



Department of Planning, Industry and Environment

Murrumbidgee Catchment

Water for the Environment: Annual Priorities 2021-22



Water for rivers and wetlands



In 2021-22, water managers will continue to build on the success of previous years through the careful management of water for the environment.

During 2020-21, Department of Planning, Industry and Environment (the Department) worked with the Commonwealth Environmental Water Office and capitalised on the wet conditions across the catchment to deliver water for the environment to sites including the Gayini (formerly known as Nimmie-Caira), 193 gigalitres, and Yanga National Park, 112 gigalitres. Water was also used to benefit wetland habitats in the Murrumbidgee and Coleambally irrigation areas as well as the mid-Murrumbidgee, Lower Murrumbidgee, North Redbank, Forest Creek and Wanganella Swamp.

In 2021-22 managed watering events will initially focus on maintaining permanent water 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, e.g. wetland reconnection flows. 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.



Weather and water forecast



In April 2021, the Bureau of Meteorology confirmed the 2020–21 La Niña has now passed. Climate model outlooks indicate the El Niño–Southern Oscillation (ENSO¹) is now neutral with no sign of either La Niña or El Niño developing at least until September 2021. Rainfall was below average and temperatures warmer than average in May and June 2021 for eastern mainland Australia, and will continue in July. Starting allocations were 95% for high security and 30% for general security licences (Department of Planning, Industry and Environment–Water 2021). Water management plans reflect these wetter conditions and are mindful of the favourable starting allocations and high carryover.

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. Moderate to wet conditions are forecast for the Murrumbidgee catchment in 2021–22.

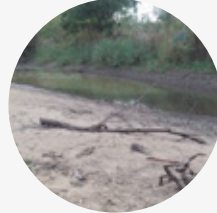
Resource availability scenario



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

¹ENSO: The interaction between the sea surface and atmosphere over the Pacific Ocean which results in dryer or wetter conditions (El Niño or La Niña).

Key planned actions for 2021-22



Waterbirds

Flows (up to 120 gigalitres) are planned to provide foraging and breeding habitat for waterbirds, turtles, frogs and other aquatic species in core areas of Yanga National Park, Gayini and the North Redbank wetlands. Key Australasian bittern habitats will be watered in the Murrumbidgee and Coleambally irrigation areas and Yanco Creek systems.



Vegetation

Key mid-Murrumbidgee and Yanco/Forest Creek sites currently out of reach of river flows will be provided with water via pumping, e.g. Willbriggie Lagoon, Wanganella Swamp and Rhyola Swamps (10 gigalitres).



