Drought Management in Regional NSW

March 2026

Contents

Acknowledgement of Country

Our work with First Nations people is important to us. We acknowledge and have a great appreciation for the knowledge and connection that First Nations people have with water and land, and we are committed to building, supporting and strengthening our partnerships with First Nations people across our operations.

Why do we need to be better prepared for drought?

During the most recent drought (2017-2020), we identified opportunities to improve drought management in NSW. Since then, we have laid the groundwork to enhance our preparedness for future droughts.

This work helps clarify:

- roles and responsibilities across agencies and stakeholders
- how government and stakeholders' collaboration can reduce drought impacts and improve water resource management
- when and how customers and communities are informed of updates.

These improvements aim to reduce reactive responses and support more proactive, coordinated engagement and response.

Drought management is a shared responsibility between WaterNSW, government agencies, industries, customers and communities.

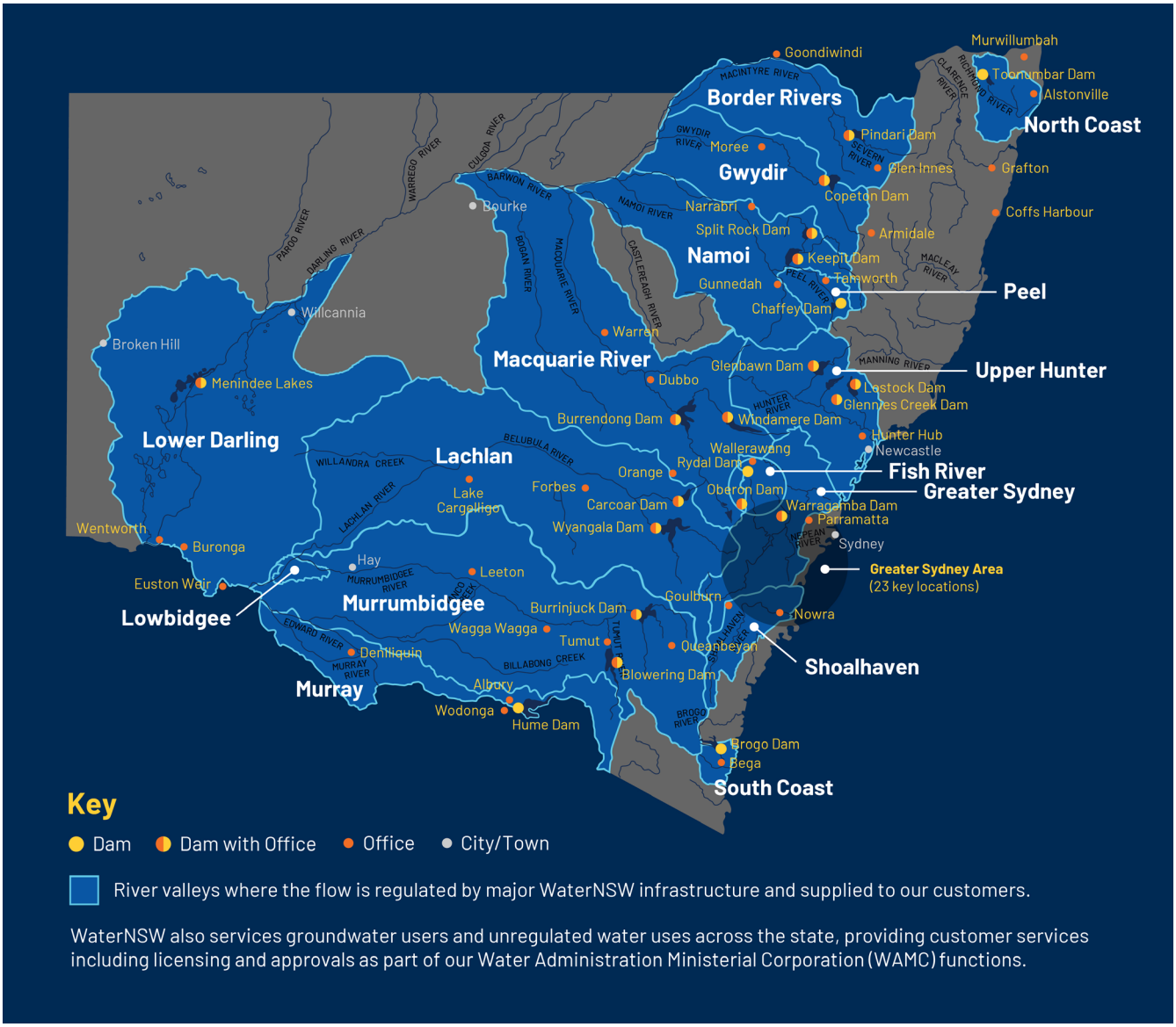
WaterNSW has developed a drought contingency plan for each regional valley to guide our response to severe droughts. This adaptive plan allows us to adjust actions based on real-time climate and environmental conditions. Allocating sufficient time and resources to prepare for and effectively respond to droughts is essential.

