Australian Government
Commonwealth Environmental Water Holder

FLOW Monitoring Evaluation Research

Flow-MER Area-scale Project Highlights
Quarter 4 (April - June 2026)

Flow-Monitoring, Evaluation and Research (Flow-MER) is the Commonwealth Environmental Water Holder's (CEWH) Science Program. The CEWH uses Flow-MER to adaptively manage Commonwealth environmental water in the Murray–Darling Basin (the Basin), demonstrate outcomes, and meet our legislative reporting requirements.
This document is a summary of highlights from across the Flow-MER Program's Area-scale Projects for the period April - June 2026.

www.flow-mer.org.au

1 Lower Balonne River System

Waterbird surveys at Narran Lake Nature Reserve recorded 23 waterbird species. Grey teal were the most abundant species. A highlight sighting was the white-bellied sea eagle, which is a vulnerable species. These results suggest recent flows are supporting large numbers of birds in the wetland. They demonstrate flooding events are vital for waterbird habitat in the Narran Lakes system.

Researchers and project partners worked with Cultural Advisor Kevin Knight. Together they continued documenting cultural knowledge and river stories along the Darling / Baaka River. Discussions focused on cultural outcomes for the Flow-MER Program. They looked at how water management can better support Country and cultural values, including through ongoing engagement with the Toorale Joint Management Committee.

2 Border, Barwon and Namoi River Systems

In May, researchers recorded more than 200 river red gum seedlings in the Border Rivers following recent flow pulses. Past surveys across the region have shown that although large numbers of seedlings can establish after flows, many die within the first year. Monitoring their growth and survival helps researchers identify the conditions young trees need to persist. This knowledge supports environmental watering aimed at maintaining healthy riparian forests for the future.

3 Gwydir River System

Year 8 students from St Philomena's School in Moree joined an on-Country learning event at Whittaker's Lagoon, where they explored Gomeroi knowledge of wetland plants and their cultural uses. Students took part in hands-on activities including seed sifting, weaving and tasting native millet pancakes. The experience highlighted the importance of water in supporting healthy wetlands, ecosystems and communities.

4 Darling and Warrego River Systems

Monitoring recorded about 2,600 pelican chicks at a breeding colony at Lake Cawndilla North. Most chicks were close to fledging. Flocks of up to 600 pelicans were seen in the Lower Darling / Baaka River region. This is likely linked to the breeding event. Researchers rarely document pelican breeding in this area. These results help researchers identify the conditions that support breeding.

Fish monitoring in the Darling / Baaka, Great Darling / Baaka Anabranch and Warrego / Warriku rivers showed strong evidence of golden perch / kunpali breeding. There were hundreds of young fish seen near Louth. Over 200 golden perch and 24 Murray cod / partnu were recorded in the Lower Darling / Baaka River. The broad range of fish sizes shows the importance of river connectivity in supporting recruitment and fish population health.

5 Macquarie River and Marshes

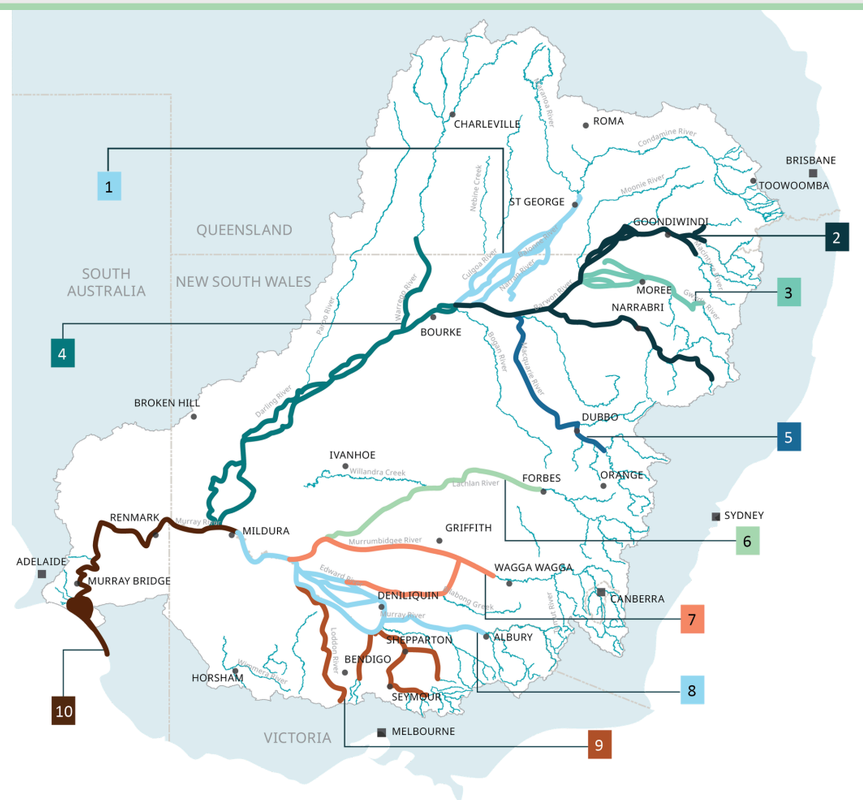
Annual vegetation surveys recorded 118 plant species across 73 sites. This shows strong native plant diversity, even though most of the marshes were dry. The results will be combined with satellite and drone imagery to help track ecological change and support future water management decisions.

