

Wambuul Macquarie-Cudgegong Environmental Water Advisory Group

Meeting summary 7-8 May 2024

On 7 and 8 May 2024, the Wambuul Macquarie-Cudgegong Environmental Water Advisory Group (EWAG) met in Dubbo to consider and recommend environmental watering objectives and use for the 2024-25 water year.

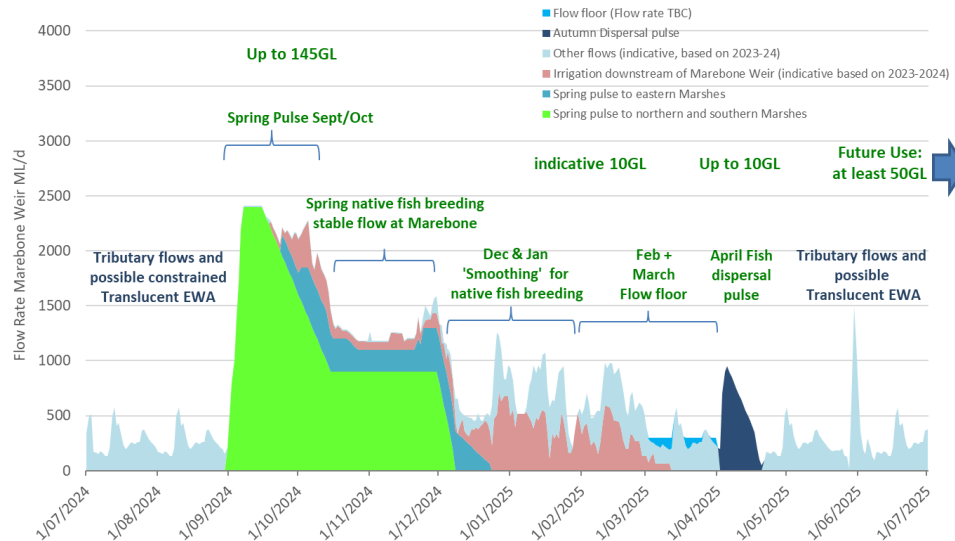
Strategic planning session

Based on generally average rainfall forecasts and outcomes of environmental watering last water year, in the 2024-2025 water year it was recommended to target several annual objectives to contribute to a series of multi-year objectives. A series of watering actions were then recommended to meet these aims.

Proposed Wambuul-Macquarie River actions 2024-25

- 1) To maintain the health of mixed marsh and river red gum woodlands and support wetland-dependent fauna, a spring flow pulse targeted at the Wambuul-Macquarie River in September and October 2024 will be provided. This pulse aims to inundate approximately 20,000 hectares of the Macquarie Marshes wetlands for at least three months during the peak productivity period.
- 2) The group endorsed a watering strategy for the Eastern Marshes subsystem that prioritises a minimum flow duration. This strategy incorporates a two-year watering outlook, establishes flow triggers, and aims to provide at least 90 continuous days of inundation in the Eastern Marshes using all available water sources. To further optimise the approach, water managers will actively consult with Eastern Marsh landholders to identify and refine the strategy.
- 3) To address the decline in native fish populations downstream of Warren caused by the 2017-2019 drought, four specific actions were recommended:
 - a) Provide a stable river flow, approximately 1,000ML/d from mid-October to 1 December 2024 to assist native fish nesting, particularly for Murray Cod.
 - b) Work with river operators and the irrigation industry to smooth higher river flows and minimise sharp rises and falls in water levels during December and January, to assist breeding of summer-nesting fish, like freshwater catfish.
 - c) Over February and March, provide a flow floor (minimum daily flow) to assist young-of-year native fish find shelter and food, ultimately increasing their survival to juveniles.
 - d) To allow native fish to move and disperse into new habitat prior to winter, a small flow pulse will be provided in Autumn 2025 if not provided by other water sources.
- 4) Retain no less than 50GL for the 2025-26 water year for future use.
- 5) This watering strategy will support waterbird habitat and vegetation health in key nesting and foraging sites within the Macquarie Marshes. The spring flow pulse will increase the productivity of the Wambuul-Macquarie River leading into warmer months which will increase available food supplies for native fish, platypus, rakali (water rats), yabbies, mussels and a range of other aquatic animals.

