

## How we make decisions

The Department is supporting the health and resilience of rivers and wetlands by delivering water for the environment where and when it is needed.

We use the best available science, management expertise and experience to manage water across the landscape.

This statement of annual priorities identifies the waterways and wetlands that are likely to receive water.

Our decision-making process considers:

- expected availability of water in the coming year
- conditions of the previous year
- current health of the plants and animals in these ecosystems.

Community-based environmental water advisory groups provide feedback and advice to the Department on the management of water for the environment.

The NSW Government works with the Commonwealth Environmental Water Holder to manage water in the catchment.

## 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 Murrumbidgee catchment, rivers and wetlands are important cultural and spiritual sites for Aboriginal people, as well as the broader community.

## About the Murrumbidgee catchment

The Murrumbidgee catchment covers 81,527 square kilometres and includes 26 storage or diversion structures, 1690 kilometres of the river, and the surrounding wetlands. The climate conditions range from alpine in the Snowy Mountains to semi-arid on the Riverina plains.

Wetlands throughout the Murrumbidgee support threatened species listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and NSW *Biodiversity Conservation Act 2016*.

### Expected environmental water volumes available at 1 July 2020

Source	Maximum volume available	Volume expected at 1 July under current conditions
<b>Planned environmental water</b>		
Environmental water allowance (1)	100 gigalitres linked to announced general security allocations	0 gigalitres
Environmental water allowance (2)	Triggered by Burrinjuck Dam inflows and releases	Up to 30 gigalitres
Environmental water allowance (3)	Linked to announced general security allocations	0 gigalitres
<b>Water licensed to NSW</b>		
General security	31.4 gigalitres	0.2 gigalitres
Supplementary	6.7 gigalitres	Dependent on surplus flows
Lowbidgee supplementary access licence (South Redbank/Yanga)	148 gigalitres	Dependent on surplus flows
<b>Water licensed to the Commonwealth</b>		
High security	13.6 gigalitres	Up to 12.9 gigalitres
General security	283 gigalitres	0 gigalitres new allocation, approx. 44 gigalitres carryover
Conveyance	41.3 gigalitres	26.5 gigalitres
Supplementary	22 gigalitres	Dependent on surplus flows from unregulated tributaries
Lowbidgee supplementary	393 gigalitres	Dependent on surplus flows

**Note:** This is an indicative summary of volumes expected to be available. For further detail and information on available volumes, please contact the region via Department enquiries on 1300 361 967.

1 gigalitre = 1000 megalitres

2.5 megalitre = 1 Olympic swimming pool



DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT

# Murrumbidgee catchment

Annual Environmental Watering Priorities 2020–21



Cover photo: Glen Dee rookery.

Photo: Mark Henderson.

Page 2 infographic: J Humphries/DPIE.

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## Water for rivers and wetlands

In 2020–21, water managers will continue to build on the success of previous years through the careful management of water for the environment.

During 2019–20, Department of Planning, Industry and Environment (the Department) worked with the Commonwealth Environmental Water Office to deliver approximately 73 gigalitres of water for the environment to sites including the Gayini (formerly known as Nimmie Caira) and North Redbank wetlands. Water was also used to maintain refuge wetland habitats in the Murrumbidgee and Coleambally irrigation areas as well as Mid-Murrumbidgee, Lower Murrumbidgee and Wanganella Swamp pumping projects.

This year managed watering events will initially focus on maintaining drought refuge habitat for southern bell frogs, native fish, waterbirds and other aquatic species.

Water managers plan to supplement existing system flows to provide the maximum benefit to plants and animals. Watering events will aim to restore a more natural flow pattern to support a robust food web and other system functions. Water will be managed to provide essential connections between the river and floodplain wetlands to aid in the movement of essential nutrients and native fish.

## 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



## Weather and water forecast

In July 2020, the Bureau of Meteorology has forecast the Indian Ocean Dipole (IOD<sup>1</sup>) and El Niño–Southern Oscillation (ENSO<sup>2</sup>) in Australia to remain neutral, with a shift toward wetter than average conditions and warmer than average temperatures through winter–spring 2020. The ENSO Outlook is currently at La Niña WATCH, indicating the chance of La Niña forming in 2020 is around 50%. Water management plans reflect this wetter outlook, whilst being mindful of the existing dry catchment conditions.

Water managers have prepared watering plans that consider 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. Dry to moderate conditions are forecast for the Murrumbidgee catchment in 2020–21.

<sup>1</sup> IOD: The difference between sea surface temperatures between two areas of the Indian Ocean.

<sup>2</sup> ENSO: The interaction between the sea surface and atmosphere over the Pacific Ocean which results in dryer or wetter conditions (El Niño or La Niña). Both IOD and ENSO are considered key influences of weather in Australia.

## Key planned actions for 2020–21

### Waterbirds

- Flows (up to 40 gigalitres) are planned to provide refuge habitat for waterbirds, turtles, frogs and other aquatic species in core areas of Yanga National Park, Gayini and North Redbank wetlands. Key Australasian bittern habitat will be watered in the Murrumbidgee and Coleambally irrigation areas and Yanco Creek systems.

### Vegetation

- Key mid-Murrumbidgee sites including Yarradda, Darlington, Gooragool and Mantangry lagoons will be provided with water via pumping (10 gigalitres).

### Native fish

- If resource availability improves significantly, flows (up to 20 gigalitres) are planned to maintain instream and deep water off-stream habitats for native fish and restore a more natural flow pattern to support native fish populations.

### Connectivity

- If resource availability improves significantly, flows (up to 50 gigalitres) are planned to connect the Lowbidgee lakes and remove the effects of three weirs within the lower Murrumbidgee river channel (assumes significant resource improvement or supplementary access).

## Map of proposed annual priority targets in the Murrumbidgee Water Resource Plan Area 2020–21

