How we make decisions

As a series of unregulated NSW rivers fed from Queensland, watering actions in the NSW part of the Water Resource Plan area cannot be managed in the same way that water for the environment can be managed in a typical regulated system. Environmental outcomes are typically generated by managing environmental water through systems and reducing the volume of water that can be taken from rivers.

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. The waterways of the Intersecting Streams are important cultural and spiritual sites for Aboriginal people.

About the Intersecting Streams catchment

The Intersecting Streams are in the north-west of New South Wales covering an area of approximately 120,431 square kilometres. This area comprises the NSW sections of five key river systems, including the Paroo, Warrego, Culgoa–Birrie–Bokhara–Narran connected system and Moonie River that originate in Queensland and terminate in New South Wales, and Yanda Creek in New South Wales.

There are three listed Ramsar sites and areas indicated in the Directory of Important Wetlands located in the Paroo, Warrego and Narran water sources and an Important Bird Area (IBA) identified by BirdLife Australia.

The IBA contains the lower Paroo floodplain, including the overflow lakes, as well as the Yantabulla swamp and the Cuttaburra Creek floodplain. The area contains a complex network of channels, wetlands and lakes. Floods occur erratically: water enters from the Paroo, the Warrego River via Cuttaburra Creek and other channels, filling shallow channels, floodplain depressions and numerous ephemeral lakes. Ranging up to 5.5 metres in depth, some lakes retain water for up to three years. When conditions are suitable, the system supports up to 400,000 waterbirds.

Traditional Owner groups in the Intersecting Streams area include Budjiti, Euahlayi, Guwamu/Kooma, Kamilaroi, Kunja, Murrawarri and Ngemba.

Expected environmental water volumes available at 1 July 2020

Source	Maximum volume available	Volume expected at 1 July under current conditions
Water licensed to the Commonwealth.		
Moonie		
Qld unsupplemented	5,671 megalitres	Event-dependent
Condamine-Balonne		
Nebine unsupplemented	5,920 megalitres	Event-dependent
Lower Balonne unsupplemented	68,317 megalitres	Event-dependent
Condamine-Balonne unsupplemented	1,062 megalitres	Event-dependent
Condamine-Balonne overland flow	96,741 megalitres	Event-dependent
Upper Condamine unsupplemented	841 megalitres	Event-dependent
Upper Condamine groundwater	40,224 megalitres	NA
St George (medium)	45 megalitres	0 megalitres
Warrego		
Qld unsupplemented	39,455 megalitres	Event dependent
NSW unregulated	17,826 megalitres	Event-dependent

Note: This is an indicative summary of volumes expected to be available. For further information on available volumes, please contact the region via Department of Planning, Industry and Environment enquiries on 1300 361 967.
1 gigalitre = 1000 megalitres
2.5 megalitre = 1 Olympic swimming pool

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NSW GOVERNMENT

DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT

Intersecting Streams catchment

Annual Environmental Watering Priorities 2020–21

environment.nsw.gov.au

Water for rivers and wetlands

The Intersecting Streams rely on rainfall in southern Queensland (Qld) and connection across the NSW–Qld border to generate the flows that support the rivers and wetlands in this unique area.

After many years of deep drought, connection along many streams to the Barwon and Darling rivers was achieved in the NSW reaches of the Moonie, Culgoa and Warrego rivers as a result of summer rainfall in 2019–20. Significant flow (400 gigalitres plus) in the Paroo River across the border was also a feature of late summer, along with over 60 gigalitres of flow into the Narran Lakes system from the Narran River.

With drought in the northern basin potentially easing, critical environmental demands have reduced, particularly in relation to connectivity. In 2020–21, the focus of environmental water managers will be to optimise the outcomes of recent flows with a focus on creating opportunities for northern basin recovery.

Weather and water forecast

In July 2020, the Bureau of Meteorology has forecast the Indian Ocean Dipole (IOD[1]) and El Niño–Southern Oscillation (ENSO[2]) 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%.

Environmental water managers have prepared annual watering plans that consider a range of weather and water availability scenarios. This is known as resource availability scenario planning. There remains a significant degree of uncertainty around resource availability. On balance, the outlook is rated as dry to moderate.

[1] IOD: The difference between sea surface temperatures between two areas of the Indian Ocean.

[2] ENSO: The interaction between the sea surface and atmosphere over the Pacific Ocean which results in dryer or wetter conditions (El Nino or La Nina). Both IOD and ENSO are considered key influences of weather in Australia.

Key planned actions for 2020–21

Waterbirds

- In 2020–21, water is likely to be retained in Narran Lake as a result of inflows which commenced in March 2020. A priority is to ensure a sufficient vegetation condition and water level should further inflows trigger a colonial waterbird breeding even in spring 2020.

Vegetation

- The water that reached the Narran Lakes in March–April 2020 is expected to have significantly improved the vigour of vegetation in the lakes system. Opportunities that arise in 2020–21 to increase the duration of inundation of water-dependent vegetation should be prioritised.
- In spring and summer 2019–20, flows in the Warrego River inundated the Toorale western floodplain wetland vegetation, connecting through to the Darling River. Repeated inundation in 2020–21 will increase vigour and diversity of wetland vegetation in this location. This will be balanced against the needs of the downstream Barwon–Darling system.

Connectivity

- As these systems are typically intermittent, further flows and inter-system connections depend on rainfall occurring throughout the year.

Native fish

- Following significant fish kills in the northern basin in 2019–20, a key priority is to support remaining stocks of native fish and provide opportunities for them to breed and disperse into secure habitat.

Map of proposed annual priority targets in the Barwon-Darling Water Resource Plan area 2020–21

Note: There are currently no plans to undertake environmental watering under current conditions.

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