Figure 1 Recommended indicative flows at Wambuul-Macquarie River at Marebone

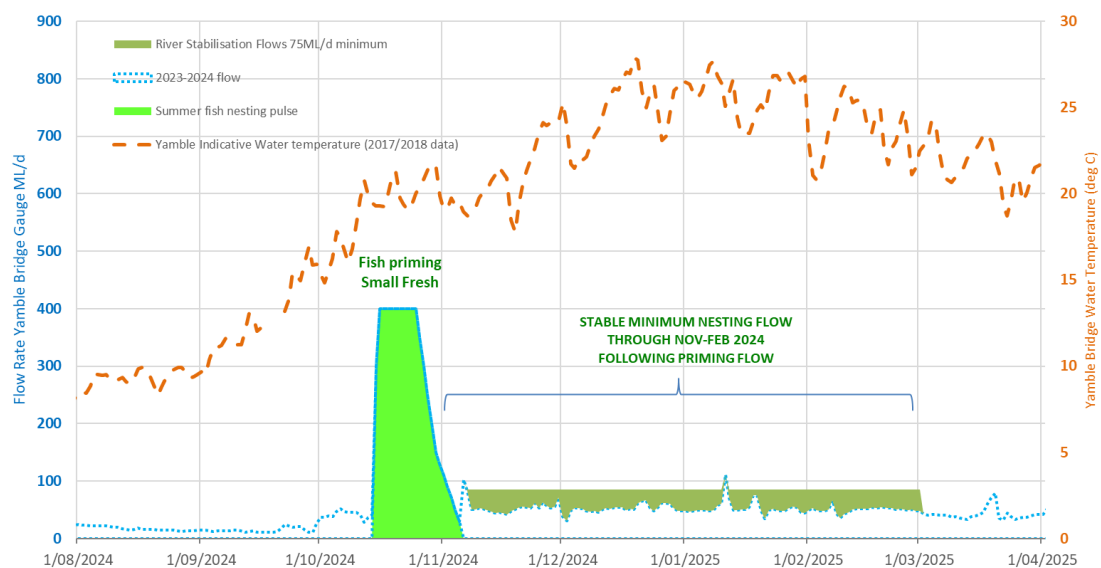


Proposed regulated Cudgegong River actions 2024-25

To further enhance river productivity and significantly boost native fish breeding in the Cudgegong River, the group recommended a similar set of objectives and watering approach to 2023-24. The actions include:

- 1) A small pulse flow in late October 2024, timed with rising water temperatures, to boost productivity and prime the regulated Cudgegong river for native fish spawning.
- 2) Elevated base flows through summer 2024-25 to benefit species like Murray cod, catfish, and other small-bodied native fish during their breeding season.
- 3) At least 5.3 gigalitres (GL) of water will be retained for future use in 2025-26.

Figure 2 Recommended indicative flows at Rocky Waterhole in the Cudgegong River



Monitoring and communications planning 2024-25

To support informed decision-making and reporting, a set of monitoring activities are planned. These include:

- Routine surveillance of environmental flows by NSW regional staff.
- Inundation mapping of the Macquarie Marshes using remote sensing
- Field surveys of frogs, birds, and vegetation within the Macquarie Marshes.
- Completion of the 2022 Macquarie Marshes vegetation community extent map.
- Native fish monitoring in the Wambuul-Macquarie and Cudgegong Rivers, where it can be resourced.
- Engaging researchers around Cudgegong River flow management questions.

Communications to promote the watering approach and outcomes are also planned, including a range of traditional media activities (newspaper articles, website entries) and contributing to a newsletter series prepared by the Commonwealth.