Australian Government
Commonwealth Environmental Water Holder

FLOW Monitoring Evaluation Research

Flow-MER Area-scale Project Highlights
Quarter 2 (October - December 2025)

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 Oct-Dec 2025.

www.flow-mer.org.au

1 Lower Balonne River System

Researchers recorded over 180 wetland plant species in a comprehensive vegetation survey. This establishes a crucial baseline for future environmental water management decisions. The survey showed lignum shrublands expanding in favourable wet conditions. It also documented evidence of recovery from the 2023 fire.

The first fish surveys at Narran Lakes since 2008 found fewer species than expected. There were signs that golden perch are recovering well after years of drought. Carp dominance continues to put pressure on native species.

Flow-MER scientists, government staff, Dharriwaa Elders Group Rangers, a Yuwaalaraay/Euahlayi and Gamilaroi Elder and Narran Lakes Joint Management Committee member, and Queensland Murray Darling Catchment Aboriginal Rangers came together for a knowledge exchange field trip. The trip was to share traditional knowledge about caring for Country.

2 Border, Barwon, and Namoi River Systems

Vegetation monitoring along the river at 20 sites found about 100 plant species. Native species made up 60%. There was strong Eucalyptus seedling growth and thriving lignum shrublands.

Spring surveys at 10 sites measured 1,522 fish for length, weight, and condition. Small-bodied fish are useful indicators of wetland health. They provide food for larger fish and waterbirds. Native carp gudgeons and Australian smelt were found successfully breeding in multiple sites.

3 Gwydir River System

Spring surveys recorded 38 species across 25 wetland sites. Notable species include the brolga and magpie goose. Babies of 5 different bird species were seen. This demonstrates the wetlands are providing excellent breeding habitat.

The team hosted a stall at the Black Gully Festival in Armidale. They engaged the community in collecting and identifying macroinvertebrates (waterbugs). The focus was on how everyone can help keep the Gwydir (Guwayda) River headwaters healthy.

4 Darling and Warrego River Systems

Flows including environmental water helped reconnect the Great Darling Anabranch from Lake Cawndilla to the Murray. It also freshens refuge pools and gives opportunities for native fish to move downstream.

Plant cover and plant species diversity have both increased from spring 2024. This follows the floodplain flow in autumn–winter of 2025. At one site the number of species doubled to 14, while bare ground dropped from 30% to 5%.

A collaborative paper was published in October. It looks at ways Aboriginal and non-Aboriginal scientists can work together on monitoring and managing freshwater systems.

5 Macquarie River and Marshes

A multi-year study tracked over 200 golden perch with acoustic tags across 500 km of river. It confirmed these fish travel huge distances between different rivers. This major study identified key barriers blocking fish movement. It shows where water flow management is of critical importance.

The Project team held their first landholder barbecue. This brought together landowners and researchers. Private landowners control 88% of the Marshes' 200,000 hectares. This event strengthens the crucial partnerships needed for successful ecosystem management.

6 Lachlan River System

Over the last 2 years, a 3-stage water flow method was employed. The flow method is designed to help Murray cod spawn and raise their young. Two sampling trips were undertaken in October 2025, with samples to be processed in 2026.

An environmental water trial brought together farmers, scientists, and government agencies. It delivered environmental water to two properties in the Jemalong Irrigation Area. A short film was produced, which shows vegetation recovery and increased birdlife. It also shows the benefits for landholders at both sites.

7 Murrumbidgee River System

Researchers conducted vegetation surveys at 18 sites. Locations included the mid-Murrumbidgee, Redbank, Western Lakes, and Gayini Nimmie-Caira areas. The North Redbank site was full, with a high diversity of amphibious species. At Bala in Gayini Nimmie-Caira, there were signs of lignum growth after a long time underwater.

Surveys were conducted across 8 sites in North Redbank and Gayini Nimmie-Caira. Researchers recorded a broad range of frogs, including 1,244 tadpoles at Murrundi. Three large broad-shelled turtles at Bayil Creek were also recorded. This suggests a balanced ecosystem that has been stable long enough for turtles to reach a large size.

Researchers worked with First Nations field staff. They came from Mutthi Mutthi and Nari Nari Tribal Council Rangers for monitoring. Over 30 community members participated in a bioblitz, led by the Cultural Advisor and a Wiradjuri Aboriginal Landcare Officer.

8 Mid-Murray River System

Researchers are tracking silver perch in the Mid-Murray using PIT and acoustic tags. They are monitoring how the fish move through fishways and river structures. The Mid-Murray River is important for silver perch. It offers long stretches of fast-flowing permanent water. This helps the species survive, grow, and maintain healthy numbers.

The Edward/Kolety-Wakool Environmental Water Reference Group visited the Deniliquin–Wakool area. They explored local creeks and wetlands. The group met with landholders and learned about environmental watering. They also spent time together on Country.

Mid-Murray Flow-MER researchers and Yarkuwa River Rangers attended a joint New Zealand and Australian Freshwater Science Society (AFSS) conference. They presented collaborative work on environmental flows and water quality. They also shared their work on Indigenous engagement in river management.

9 Goulburn River and Northern Victorian Tributaries

Surveys of larval fish took place in the Lower Goulburn River, Broken, Campaspe, and Loddon rivers. Field observations suggest Murray cod reproduced in the Lower Goulburn River in 2025. This is a significant breeding success for this iconic native species in the area.

Staff attended a workshop with the Burnanga Indigenous Fishing Club. They talked about how the Goulburn Broken Catchment Management Authority and the GRANT Area-scale Project team could help support a Yorta Yorta-led cultural monitoring project.

10 Lower Murray and Coorong, Lower Lakes and Murray Mouth

Native fish egg and larval samples were collected. Further lab testing will help identify species and numbers. This information will help us understand breeding success.

A new computer model has been developed to better understand water flows around weirs 7-9 in the Lower Murray River. This model will show how water moves through the river and affects habitats.

Members of the Lower Murray team won the Delivering Better Outcomes for Aboriginal Communities award. It recognised the collaborative Pondi (Murray Cod) monitoring work between the South Australian Research and Development Institute Inland Waters and the Ngarrindjeri and River Murray and Mallee Aboriginal Corporations.