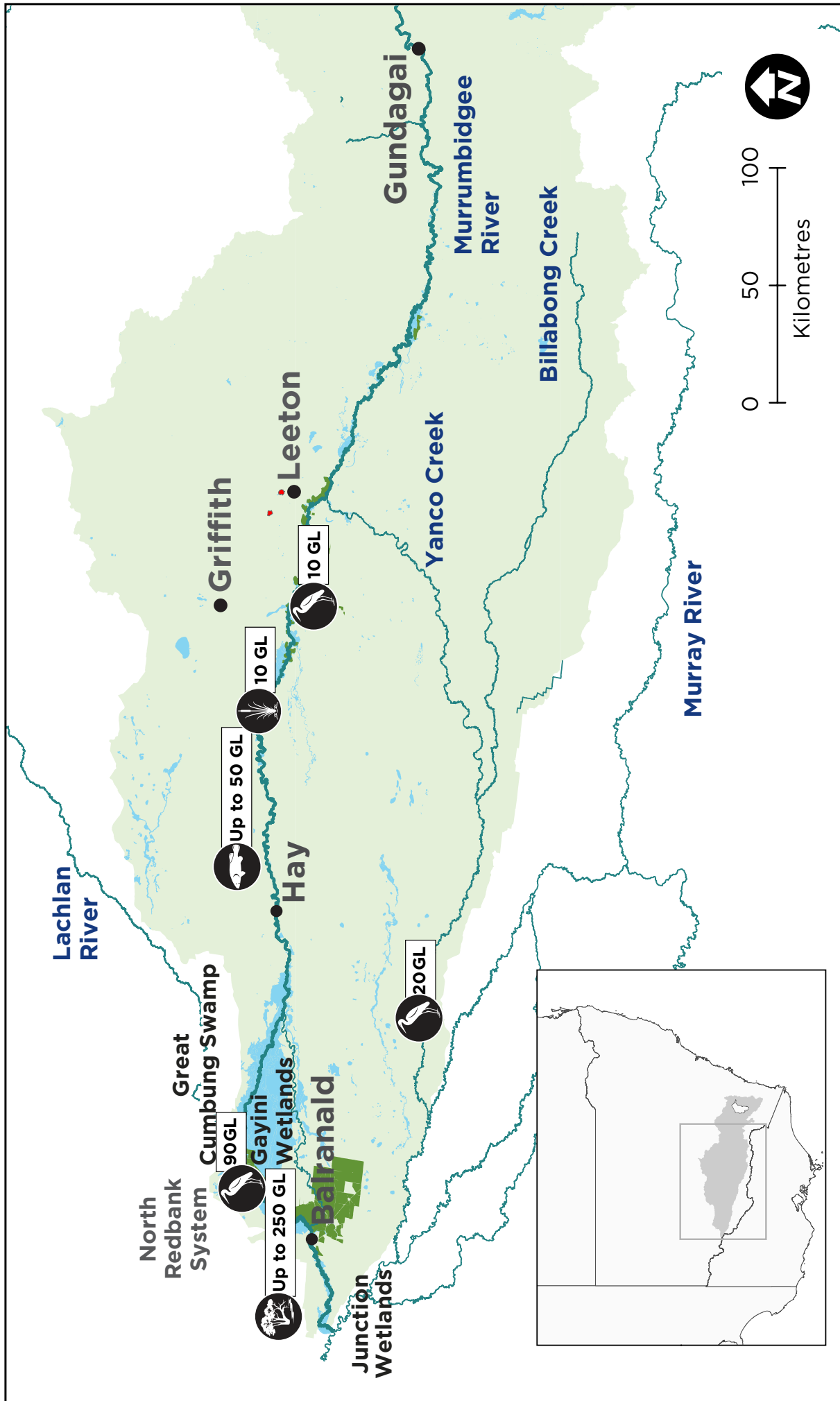
Native fish

Flows (up to 50 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

A wetland reconnection flow (up to 250 gigalitres) is planned to inundate hundreds of mid-Murrumbidgee wetlands and the Lowbidgee lakes, while removing the effects of three weirs within the lower Murrumbidgee river channel and maximising fish passage (assuming reasonable starting allocations).



— Major rivers and creeks
 Ramsar sites
 Selected national parks and state forests
 Waterbodies and wetlands
 Murrumbidgee Water Resource Plan Area

Figure 1 Map of proposed annual priority targets in the Murrumbidgee Water Resource Plan area 2021-22.

How we make decisions

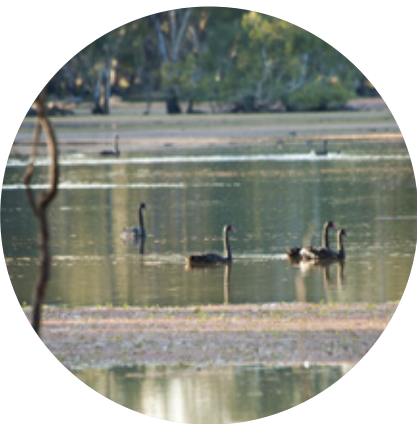


Department of Planning, Industry and Environment (the Department) is supporting the health and resilience of rivers and wetlands by delivering water for the environment where and when it is needed. We use the best available science, management expertise and experience to manage water across the landscape. This statement of annual priorities identifies the waterways and wetlands that are likely to receive water under predicted weather conditions.

Our decision-making process considers:

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

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 catchments.



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. The waterways are important cultural and spiritual sites for Aboriginal people and the broader community.



About the 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*.

Table 1 Expected environmental water volumes available at 1 July 2021.

Source	Maximum volume available (gigalitres – GL)	Volume expected 1 July under current conditions (gigalitres – GL)
Planned environmental water		
Environmental Water Allowance (1)	100 GL Linked to announced general security allocations	6.2 GL
Environmental Water Allowance (2)	Triggered by Burrinjuck Dam inflows and releases	14.3 GL
Environmental Water Allowance (3)	Linked to announced general security allocations	0 GL
Water licensed to NSW		
General security	31.4 GL	12.4 GL New allocation, approx. 2.9 carryover
Supplementary	6.7 GL	Dependent on surplus flows
Lowbidgee supplementary access licence (South Redbank/Yanga)	148 GL	Dependent on surplus flows
Water licensed to the Commonwealth		
High security	14.2 GL	Up to 13.5 GL
General security	286.5 GL	167.8 GL total
Conveyance	50.3 GL	37.7 GL
Supplementary	22 GL	Dependent on surplus flows from unregulated tributaries
Lowbidgee supplementary	406.6 GL	Dependent on surplus flows

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 Department enquiries on 1300 361 967. 1 gigalitre = 1000 megalitres; 2.5 megalitre = 1 Olympic swimming pool

Reference: Department of Planning, Industry and Environment-Water 2021, Water Allocations Statement: Water availability and allocation update – Murrumbidgee, DPIE, Sydney.