As a customer and community member, you also have a role to play in being better prepared for drought, by taking steps such as conserving water, implementing efficient irrigation systems, and planning for water shortages.

Together, we can better manage the impacts of drought and ensure a more sustainable future for NSW.

Keepit Dam during drought

Figure 1: NSW regulated river valleys



How WaterNSW and the government are working together in drought

How we work together

WaterNSW is working closely with the government in a coordinated way and taking part in drought decision making, as shown in the figure below.

Figure 2: Drought governance

Role of key agencies

WaterNSW

WaterNSW operates the state's dams, capturing and storing water and then supplying it ready for distribution for the environment, agriculture, industry and the community. We deliver water according to the rules set by the government.

WaterNSW owns and operates 20 major dams in regional NSW. These dams are located across the state on 12 major river systems and regulated valleys including Border Rivers, Gwydir, Namoi, Peel, Murray, Lower Darling, Murrumbidgee, Bega/Brogo, Hunter/Paterson, Richmond, Lachlan and Macquarie.

We deliver water to our customers who include farmers and irrigators, local councils, family businesses and industry. When our customers place a water order, we release this from our dams down the river system, for their use. We also release and deliver water to customers including the State and Australian Government Environmental Water Holders for the environment via their licensed (or 'held') environmental water, to keep ecosystems and rivers healthy.

During drought, WaterNSW is responsible for proposing drought response measures, and then implementing those measures if approved by the Minister or Minister's delegate. We will work closely with government agencies for consistent, transparent and swift decision making, and to inform customers and community in a timely manner.

NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW)

DCCEEW-Water Group is responsible for overall management of NSW's water resources. In the context of water shortages, DCCEEW-Water Group determines how limited available water will be shared according to the priorities set up in the *Water Management Act 2000* and water sharing plans.

During drought, DCCEEW-Water Group leads and coordinates water management related drought response decisions and supports water utilities such as WaterNSW and local water utilities to implement the drought response measures in rural and regional areas to extend remaining water resources.

Department of Primary Industries and Regional Development (DPIRD)

DPIRD protects, supports and develops NSW's primary industries and supports regional economies. DPIRD includes Local Land Services, NSW Resources, Agriculture and Biosecurity, Fisheries and Forestry and Regional Development and Delivery.

During drought, DPIRD is the lead drought agency, coordinating whole-of-government governance for drought management and providing support to communities via a range of on and off-farm programs and initiatives.

DPIRD produces and publishes a monthly State Seasonal Update, which provides a comprehensive summary of conditions to help industries and communities prepare for and manage drought.

DPIRD also have a role in developing and implementing policy that addresses natural resource management issues related to drought, including native fish protection and recovery.

Natural Resources Access Regulator (NRAR)

NRAR is the independent regulator responsible for enforcing water management legislation and regulations. This includes (but is not limited to):

- monitoring of water take and receiving reports from the public and government bodies of alleged breaches of water law and assessing to determine if a detailed investigation is required
- investigating alleged breaches of water law and taking action where required.

During drought, NRAR's responsibilities do not change but there is typically an increase in concerns and reports related to water being taken unlawfully when there is a water shortage.

Bureau of Meteorology

The Bureau of Meteorology is the national weather and climate information service, providing current weather reports, warnings and forecasts, and also past climatic records.

The data and forecasts are an important component of the information used to forecast storage inflows and inflows downstream to assist with resource assessments, determination of supplementary flow events and managing first flush events.

"All agencies should work together to improve how the state manages droughts"

How do you know if your valley is in drought?

Drought stages

Drought is a gradual repeated event and is not classified as a natural disaster under NSW's emergency management framework. In NSW, drought is treated as an ongoing and repeated cycle of preparing for, responding to and recovering from dry conditions (NSW DCCEEW Drought webpage).

