

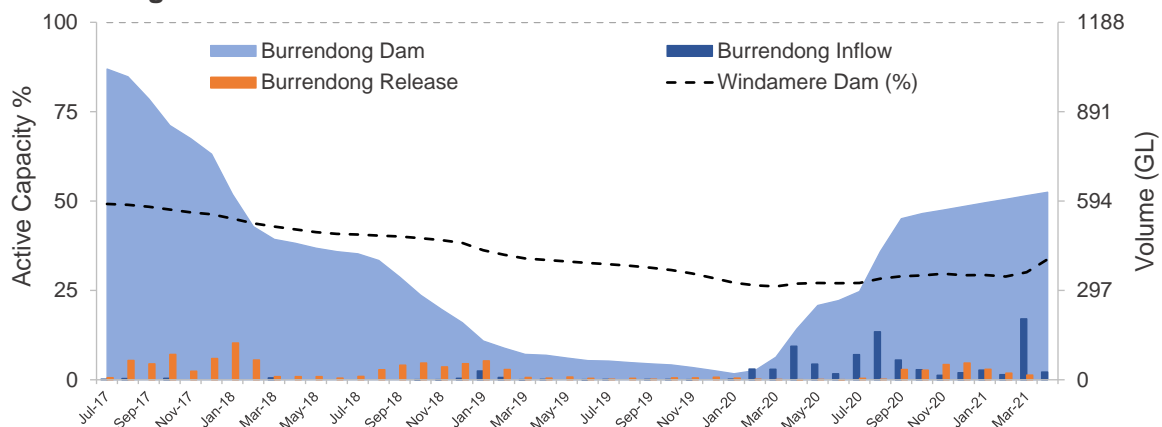
### Was this the worst drought on record?

From 2017 to 2020, NSW experienced a 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.

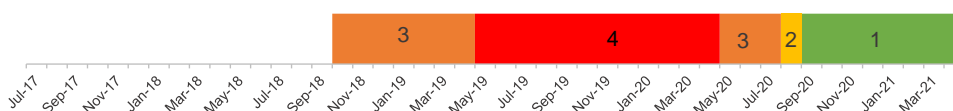
This drought was the worst in terms of storage inflows for any 24 month and 36 month consecutive periods for the Macquarie Valley over the historical record from the 1890's until now. The 24 month inflows into Burrendong Dam were 70% less than the previous worst recorded period in 1937-1939. The 36 month inflows were 72% less than the previous worst recorded period in 1937-1940.

In early February 2020, Burrendong Dam was at its second lowest level ever at 1.5%.

