

Community update on response to fish deaths in Menindee and Lower Darling

Current situation

The risk of further large-scale fish deaths is still a possibility.

This is particularly the case for Bony Herring in the river reach between Lake Pamamaroo and Weir 32, which boomed during the recent floods and many may now be in poor condition and more susceptible to environmental stresses.

Our water quality monitoring is showing continued improvement in dissolved oxygen levels in the Darling River at Menindee. In addition to the release of oxygenated water from lakes Pamamaroo and Menindee, the cooler water temperatures as air temperatures fell over Winter have seen dissolved oxygen levels recover. These circumstances are all helpful to the survival of fish.

However, blue-green algae is now starting to cause some concern as blooms, of varying severity, are being detected in the Menindee Lakes and the lower Darling River. [Red Alerts](#) are currently in place for the Darling River at Pooncarie, Burtundy, Tolarno and Talyawalka Creek at Menindee-Pooncarie Road Crossing.

Algal blooms persisted within the Weir 32 weir pool. Lake Wetherell and some of the small upstream lakes also have higher concentrations of algae. The larger lakes - Pamamaroo and Menindee - do not have large algae blooms present, but algae has been detected. The pulsed releases that commenced on 19th August, and ran for 3 days, helped to dissipate the blooms in Weir 32, as well as downstream in the lower Darling Baaka.

What are the key challenges?

We face challenges from the reduction of dissolved oxygen levels caused by:

- temperature increases
- the enormous population of carp and bony herring that boomed during the last three years due to floods,
- further algal blooms
- the impacts of agriculture
- several weirs which affect flows and fish migration (fish are trapped between main weir and weir 32).

What is being done?

Increased flows to support Murray cod nesting commenced from 19 August. These annual increased flows are usually released from Lake Menindee, but at this time they are being released from Lake Pamamaroo. This is being done to have the dual impact of supporting Murray Cod breeding further downstream while also ensuring dissolved oxygen levels are maintained in the river each between Lake Pamamaroo and Weir 32.

