

How we make decisions

DPIE 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.

As rainfall is hard to predict, 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 DPIE on the management of water for the environment.

The NSW Government works with the Commonwealth Environmental Water Holder to manage water in the catchments. Jointly held water allocations are also managed in collaboration with partner agencies.

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 Murray and Lower Darling catchments, rivers and wetlands are important cultural and spiritual sites for Aboriginal people, as well as the broader community.

About the Murray and Lower Darling catchments

The Murray and Lower Darling catchments cover 98,300 square kilometres. The catchments include the world's largest stand of river red gums and 1700 kilometres of Australia's longest river, the Murray. The Murray is also home to diverse wetland ecosystems, plants and animals. Ramsar-listed sites include the Millewa, Werai and Koondrook-Perricoota forests, the eastern section of Chowilla Floodplain and the River Murray Channel.

The Murray and Lower Darling catchment wetlands and rivers also support important Aboriginal cultural heritage values, with more than 968 cultural heritage sites formally recorded. Aboriginal people continue to contribute important knowledge to inform the management of water for the environment.

Expected environmental water volumes available at 1 July 2019 (The Living Murray environmental water is not included in this table)

Source	Maximum volume available	Volume expected at 1 July 2019 under current conditions
Planned environmental water		
Barmah-Millewa environmental water allowance	700 gegalitres	358 gegalitres (170 gegalitres NSW; 188 gegalitres Victoria) Barmah-Millewa Forest Environmental Water Allowance (EWA) is used to support carry-over and high security allocations in the NSW Murray in dry years. Therefore, the EWA will not be available for environmental use until NSW Murray general security allocations reach 30%.
Murray additional environmental water allowance	29 gegalitres	5.7 gegalitres This water is only available when NSW Murray high security allocations reach 97 per cent.
Water licenced to NSW		
Murray - conveyance	30 gegalitres	15 gegalitres
Murray - high security	2.8 gegalitres	1.9 gegalitres
Water licenced to the Commonwealth		
Murray - general security	352 gegalitres	Up to 176 gegalitres
Murray - high security	17 gegalitres	17 gegalitres
Lower Darling - general security	2 gegalitres	0 gegalitres
Lower Darling - high security	0.5 gegalitres	0.5 gegalitres

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 DPIE enquiries on 1300 361 967.

1 gegalitre = 1000 megalitres

2.5 megalitre = 1 Olympic swimming pool

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NSW DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT

Murray and Lower Darling catchments

Annual Environmental Watering Priorities 2019–20



Water for rivers and wetlands

In 2019–20, water managers will continue to build on the gains of previous years through the careful management of water for the environment.

During 2018–19, flows were delivered into the Tuppall Creek, between Tocumwal and Deniliquin. For decades now Tuppall Creek has been disconnected from the Murray River apart from during very large flood events. The Department of Planning, Industry and Environment (DPIE) is working with Murray Irrigation and the local farming community to reinstate the frequency and duration of small to medium sized instream flows into the creek by upgrading Murray Irrigation's water delivery infrastructure.

DPIE (formerly OEH) worked in collaboration with the Commonwealth Environmental Water Office and landholders to deliver water into the Thule Creek in 2018–19. Flows into the Thule are now much less frequent than the natural flow regime and are supplemented using Murray Irrigation's supply system. Last year, DPIE (formerly OEH) funded works to upgrade the Thule Creek Escape so the maximum flow rate could be increased from 40 ML/day to 130 ML/day.

Restoration of creeks such as the Tuppall and Thule will help to enhance the environmental, social and economic values of the central Murray region.

DPIE (formerly OEH) also delivered water into several private property wetlands in the central Murray and lower Murray. The delivery of this water supported recovery efforts for the endangered southern bell frog. This is one of the NSW Government's *Saving Our Species* projects which is being managed in collaboration with local landholders, Murray Irrigation, and our Environmental Water Management and Ecosystems and Threatened Species teams.

In 2019–20, managed water will target a range of outcomes, including the maintenance of habitat that support colonial nesting waterbirds and the threatened Australasian bittern, improving conditions for small-bodied native fish, providing refuge and dispersal flows for large-bodied native fish, supporting wetland plants and enhancing connectivity in waterways for native fish.

Weather and water forecast

Availability of planned and licenced water is expected to be limited in the Murray catchment early in the 2019–20 water year due to a lack of inflows into the major storages during autumn and winter.

Below average rainfall is forecast for winter-spring in the Murray catchment, coupled with warmer than average temperatures with the possibility of a late autumn break. Drought conditions are forecast to continue for the Lower Darling.

Water managers have prepared watering plans that take into consideration a range of weather and water availability scenarios. This is known as Resource Availability Scenario planning. Dry (Murray) to very dry (Lower Darling) conditions are forecast for the Murray and Lower Darling catchments in 2019–20.

Key planned actions for 2019–20

Waterbirds

- Managed watering events (18 gegalitres) are planned for the Murray Valley national and regional parks to support sites that contain nesting Australasian bitterns and a suite of other native birds.

Native fish

- Murray River multi-site flows (up to 150 gegalitres) are planned from Hume Dam through to South Australia to support native fish (particularly Murray cod and golden perch breeding and recruitment), vegetation and instream productivity.
- Fish flows (up to 60 gegalitres) in the Edward-Wakool river system will provide benefits for native fisheries, instream vegetation and food-webs. Water

Vegetation

- Flows (2 gegalitres) will be delivered to targeted private wetlands that provide critical habitat for southern bell frogs and to promote reproduction and recruitment of vegetation and other wildlife.
- Flows (1.5 gegalitres) will be delivered into Thegoa Lagoon in spring 2020 to enhance aquatic vegetation and habitat for a range of small-bodied native fish species. The water will also help to maintain the condition of veteran river red gum trees that occur along the riparian corridor.

Connectivity

- Flows (6 gegalitres) will provide connectivity between Tuppall Creek and the Edward River for native fish and carbon exchange.
- Flows (6 gegalitres) will provide connectivity between the Thule Creek and Wakool River for native fish, vegetation and carbon exchange.

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 Murray and Lower Darling Water Resource Plan Area 2019–20