If the dry conditions persist and shortages in water resources are identified, the NSW Government will announce drought stages for the valley. There are four drought stages currently identified, and their conditions are outlined in the NSW Extreme Events Policy.

Drought stages			
Stage 1	**Stage 2**	**Stage 3**	**Stage 4**
Normal operation	Initial operational adjustments	Further operational adjustments and access restrictions	Focus on critical water needs

Figure 3: 2017-2020 drought spread in NSW

Drought stages

	2018			2019												2020												2021			
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Murray	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1
Lower Darling	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	2	2	2	2	2	2	2	2	2	2	2	1
Murrumbidgee	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lachlan	1	1	1	1	1	1	1	2	3	3	3	3	3	3	3	3	3	3	3	3	3	2	1	1	1	1	1	1	1	1	1
Belubula	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	1	
Macquarie	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	2	1	1	1	1	1	1	1	1
Cudgegong	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1
Lower Namoi	2	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	2	2	1	1	1	1	
Upper Namoi	2	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	3	3	2	2	2	2	2	2	2	1	1	1	1	
Peel	1	1	1	1	1	1	1	2	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	2	2	1	1	1	1
Gwydir	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	1	1	1	1	1
Border Rivers	1	1	1	1	2	2	2	3	3	3	4	4	4	4	4	4	4	4	3	3	3	3	2	2	2	2	2	2	2	2	1
Barwon-Darling	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	2	2	2	2	2	2	2	2	2	2	2	1
Bega and Brogo															2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Richmond															2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Hunter															1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1

1 Normal operations
2 Emerging/recovering drought
3 Severe drought
4 Critical drought

The table shows how valleys progressed through the drought stages of the Extreme Events Policy, from October 2018 when the policy commenced.

Source: NSW Department of Climate Change, Energy, Environment and Water

Drought status monitoring

WaterNSW aims to track, assess and report the relevant information concerning climatic, hydrologic, and water allocation conditions and their trends.

WaterNSW has identified primary and secondary drought indicators for tracking hydrologic and climatic conditions and trends, and early identification of whether the valley is at risk of drought.

Primary indicators	Recorded dam inflow 	Track rolling 12-months inflow volume to water storages against minimum and 80% monthly average. Extended period of inflow deficit will reduce available supply in storages.
	Recorded rainfall 	Track rolling 12-months rainfall trend in catchment against moderately dry average. Extended periods of very low rainfall could signal the emergence of drought.
	Storage depletion forecast 	Time-based supply forecast based on current storage level and assumed future conditions. Estimate of time left to enable key measures before reaching critical storage levels.
Secondary indicators	BOM climate outlook 	Chance of above or lower than median rainfall and likelihood of El Niño or La Niña event.
	BOM soil moisture outlook 	Soil moisture monthly relative value against the average value.

The early detection of changes in drought indicators is key to assess the potential risks to water availability, assist in planning and preparing for an emerging drought. On a regular basis, **WaterNSW updates each valley's drought status on WaterInsights**. You also can find NSW drought status and further information on the NSW Department of Primary Industries and Regional Development (DPIRD) website.

Peel River during drought

How will we respond to drought?

WaterNSW's drought management aligns with the drought staged approach, outlined in the NSW Extreme Events Policy.

These drought plans are designed to:

- **enhance preparedness** by proactively managing water resources as drought conditions evolve
- **support effective response and recovery** by guiding actions during and after drought events
- **clarify decision-making and governance**, ensuring transparency and consistency in how water resources are managed during extreme events.

This structured approach helps deliver better outcomes for communities, the environment, and water users across NSW.

What did we hear from you?

In our conversations with you about drought-related challenges, you shared the following key concerns:

- **Workforce challenges**: local industries are struggling to attract and retain staff due to the frequency and severity of droughts.
- **Declining liveability**: the liveability of townships across the valley is deteriorating, largely due to water scarcity and associated social impacts.
- **Bore water access**: there is a lack of confidence in accessing bore water when and where it is needed.
- **Water delivery certainty**: there is a request for improved certainty around water delivery and forecasting.
- **Timely communication**: clear, timely updates on drought status and proposed management actions are essential.
- **Transparency on environmental water**: there is a strong desire for more transparency regarding the use and management of environmental water.
- **Environmental protection**: minimising impacts on aquatic species and the broader environment is a priority.

Our preparedness

We will continue to monitor and update drought status through WaterInsights, ensuring that relevant stakeholders and customers are kept informed in a timely and transparent manner.