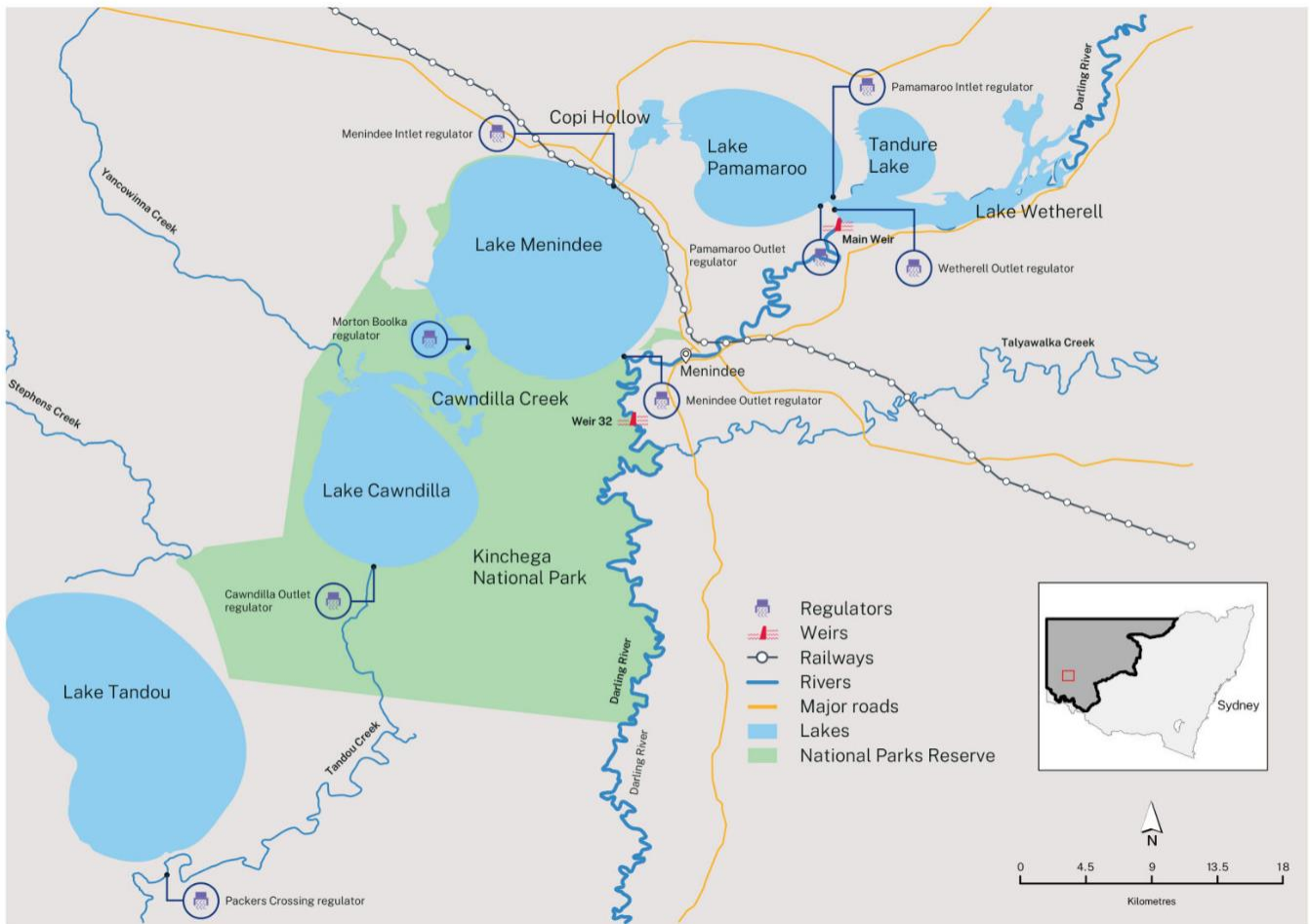
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The flows have had the added benefit of helping to combat the increased algal blooms and associated water quality issues in the lower Darling River.

At present, flows of 500M/L a day from Lake Pamamaroo are planned to continue until early December, but we will continue to monitor, and make adjustments based on water quality information, and the need to balance that with conserving water in the top lakes.

MAP



How will the Lakes and water quality be managed during the coming summer?

Balancing fish health with the need to conserve water in the top lakes at Menindee as we move into summer, coupled with the potential for severe dry weather as a result of the now confirmed El Nino event, is the situation we need to address.

We know there is still a large number of fish, predominantly Bony Herring and Carp, between Pamamaroo outlet and Weir 32. If we continue to release water from Lake Pamamaroo, we face the possibility of bringing forward the drought management procedures for Menindee Lakes earlier than would be expected under the current conditions.

If we cease flows from Lake Pamamaroo, we face the possibility of more fish deaths as the weather gets hotter. There is also the real possibility that even with water continuing to be released from