Tracking data in the Macquarie Marshes show that broad-shelled turtles can travel surprisingly long distances in response to river conditions. One turtle moved a total of 71 km in 7 months. The study is improving understanding of how turtles use wetland habitats.

6 Lachlan River System

A drone monitoring method developed by University of Canberra researchers is now being used in the Lachlan Area. It is used to assess the health of river red gums in the Great Cumbung Swamp. This new approach builds on earlier Flow-MER-funded drone research. It uses cameras and LiDAR sensors to measure vegetation condition, height and cover. The method accurately identified shrubs and trees more than 92% of the time. It offers a faster, less labour-intensive alternative to ground-based surveys. This method may also be applied to monitoring other floodplain plant species in the future.

Southern bell frogs are continuing to expand across the Great Cumbung Swamp. Surveys in 2026 confirm the species is now widespread across more than 320 km² of the lower Lachlan. Nearly two-thirds of frogs recorded were juveniles or subadults. This provides strong evidence of ongoing breeding and recruitment. Genetic analysis suggests the population originated from the Lowbidgee Floodplain. It has established what is effectively a fifth key population in NSW. This highlights a significant recovery for the threatened southern bell frog.



7 Murrumbidgee River System

Four PhD students from Bhutan and Pakistan are currently working with the Flow-MER Murrumbidgee team to investigate how environmental water supports native vegetation, fish and waterbirds. Their research combines field monitoring with technologies such as satellite imagery, acoustic recorders, drones and machine learning.

8 Mid-Murray River System

Citizen scientists are helping improve understanding of river flows across the Mid-Murray. Trained volunteers collect water level data at sites lacking automated monitoring. They use a purpose-built phone app to submit water level observations and photographs. This provides useful information to support data collected from hydrometric monitoring stations.

Annual fish surveys recorded strong numbers of Murray cod in the Wakool River. Catch rates were comparable to those seen before the record 2022 flood. Young-of-year Murray cod were found across the system. This indicates successful breeding and recruitment. Improved catch rates also suggest native fish populations are recovering from the poor water quality and fish deaths associated with the flood.

First Nations women from the Mid-Murray and Murrumbidgee came together at Yarkuwa Indigenous Knowledge Centre for a two-day Knowledge Sharing event. The gathering focused on cultural learning, connection and relationship building. Representatives from Wamba Wamba, Perrepa Perrepa, Duduroa Dhargal, Wiradjuri and Mutthi Mutthi Nations shared knowledge through yarning, weaving and paper bead making.

9 Goulburn River and Northern Victorian Tributaries

Twenty adult golden perch were fitted with acoustic tags in the Campaspe River. This was done as part of a new monitoring project. The project examines native fish responses to river flows and environmental water deliveries. Listening stations along the Campaspe and Murray rivers will track fish movement and migration patterns to inform future water management decisions.

10 Lower Murray and Coorong, Lower Lakes, and Murray Mouth

Monitoring across the Lower Murray recorded widespread spawning activity by native flow-cued fish during the 2025–26 spawning season. This included approximately 1,000 eggs and larvae from both golden perch and silver perch. Young-of-year Murray cod, golden perch and silver perch were detected during fish surveys. This indicates successful breeding across the system. Most eggs and larvae were collected from NSW sampling sites. These results highlight the importance of this area as a key spawning zone for native fish.