

Healthy Rivers,  
Healthy Communities

## Water for the environment supporting colonial waterbird breeding

### Water for the environment delivered to:



Support colonial waterbird breeding and feeding habitat



Maintain connection between the Macquarie River/Wambuul, Macquarie Marshes and Barwon River



Support native fish recruitment and movement



Support plants and animals to complete their life cycles

**Timing:** Summer to Autumn 2023

The Macquarie Valley experienced wet conditions for a second year in a row. With significant rainfall and river flows, Burrendong Dam remained above 100% of capacity between July 2022 and early February 2023, peaking at over 149% capacity in October 2022.

A combination of water from Burrendong Dam, rainfall and stream flows into the Macquarie River saw flows across 220,000 hectares of the iconic Macquarie Marshes in Spring 2022. This included outer floodplain areas that did not receive water in 2021 or 2016.



One of the waterbird colonies in the Macquarie Marshes. Photo: CEWO

Large volumes of water flowing into the Macquarie Marshes provided ideal conditions for waterbird breeding. Vast colonies of breeding ibis, egrets and herons started to form in Spring 2022, along with spoonbills, magpie geese, cormorants, and a range of non-colonial species like ducks.

The Macquarie Marshes support some of the largest colonial waterbird breeding events in Australia. In 2021–22, the Marshes were home to an estimated 150,000 pairs of colonial waterbirds plus many more non-colonial species. The spring-summer 2022–2023 breeding event is a similar size, or larger.

Water levels in the Marshes have been largely controlled through flood management tools at Burrendong Dam, with advice from NSW environmental water managers.

To date, the colonies have been progressing well, with many chicks already out of their nests and flying around. However, water for the environment will need to be delivered in February and March 2023 for some colonies to be successful.



Egret chick, Macquarie Marshes. Photo: CEWO. Photo taken during approved scientific monitoring.

## Supporting waterbirds with water for the environment

Water for the environment is being delivered to the Marshes for around one month between mid-February and mid-March 2023 to support the remaining waterbird colonies through to completion.

Water for the environment delivered to support nesting waterbirds also provides food and wetland areas for baby birds to explore. The water will also maintain flow connection to the Barwon River to support native fish movement.

Subject to rainfall, up to 50 gigalitres of Commonwealth and NSW water for the environment will flow into the Macquarie Marshes during this time. The amount of water delivered will be adjusted based on rainfall and other flows in the system plus the needs of the colonies.

## Why is water for the environment needed now?

While the first half of the water year (late 2022) was very wet, conditions have dried down over Summer. Drier conditions, along with the end of the use of flood management tools at Burrendong, mean colonies with younger chicks are at risk of predators and nest deserting as water levels decline. Adult birds rearing baby birds and young new to flying also need a secure food source.

With bird populations in decline over the last 40 years, it is important to support waterbird breeding events when nature triggers them.



*White Ibis chick. Photo: CEWO. Photo taken during approved scientific monitoring.*

## Monitoring colony health

The University of New South Wales (UNSW) and the CSIRO conduct monitoring of waterbirds on behalf of the CEWH, which complements regular monitoring by the NSW Department of Planning and Environment (DPE). Local landholders also assist greatly in colony observation.

This work records colony sizes, stages of development, water depth and quality and other information to inform water management decisions to support the colonies and their feeding grounds. Monitoring resources are provided by the NSW DPE and the Commonwealth Environmental Water Holder (CEWH).

## Our partners

The CEWH works with NSW DPE – Environment and Heritage Group in consultation with the Macquarie–Cudgegong Environmental Water Advisory Group to deliver water for the environment. This advisory group includes representatives from local landholders, the irrigation industry, relevant agencies, environment groups and the Aboriginal community.



*Staff wading in to undertake waterbird monitoring. Photo: CEWO*

## Contacts

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*We acknowledge the Traditional Owners of the Murray–Darling Basin. We pay our respects to them and their elders past, present, and emerging.*