We have identified the key preparatory activities that will support the implementation of drought response measures when needed.

There is now greater clarity and improved protocols regarding the roles of different government agencies. This has improved how we communicate and coordinate between agencies, customers and within the broader community.

Proposed responses

The focus, activation conditions, and likely responses for each drought stage are summarised in Table 1. This table serves as a key reference for understanding how drought stages are managed under the NSW Extreme Events Policy. Before implementing any drought response measures, we will:

- communicate clearly with stakeholders and affected communities
- undertake all necessary approvals to ensure actions are coordinated, transparent, and in line with regulatory requirements.

This structured approach ensures that drought responses are timely, effective, and well-governed.

Drought recovery

Recovery from drought in the valley is considered to have occurred when:

- dam levels approach higher storage thresholds, indicating a return to more stable water availability
- water allocations are restored for General Security licence holders, reflecting improved water resource conditions.

These indicators signal that the system has regained sufficient resilience to support both environmental and consumptive needs.


Burrendong Dam during drought

Table 1. Drought stage condition and our focus

Drought severity increasing

Drought condition improving

	Drought stage	Condition	Our focus
Preparation	**Stage 1 - Normal Operation**	All water can be delivered on demand under normal river operation	• WaterNSW business as usual operation • Continue valley condition monitoring and WaterInsights update
Response	**Stage 2 - Emerging drought**	Water cannot be delivered under normal river operation to all sections of the regulated river system	• Continue to monitor valley conditions and WaterInsights update • Recommend DCCEEW-Water Group makes drought stage announcement related to water management • Establish communication channels with DCCEEW-Water Group and other relevant government agencies • The need for changes in river operations to conserve water (i.e. delay/minor grouping of some water deliveries to reduce losses) • No new general security allocation will occur • Replenishment flows may be reduced • Planning, preparation, and construction (if applicable) of any drought measures required to be operational in Stage 3
Response	**Stage 3 - Severe drought**	Dam levels have dropped significantly, on-demand deliveries to users, particularly general security users, may not be possible	• Continue valley condition monitoring and WaterInsights update • Recommend DCCEEW-Water Group makes drought stage severity upgrade announcement related to water management • Provide timely communication to customers and water users. Not all water in accounts can be delivered • Reduced high priority and high security allocations • Portion of general security account water may need to be restricted • Continue water conservation measures
Response	**Stage 4 - Critical drought**	Dam levels are approaching critical low levels and only limited essential needs can be met	• Continue valley condition monitoring and WaterInsights update • Recommend DCCEEW-Water Group makes drought stage severity upgrade announcement related to water management • Continue timely communication with government stakeholders, customers and water users • All remaining general security and environmental water in accounts may be suspended • Only critical water needs will be delivered from storage • Ceased flows to effluent creeks if relevant • Shorten the regulated river and continue water conservation measures

How we will engage with you

Our engagement pathway and activities are outlined in the table below. We will ensure that we provide information in a timely and transparent manner.

Table 2. Our engagement pathway

Our approach

WaterNSW takes a consistent approach to its communication and engagement. Our aim is to be helpful experts and trusted partners to a breadth of audiences: customers, communities, and stakeholders. This table outlines our guiding principles and the activities we will deploy during drought.

Guiding principles

Our communication and engagement approach principles:

- Our drought communications will support broader government messaging.
- We will support customers and keep stakeholders informed.
- We aim to be a source of reliable operational information and remain impartial.
- Our engagement will be tailored to the local context, and timely, reflecting the dynamic nature of drought.
- We will communicate early and often, and be willing to share relevant data and insights.

Activities during drought

We will take an 'always on' approach to communications in drought and strive to go 'over and above' where possible.

Customers	Stakeholders and community	First Nations
Customer Advisory Group (CAGs) meetings, customer system notices, newsletters, direct letters and emails, interactive voice response messages. WaterInsights updates. We will share drought status updates in CAGs and using the above channels,and where needed engage face to face.	We will engage with stakeholders, including industry and community groups, and different levels of governments. We will share updates via WaterInsights, website and social media and advertisements, as well as participatie in panels and forums, field days, and other regional events.	We will conduct face to face meetings with Traditional Owners, and provide regular communications through existing channels. We will support projects in drought affected areas, working with Government agencies to keep Traditional Owners informed.

We're the people taking care of the state's water at the source – capturing, storing, delivering.

waternsw.com.au

WaterNSW