#### Dam Storage



#### Drought Stage



#### Allocations

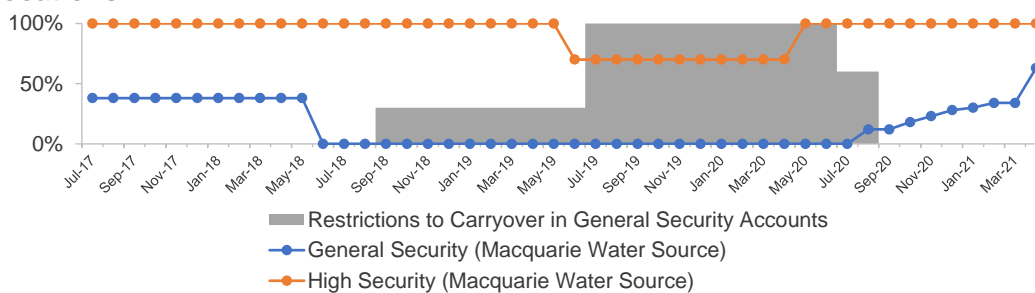
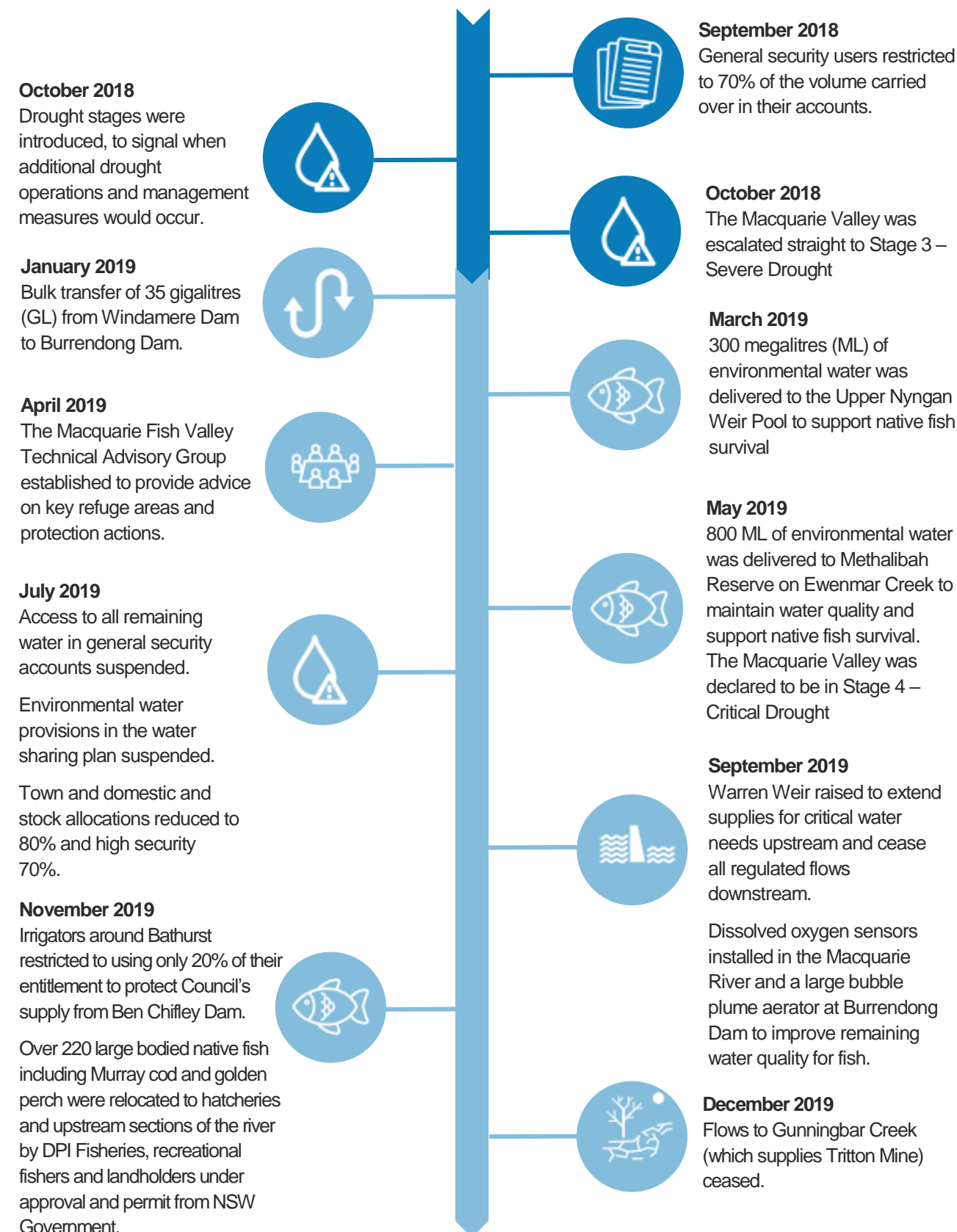
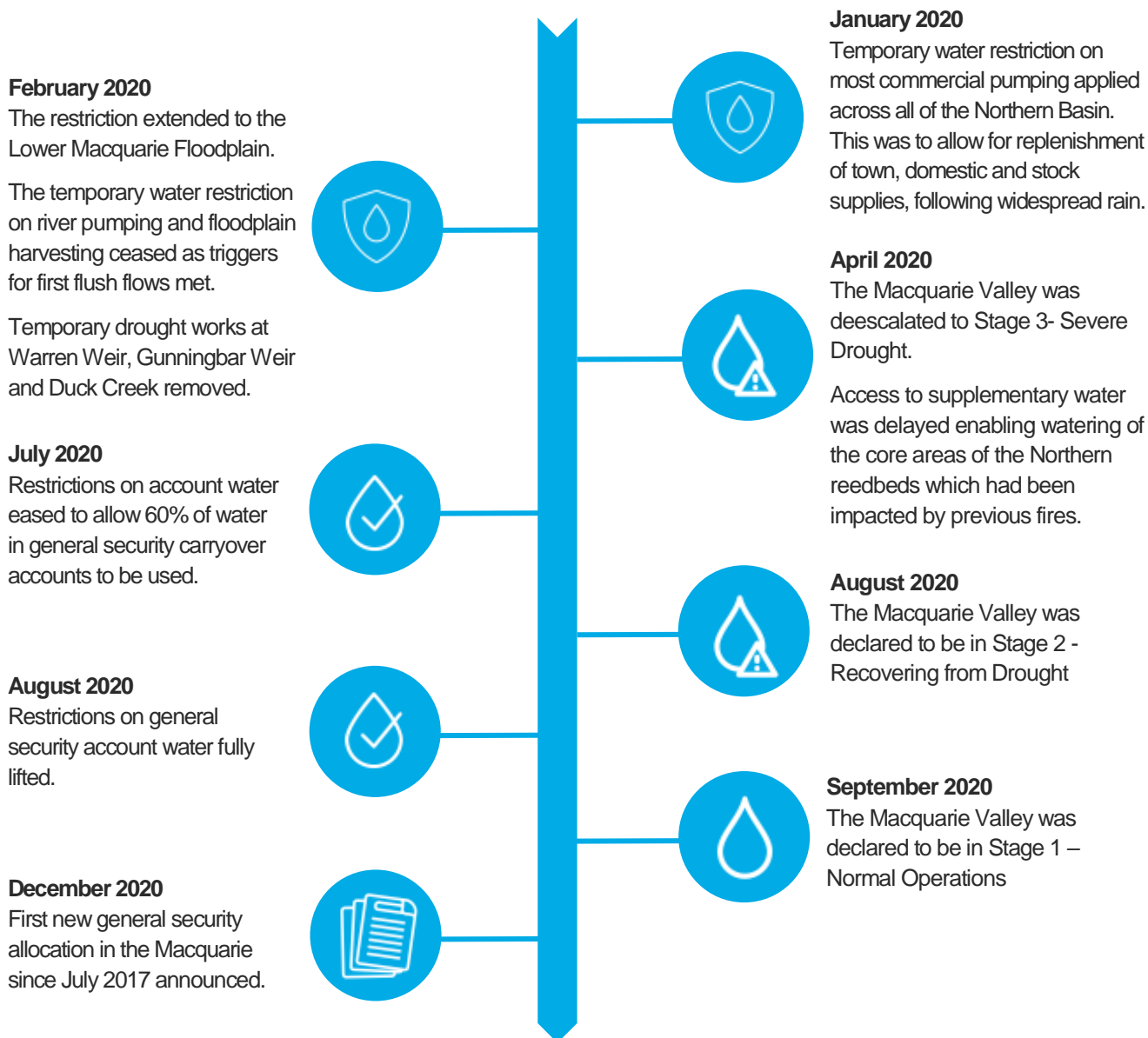


