

How we make decisions

OEH uses the best available science, management expertise and experience to identify watering sites and provide the right amount of water where and when it is needed.

This statement of annual environmental watering priorities identifies the waterways and wetlands that are likely to receive water. We take into account how much water is expected to be available in the coming year, conditions of the previous year, and the current health of the plants and animals in these ecosystems.

As rainfall is difficult to predict, we plan for a range of objectives based on different scenarios. These scenarios are determined by how much water is likely to be available in the coming year, the climate conditions of the previous year and the seasonal forecast for the coming year.

Community-based Environmental Water Advisory Groups (EWAGs) provide feedback and advice to OEH on the management of water for the environment.

What is water for the environment?

Water for the environment is a share of the water in dams and rivers that is set aside to support the long-term health of local rivers, creeks and wetlands. Healthy rivers carry water to homes, farms, schools and businesses. In the Macquarie valley, rivers and wetlands hold significant spiritual and cultural importance for the Wiradjuri and Ngemba-Wailwan Aboriginal people.

About the Macquarie valley

The Macquarie valley covers more than 75,000 square kilometres in the state's central west. It extends from the Blue Mountains to the Barwon River Plains with major tributaries including the Cudgegong, Talbragar and Bell rivers. The valley is home to the iconic Macquarie Marshes – one of the largest remaining semi-permanent wetland systems in inland Australia. It is one of the biggest colonial waterbird breeding sites in Australia.

Macquarie–Castlereagh catchment

Annual environmental watering priorities 2017–18

Expected environmental water volumes available at 1 July 2017

Source	Maximum volume available	Volume expected at 1 July under current conditions
Planned environmental water		
Environmental water allowance	320 gegalitres	188 gegalitres
Water licensed to NSW		
General security	96.8 gegalitres	58 gegalitres
Supplementary	1.4 gegalitres	Event-dependent
Water licensed to the Commonwealth		
General security	252.4 gegalitres	122 gegalitres
Supplementary	8.3 gegalitres	Event-dependent

Note: This is an indicative summary of expected volumes to be available. For further detail and information on available volumes please contact the region via the Environment Line 131 555.

1 gegalitre = 1000 megalitres
2.5 megalitre = 1 Olympic swimming pool



Planning for the year ahead

High rainfall and natural flooding, from June 2016 to October 2016, with additional strategic environmental watering paved the way for extensive vegetation recovery and significant waterbird breeding in the Macquarie Marshes.

Water managers are planning to build on these ecological responses through a 3-year watering strategy. This will focus on minimal seasonal inundation of vegetation communities in the Macquarie Marshes. The strategy will also allow water carryover provisions for possible future dry conditions and fish connection flows to the Barwon River.

Weather and water forecast

As a result of recent floods, a reasonable volume of licensed water is available for environmental watering events.

Warmer and drier than average conditions are forecast for the beginning of the coming year and water management plans reflect this.

Water managers have prepared watering plans that take into consideration a range of weather and water availability scenarios, in case it rains more or less than expected. This is known as resource availability scenario planning (www.mdba.gov.au/sites/default/files/archived/altered-PBP/APBP-Ch7-Guideline.pdf). Very wet scenario actions are proposed for the Macquarie–Castlereagh valleys.

Macquarie–Castlereagh resource availability scenario

Very dry

Main aim: Protect

- Avoid critical loss
- Maintain key refuges
- Avoid catastrophic events



Dry

Main aim: Maintain

- Maintain river functioning
- Maintain key functions of high priority wetlands



Moderate

Main aim: Recover

- Improve ecological health and resilience
- Improve opportunities for plants and animals to breed, move and thrive



Wet to very wet

Main aim: Enhance

- Restore key floodplain and wetland linkages
- Enhance opportunities for plants and animals to breed, move and thrive



Map of proposed annual priority targets in the Macquarie–Castlereagh Water Resource Plan Area 2017–18



Key planned actions for 2017–18

Waterbirds



Managed water flows (around 135 gegalitres) are planned to inundate 20,000 hectares of the Macquarie Marshes. These will provide feeding and breeding opportunities for resident, nomadic waterbirds and their young. It will also provide some spring and summer feeding areas for inland-bound migratory shore birds including marsh sandpipers, common greenshanks, Latham's snipe and black-tailed godwits.

Vegetation



Managed flows (part of the 135 gegalitre flow) will maintain and improve the resilience of vegetation communities in the core Macquarie Marshes including reedbeds and water couch meadows. Managed flows will also recharge the shallow groundwater systems to help support outer areas of river red gum and coolabah-blackbox woodlands.

Native fish



The connectivity provided by the spring flow event and the potential Barwon River connection flow will promote the breeding of in-channel species such as Murray cod, hardyhead and eel-tailed catfish.

Connectivity



The 135-gegalitre flow event will also connect areas within the river system and the catchment to the Barwon–Darling rivers. These connections will allow the movement of native fish, other aquatic animals like insects, turtles, water rats and mussels, plus allow the movement of nutrients and carbon within the river system.

An additional 50 gegalitres has been set aside to provide a cool-season fish connection flow to the Barwon River should environmental and weather triggers be met.