



Australian Government

Commonwealth Environmental Water Office



In partnership with:

Department of Planning,
Industry and Environment

Macquarie River Valley 2020–21: Event Update #4

Initial environmental outcomes, 4 February 2021

Objectives:

Supporting the recovery of native fish, particularly Murray cod, and core wetland vegetation in the Macquarie Marshes.

Timing:

October 2020 – February 2021

Target areas:

Mid-Macquarie River, Macquarie Marshes, lower Macquarie River.



Reeds and marsh club rush at Louden’s Lagoon (CEWO)

Progress of the flow

Water for the environment was delivered during October to support Murray cod, followed by a pulse to the Macquarie Marshes in November to disperse larval fish and help core wetland vegetation to recover from the drought.

Low flow rates (300–400 ML/day) have been provided to the Marshes through December 2020 and January 2021. These flows help wetland plants in inner core wetland areas to finish their growth cycles during the warmer months. This includes the North Marsh reedbed, which has been affected by both fire and drought. Waterbirds, fish, frogs and other plants and animals are also benefiting from these flows.

Rainfall and natural flow events in early January also benefited the Macquarie River and inundation in the Marshes. The delivery of water for the environment will finish in early February 2021.

Initial outcomes in the Marshes

Monitoring activities by NSW agencies are helping to assess the environmental response to the flows.

Wetland vegetation

Water for the environment has increased the growth, diversity and cover of wetland vegetation in the Macquarie Marshes. With some inundation continuing into the warmer months, wetland vegetation has grown well, especially in water couch and mixed marsh areas. The North Marsh reedbed is also being supported to grow, flower and recover.

Waterbirds

A range of waterbird species were observed responding to inundation in the Macquarie Marshes. Approximately four small (<100 nest) colonies of colonialy-nesting birds such as egrets, cormorants, darters and Australian white ibis have



Egrets displaying breeding colours, Macquarie Marshes (Nicola Brookhouse, NPWS)



been observed in the southern and northern Marshes during the past few months. We continue to monitor these sites and hope for rainfall that might increase the size and number of colonies. There have been observations of many different types of waterbirds breeding including ducks, swamphens, magpie geese and swans.



Kayaking in the Macquarie Marshes to check on waterbird colony sites November 2020 (NSW DPIE)

Other recent Marshes bird sightings include the migratory Latham's snipe and significant flocks of more than 500 sharp-tailed sandpipers, and EPBC-listed endangered species such as the Australasian bittern and Australian painted snipe.

Frogs

Surveys in October and November 2020 showed that frogs responded well at all survey sites that had been inundated. All six flow-dependent species were recorded, with four breeding in November. Delivery of water for the environment over summer will help maintain important habitat—particularly water couch—and allow tadpoles to grow into adult frogs.



A young spotted marsh frog in the Macquarie Marshes November 2020 (NSW DPIE)

Connectivity

The lower Macquarie River experienced prolonged dry conditions and the river stopped flowing for 14 months until conditions improved in late February 2020. Delivering water for the environment to the Macquarie River and Marshes has enabled flows to continue through the lower Macquarie River over spring and summer. Around 12 GL of water that flowed out of the Marshes has passed the Miltara gauge over the last four months. These flows have helped the Macquarie connect to the Barwon River providing opportunities for native fish to move between rivers.



Macquarie Marshes November 2020 (CEWO)

Contacts

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Previous event updates can be found at:

<http://www.environment.gov.au/water/cewo/catchment/macquarie/2020-21-macquarie-river-valley-updates>

We acknowledge the Traditional Owners of the Macquarie catchment and their continuing connection to land, waters and community. We pay our respects to them, their culture, and elders both past and present.