Figure 1 - Monthly storage, drought stage and water allocations for the Macquarie Valley

### Measures implemented – September 2018 to December 2019



### Measures implemented – January 2020 to December 2020



### Government assistance and funding

The following government assistance and funding was provided:

- \$30 million for the expansion of the Dubbo bore field.
- \$47.4 million for a range of drought infrastructure projects to secure supplies for Nyngan, Cobar, Warren, Narromine, Coonabarabran, Orange and Bathurst.
- Fixed water charges for general security, unregulated rivers and aquifer access licences were waived from July 2018 to June 2021. Fixed charges were also waived for high security and domestic and stock licence holders along the regulated river.
- A \$2000 domestic water carting rebate was made available to eligible water users in the lower Macquarie Valley, where regulated river flows ceased.

### Drought information sessions

Drought information sessions were held in Dubbo and Warren in February, May 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](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.
- A 30 gigalitre (GL) target has been introduced for limiting supplementary accesses following prolonged drought in the Macquarie Valley. This target is designed to provide enough water to wet the core habitat of the Macquarie Marshes.
- A review of targets and principles for restricting commercial access when first flows occur after a prolonged drought and improved communication processes is underway.
- 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 can be found at: [waterinsights.waternsw.com.au/](http://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 can be found at: [www.industry.nsw.gov.au/water/plans-programs/regional-water-strategies](http://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.dppe.nsw.gov.au/water/plans-and-programs/nsw-water-strategy](http://www.dppe.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](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.