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Monitoring
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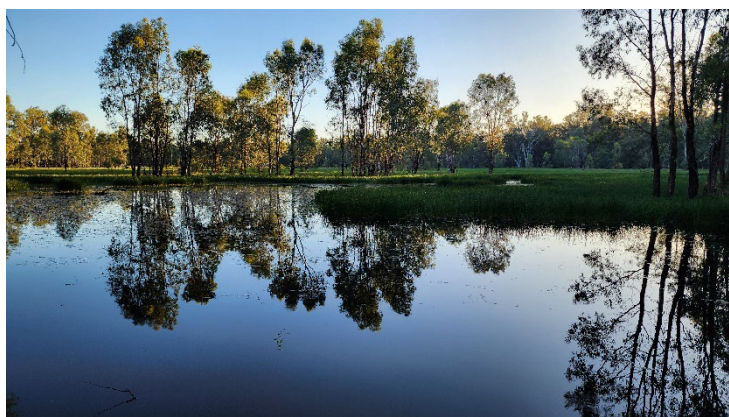


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Murrumbidgee Quarterly Snapshot – December 2024

The Murrumbidgee Flow-MER team has been busy in the field during November and December, conducting monitoring of vegetation, fish, frogs, tadpoles, turtles and waterbirds. We've also been actively engaging with First Nations – the Mutthi Mutthi, Nari Nari and Wiradjuri, and with the broader community, holding citizen science activities at three schools in Narrandera.



Steam Engine Swamp following environmental watering November 2024 Photo: Emmalie Sanders.



Native vegetation

We carried out the first vegetation ground surveys in early November, monitoring the vegetation using transects at 19 sites over 5 days. The vegetation appeared to be responding well to Commonwealth and NSW environmental water delivery, with North Redbank sites looking particularly lush. On the trip we maintained the acoustic equipment (recording calls of bats and frogs) and replaced some of the call recorders with solar powered units.

Dawa, our team PhD candidate from Bhutan, tested methods to assess the health of river red gums and black box trees as part of developing his methodology. His project will focus on the relationship between tree health and environmental watering to inform water management.



Monitoring vegetation in the bed of a dry wetland in Yanga National Park, November 2024.

Photo: Skye Wassens



Cultural outcomes

With a Mutthi Mutthi Elder we held a Community Yarn-up day at Regatta Beach, Yanga National Park in early October. The event was designed to help us build and foster relationships with the Mutthi Mutthi and begin to explore First Nations perspectives relating to water for the environment and monitoring. It was a valuable get-together, and we look forward to organising future events with the Mutthi Mutthi.

We also worked with our Cultural advisor and Wiradjuri Aboriginal Liaison Officer to undertake citizen science activities in Narrandera schools for the Aussie Bird Count, Waterbug Blitz and FrogID week. Highlights included observing some spoonbills and a diversity of waterbugs at the Narrandera wetland. These activities were highly effective in engaging students and fostering a curiosity in nature.

In early October we worked with Nari Nari rangers to download and maintain call recorders at three Gayini sites:



The Flow-MER Program team acknowledges the First Nations communities of the Murray–Darling Basin and pays respect to Elders past and present. We acknowledge First Nations people as the Traditional Owners of the land, water and sky Country across the Basin and value the expertise, wisdom and enduring connections that have informed their care for Country over millennia. We recognise the intrinsic connection of First Nations people to Country, and we value the enduring cultural, social, environmental, spiritual, and economic connection to the rivers, wetlands, and floodplains of the Basin. Artist: Rebecca Salcole

Banim, Bayil and Bala. We ventured out again in late November to discuss potential sites at Gayini to undertake monitoring of lignum stands. Three sites were identified for further discussion and on ground inspection in early February. It was a worthwhile trip with valuable discussions with the Nari Nari around selecting suitable monitoring sites to observe lignum under different watering regimes.



Native fish

In November our team of 4 field staff surveyed 8 wetlands over 5 days for fish, frogs, tadpoles and turtles in the lower Murrumbidgee. Surveys targeted wetlands that were receiving Commonwealth environmental water in the North Redbank and Western Lakes systems. Highlights included hundreds of Southern bell frog (EPBC Act vulnerable) tadpoles as well as calling adults at multiple sites in Western Lakes and North Redbank. We also recorded barking marsh frog, spotted marsh frog, Peron's tree frog, giant banjo frog, and plains froglet. We recorded native fish including flat-headed gudgeon, bony bream and Australian smelt, along with eastern long necked turtles.



*Field staff monitoring fish at Hobblers Lake, November 2024.
Photo: Emmalie Sanders*



Field staff monitoring fish and frogs at Hobblers Lake, November 2024. Photo: Emmalie Sanders.

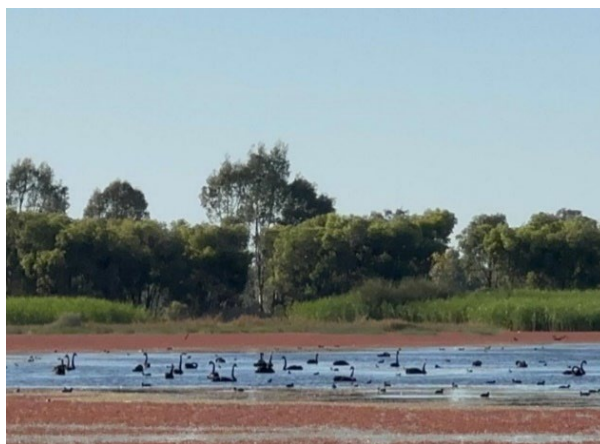


Southern bell frog tadpole, November 2024. Photo: Emmalie Sanders.



Waterbirds

Waterbird surveys were undertaken early December at 13 sites across the North Redbank and Western lakes as part of the “after” monitoring trip to assess the system following Commonwealth environmental water delivery. Complementary NSW surveys were also undertaken in October. Overall, waterbird abundance has increased by approximately 22%, and species diversity by 20% compared to August. Lakes in the Western Lakes recorded the highest abundance, consistent with the previous survey, while sites in North Redbank had the greatest species diversity. Commonly observed species included Eurasian coot, Australian wood duck, grey teal, and pied cormorants. While no EPBC-listed threatened species were detected during this trip, state-listed species such as musk duck and white-bellied sea eagle were observed. Additionally, three Australian painted snipe (EPBC Act endangered) were recorded at Western Lakes in November during vegetation surveys.



Black swans at Cherax, November 2024. Photo: Emmalie Sanders.