month and 36 month consecutive periods for the Upper Hunter Valley, supplied by Glennies Creek and Glenbawn dams, over the historical record from the 1890's until now. The 24 month inflows were slightly less than the previous lowest recorded period in 1939-1941. The 36 month inflows were 7% less than the previous lowest recorded period in 1938-1940.

#### Dam Storage



#### Drought Stage



#### Allocations

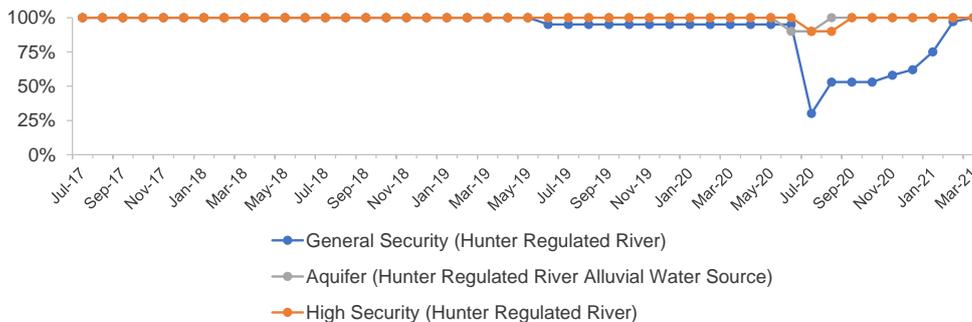


Figure 1 - Monthly storage, drought stage and water allocations for the Hunter Valley

### Measures implemented

#### July 2018

Glenbawn Dam was at 66% and Glennies Creek Dam was at 68% capacity. High security and general security licence holders received a 100% allocation.



#### October 2019

Evaporation losses from Glenbawn Dam and Glennies Creek Dam were higher than inflows and rainfall. Glenbawn Dam was holding 47% and Glennies Creek Dam was holding 48%. The dams were operated at minimum releases to conserve volumes in storage.



#### February 2020

Above average rainfall triggered some supplementary access, however there were no substantial inflows into storages.



#### July 2020

Glenbawn Dam was holding 39% and Glennies Creek Dam was holding 37%, which was a combined storage of 395 GL. These were the dam's lowest levels during the drought.



High security allocations were reduced to 90% and general security to 30%.

The Hunter Valley was declared to be in Stage 2 – Emerging Drought.

#### March 2021

Storage volumes increased further, and 100% general security allocations were announced.



#### July 2019

Glenbawn Dam was at 50% Glennies Creek Dam was at 52%. High security users received a 100% allocation and general security received a 95% allocation.



#### December 2019

The Hunter River catchment experienced its lowest December rainfall on record



#### June 2020

A 10 gigalitres (GL) Environmental Water Allowance release was made. This release occurred over 21 days to assist native Australian bass on their annual downstream migration to spawn in the Hunter Wetlands. This release aligned with AGL's order to minimise the volume required.



#### August 2020

Above average rainfall resulted in 40 GL of inflows into storages. High security allocations were increased to 100% and general security allocations were increased to 53%.



The Hunter Valley was de-escalated to Stage 1 – Normal Operations.

### Government assistance and funding

The following government assistance and funding was provided:

- \$290,000 to the Upper Hunter Shire Council to assist with water carting from Scone to Murrurundi.
- \$113,700 for an additional emergency bore until the pipeline from Scone could be completed.
- \$13 million was provided for the construction of the pipeline from Glenbawn Dam to Murrurundi via Scone. The pipeline was completed in May 2020, securing Murrurundi's supply.
- Fixed water charges for general security, unregulated rivers and aquifer access licences were waived from July 2018 to June 2021.
- The NSW Government invested \$4.3 million in the development of business cases for two infrastructure projects:
  - The bi-directional pipeline connecting Glennies Creek Dam and Lostock Dam to improve water security by connecting two variable rainfall catchments.
  - The development of a potable water pipeline that can transfer up to 75 gigalitre (GL) per year from Hunter Water Corporation's network to Singleton.

### Drought information sessions

Drought information sessions were held in Singleton in February 2020 and 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](http://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.
- The Greater Hunter Regional Water Strategy uses climatic modelling to understand the risks associated with more severe climate conditions. This long-term strategy assesses and prioritises 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/accredited/greater-hunter-region](http://www.industry.nsw.gov.au/water/plans-programs/regional-water-strategies/accredited/greater-hunter-region)
- A drought contingency plan for the Greater Hunter is being prepared and further planning work is underway for the connection of Glennies Creek and Lostock dams.

- 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](http://www.dpie.nsw.gov.au/water/plans-and-programs/nsw-water-strategy)
- 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/](http://waterinsights.waternsw.com.au/)
- 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](http://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.