



Australian Government

Commonwealth Environmental Water Office

Macquarie River Valley Water Use History

Commonwealth water for the environment: 2009–2020

Commonwealth water for the environment has been delivered in the Macquarie catchment since 2009, in conjunction with NSW water for the environment. Water has been delivered to support important sites including the Macquarie River and internationally significant Macquarie Marshes.



The amount of water for the environment delivered to the Macquarie catchment varies each year, depending on the water available, climatic conditions, and how much water the system needs in a particular year (called 'environmental demand').

The following information is a summary of how and where water for the environment has been used and the outcomes, up until 2020.



Wetland plants

Water for the environment has been delivered to support wetland vegetation in the Macquarie Marshes nearly every year since 2009.

The total area of the Marshes that has received water varies each year. However, critical wetland areas containing plants requiring regular watering are

targeted more frequently. These wetland plants include water couch, reed beds, mixed marsh, and river red gum forest.

Water for the environment has helped to improve the condition and cover of wetland plants in the Marshes. This builds resilience and helps the wetlands survive and bounce-back from dry periods.



Waterbirds

Water for the environment delivered to the Macquarie Marshes also helped to support a range of waterbirds since 2009. Water provided food and foraging habitat and helped to maintain important waterbird breeding habitat.

In wetter years, such as 2010–11 and 2016–17, water for the environment helped support the successful completion of breeding of thousands of colonial waterbirds. These include straw necked ibis, glossy ibis, Royal spoonbill, and egrets.



Photo credit: Heather McGinness, CSIRO

In drier years, such as 2014–15 and 2018–19, water for the environment provided refuge habitat for migratory waterbirds including Latham's snipe and sharp-tailed sandpipers. This water also supported endangered species like Australasian bittern and Australian painted snipe.



Native fish

In more recent years, delivery of water for the environment to the Macquarie Marshes has been managed to more actively target the needs of native fish in the Macquarie River as well.

Water was delivered to support the movement, breeding and recruitment of native fish, including Murray cod and freshwater catfish. This water also provided greater access to food resources and habitat in the mid-Macquarie River. During drought water was used to maintain refuge pools for threatened native fish—olive perchlet.

In 2016–17, water for the environment was delivered to the lower Macquarie River with the Barwon River to support native fish. This flow provided opportunities for adult and juvenile golden perch and spangled perch to move between the two rivers.



Connectivity

Deliveries of water for the environment in the Macquarie catchment help to connect different parts of the river system. From Burrendong Dam to the Macquarie Marshes through the lower Macquarie and down to the Barwon River.

Connectivity is particularly important for native fish. Connected rivers help fish move to find habitat, food, to breed and to spread to other locations.



In 2018–19, water for the environment flowed through the Macquarie Marshes, along the lower Macquarie River and into the Barwon River. Although a small flow, it was significant during the very dry conditions. The flow reconnected and refreshed numerous river pools along the Barwon river through to the Brewarrina Weir and helped to prevent native fish deaths.



Frogs

Wetland frogs in the Macquarie Marshes have benefited from the delivery of water for the environment each year. Water deliveries during spring helped to support the breeding and recruitment of frogs, such as the barking marsh frog, eastern sign-bearing froglet, Peron's tree frog, and the broad-palmed frog.

In drier years, when there is little other water in the Marshes system, water for the environment has been especially important for supporting wetland frog species and their habitat.



Our partners

Delivery of water for the environment in the Macquarie River Valley is planned and managed by the Commonwealth Environmental Water Holder and the NSW Department of Planning, Industry and Environment and DPI Fisheries.

The Macquarie Cudgegong Environmental Water Advisory Group, which includes community members from local interest groups and government, provides important local advice. Monitoring in the Macquarie is primarily undertaken by NSW agencies.

Local Engagement Officers

The Commonwealth Environmental Water Office has two Local Engagement Officers based regionally in the northern Murray–Darling Basin, who can be contacted for further information:

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