

Statement from Dharriwaa Elders Group regarding the completion of Toolkit Measures' Fishways in Walgett Shire. 5 August 2025.

Native fish

There are 86 species of freshwater fish in south-eastern Australia, 36 of which migrate at some time in their life. These species in particular need free and unimpeded passage along river channels to be able to successfully feed and breed.¹ Golden Perch, Silver Perch, Murray Cod and Bony Herring are examples of species that move long distances throughout the river system in spring, summer and autumn.² Some species can travel hundreds to thousands of kilometres throughout the Basin.

River development by dams and weirs

The Murray-Darling Basin is a highly developed river system with 56 major water storages³ and more than 4000 weirs.⁴ These structures alter flow and create barriers to fish passage up and down the rivers. Weirs and dams form pools of still water upstream, creating ideal habitat for algal blooms and introduced species such as European carp.

They restrict the downstream drift of fish larvae and create barriers for movement of all fish. This disruption of the movement and life cycle of native fish is one of the main contributors to the decline of the number of native fish in rivers.

Fish trapped above and below weirs and dams are at risk of increased predation, disease, and even localised extinctions as recruitment is decreased and populations may not be able to reach breeding grounds.⁵

Studies have found that undershot weirs, in which the water is released from the bottom of the weir at high pressure, can cause the death of 95% of Golden Perch larvae and 52% of Murray Cod larvae.⁶ The Gunidgera Weir on the Namoi River at Wee Waa is an example of this kind of dangerous weir.

Fishways

Unlike fish in the Northern Hemisphere, Australian native fish are unable to swim up and over the artificial drop caused by weirs and dams. To address this, fishways are built that allow fish to bypass dams and weirs, creating a series of 'ladders' and baffles that provide small changes in water levels, and places to rest.⁷

The design of a fishway needs to accommodate the swimming ability and physical characteristics of native fish. Smaller fish are usually weaker swimmers and need shallow gradients to ascend the

¹ Mallen-Cooper, M. (1996). Fishways and freshwater fish migration on South-Eastern Australia. University of Technology, Sydney, Faculty of Science.

² Baumgartner, L., Zampatti, B., Jones, M., Stuart, I., Mallen-Cooper, M. (2014). *Fish passage in the Murray-Darling Basin, Australia: Not just an upstream battle*. Ecological Management & Restoration. Vol 15, Issue s1 pp. 28-39

³ [Bureau of Meteorology 2025](http://www.bom.gov.au/water/nwa/2017/mdb/regiondescription/geographicinformation.shtml), *Murray-Darling Basin: Region description*, Australian Government, accessed July 2025 <<http://www.bom.gov.au/water/nwa/2017/mdb/regiondescription/geographicinformation.shtml>>

⁴ Department of Primary Industries 2023, *Dams and weirs*, NSW Government, accessed July 2025 <<https://www.dpi.nsw.gov.au/dpi/fishing/fish-passage-nsw/barriers-to-fish-passage/weirs>>

⁵ Department of Primary Industries 2023, *Improving fish passage*, NSW Government, accessed July 2025 <<https://www.dpi.nsw.gov.au/dpi/fishing/fish-passage-nsw/improving-fish-passage>>

⁶ Baumgartner, L., Reynoldson, N., and Gilligan, D. (2006). *Mortality of larval Murray Cod (Maccullochella peelii peelii) and Golden Perch (Macquaria ambigua) associated with passage through two types of low-head weirs*. *Mar Freshwater Res.* **57**: 187-191.

⁷ Department of Primary Industries 2023, *Fishways*, NSW Government, accessed July 2025, <<https://www.dpi.nsw.gov.au/dpi/fishing/fish-passage-nsw/improving-fish-passage/fishways>>

fishway. Fishways must be deep enough for larger fish but must also reduce turbulence and gradient to prevent harm to juveniles.

Removal or modification of in-stream barriers provides benefits beyond fish passage, resulting in better water quality, improved genetic diversity of fish populations, greater biodiversity and improved river connectivity.⁸

Toolkit Measures Fishways in the Walgett Shire in the Northern Murray Darling Basin.

The proposed fishways at Calmundi, Banarway, Louth and Tilpa Weirs are part of the 'toolkit measures'⁹ agreed to in the Northern Basin Review¹⁰ in 2016.

The toolkit measures were part of the argument that the Murray-Darling Basin Authority used to justify the reduction in environmental water to the Northern Basin by 70,000 megalitres (70 gegalitres) ie allowing 70 GLs of water that were originally to be left in the river for river health, to be extracted by irrigators. The argument was that if fish could travel up and down the river more easily they wouldn't need as much water.

The water was taken from the environment and there are still many weirs in the Northern Basin in NSW where fishways still haven't been built.

The fishways have been agreed to, and the Commonwealth Government has set aside the money to pay the NSW Government to build them. They were agreed to be finished by June 2024, but that has now been delayed until December 2026. As part of these projects, the NSW Government is looking at increasing water stored in weirs. This funding is one of the many ways that the Australian taxpayer has been subsidising the irrigation industry with money that is supposed to be for the environment.

The health of our rivers at Walgett has been suffering because of the blockages to flows that weirs create. **Dharriwaa Elders Group asks the Commonwealth Government to ensure that the toolkit measures' fishways are built, without increasing the storage capacity of weirs, and without any further delays.**

⁸ Department of Primary Industries 2023, *Dam and weir remediation*, NSW Government, accessed July 2025
<<https://www.dpi.nsw.gov.au/dpi/fishing/fish-passage-nsw/improving-fish-passage/weir-remediation>>

⁹ <https://www.dcceew.gov.au/water/policy/mdb/northernbasin/northern-basin-toolkit>

¹⁰ <https://www.mdba.gov.au/water-management/northern-basin>