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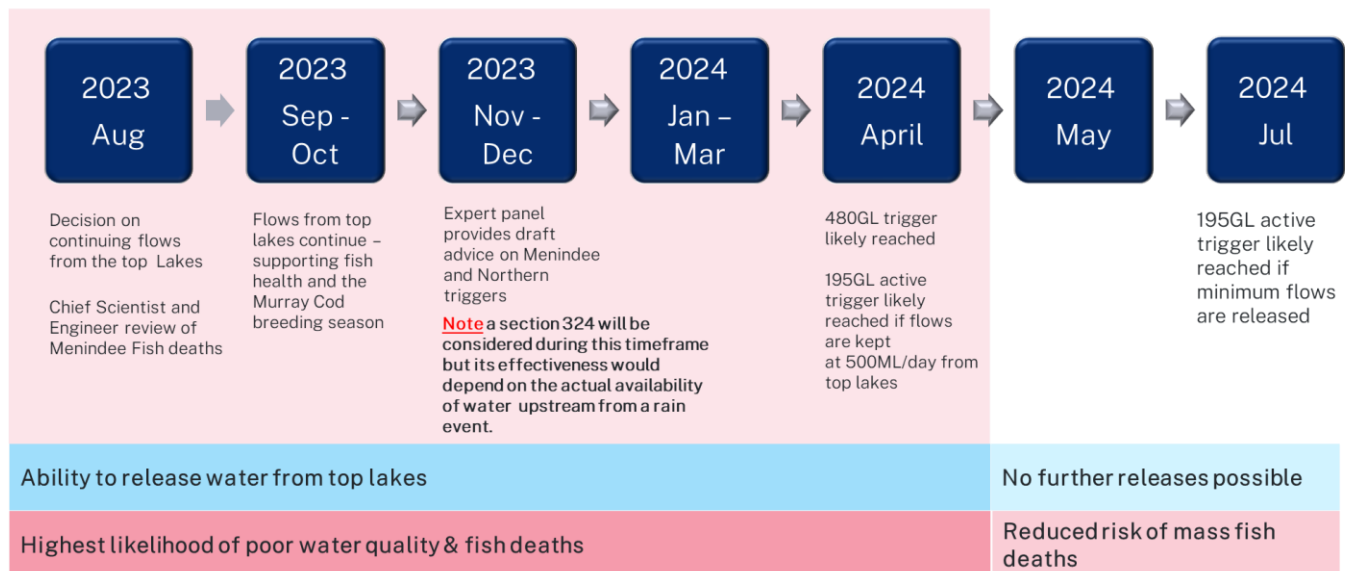
Lake Pamamaroo that fish deaths will occur as food resources are depleted in this stretch of the river. It is evident there is no easy answer as to how this situation can be managed.

Will water take from the northern basin be restricted?

Section 324 of the Water Management Act 2000 (the Act) allows the Minister or a delegate to direct, by order, that temporary water restrictions within a water source(s) have effect for a specified period, if these restrictions are determined to be in the public interest.

Applying this order would require there to be enough water upstream of Menindee and other towns on the Darling Baaka to ensure those towns critical water supply is not impacted.

Timeline of critical events



What other actions are being considered?

We have welcomed the findings of the Independent Review by the Office of the Chief Scientist & Engineer. We are getting on with actioning those recommendations including investigating immediate and long-term solutions like:

- Change infrastructure and remediate fish barriers so fish are not trapped and can move away from poor quality water in extreme events.
- Embed water restrictions in water sharing plans to provide certainty around when licence holders upstream will be restricted to support flows for water quality and downstream critical needs
- Invest in land management and rehabilitate riverbanks and floodplains can help reduce the risk of pollutants and sediments entering water ways
- Fill data gaps to make sure the best decisions are made with the best available information in future events

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- Establish accountability and responsibility for water quality in NSW so there is a sustained focus on improving water quality with clear accountabilities (currently running as incident response)
- Viability of recirculating pumps being investigated
- Pulsed releases (already used as a tool)
- Exploring funding options with the Commonwealth for fish passage projects
- Improving river connectivity through actions identified in the Western Regional Water Strategy
- Established an Expert Panel on connectivity in the Barwon Darling River, commenced 4 September 2023, report draft due Nov 2023 and final Mar 2024

Where else can I find information?

Information about the monitoring, management and maintenance of water quality, including detailed community updates from the Department of Planning and Environment, is available online: www.industry.nsw.gov.au/water/allocations-availability/droughts-floods/drought-update/managing-drought-recovery/blackwater

www.water.dpie.nsw.gov.au/menindee/community-updates-and-frequently-asked-questions

Observations of changes to water, including struggling fish or deaths can be reported directly to DPI Fisheries on 1800 043 536.

For more information about fish kills, as well as recent reports of observations and causes, visit: www.dpi.nsw.gov.au/fishing/habitat/threats/fish-kills

These types of events can be distressing to members of the community, and anyone who requires health, welfare or other support can contact local community support services. A comprehensive list of services can be located online: www.service.nsw.gov.au/transaction/customer-support-service-infoxchange-service-seeker