

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

## Pulse flow of water required to address deteriorating water quality conditions

Monitoring has shown deteriorating water quality conditions between Lake Pamamaroo and Weir 32 due to extremely hot weather conditions. It is anticipated dissolved oxygen levels will fall significantly over the next week due to the forecast extreme temperatures for the Menindee Lakes region. There is a high likelihood of stratification occurring in the water column, which could lead to hypoxic conditions (low dissolved oxygen levels) when the water mixes (destratification).

To help improve water quality and lesson the potential for a large fish kill event, a pulse flow of 1000 megalitres per day will be released from Lake Pamamaroo for two days – Wednesday 6 and Thursday 7 December. On Friday 8 December, flows from Lake Pamamaroo will return to 100 megalitres per day.

Coinciding with the increased releases from Lake Pamamaroo, releases from Lake Menindee will be scaled back from 1000 megalitres per day to 100 megalitres per day to ensure the pulse successfully flushes water all the way through the system to Weir 32. Flows from Lake Menindee will be increased back to 1000 megalitres per day on Friday 8 December.

The last pulse (which was the same size and duration) to disrupt destratification was on 23 November and proved successful.

As mentioned in the previous community update, given the dynamic nature of water quality in this stretch of river due to current weather conditions, we have needed to act rapidly by altering flow rates from both Lake Pamamaroo and Lake Menindee to prevent or lessen the water quality impacts and risk of fish deaths. This means we have been unable to provide three days' notice of any possible changes to flows rates.

## Increased chance of fish deaths in Lake Wetherell remains high

Water quality conditions in Lake Wetherell are continuing to deteriorate. Maximum air temperatures are expected to be in the low to mid 40s over the next three days, followed by substantial decreases in maximum temperatures around 10 or 11 December 2023. This could cause a destratification event, resulting in low dissolved oxygen levels throughout the entire water column.

If a destratification event occurs in Lake Wetherell over the next week or so there is an increased risk for fish deaths.

Unfortunately, options are limited to prevent or mitigate water quality issues and fish death risks in Lake Wetherell. Increased flows from upstream as a result of recent rain are expected in the coming weeks, which should assist with improving the water quality within Lake Wetherell.

Due to the size and limited access to waters within the lake, if a fish death event does take place, it will not be feasible to remove dead and dying fish. There is also still a lot of water within the lake that is spread across the floodplain, meaning it is very shallow in parts of the lake and oxygen depletes in those areas very quickly.

However, given the large volume of water in the lake, increased flows, and upstream connectivity, there is the opportunity for fish to move to find better water quality refuge so if a fish kill was to occur, it may not be large.

### Improved monitoring capabilities

Additional depth-profile 'real-time' telemetered buoys have been installed this week and are currently being brought online. It is expected they will be fully operational by the end of this week. This will assist in water quality management including managing the timing and size of flows and/or pulse water releases in the future.

### Anticipated inflows to the Menindee Lakes

Increased flows from upstream as a result of recent rain across the top of the Murray-Darling Basin is expected towards the end of December or early January 2024. These inflows will not only help improve water quality but provide increased drought security as we head into summer.

For more information [visit our website](#).

#### Community drop in session - WaterNSW flood review

While not related to the current water quality issues facing the Menindee Lakes, staff from WaterNSW will be in Menindee on Tuesday 12 December to discuss recommendations and outcomes of the Menindee Lakes Independent Flood Review, including findings from the independent report.

There will be a breakfast BBQ in Menindee from 8:00am at the CWA Hall 14 Perry Street. WaterNSW are asking any interested person to come along and have a chat - there will be no formal presentation during the session. It will be an informal, drop-in style event to enable everyone to be heard and ask questions directly with members of the WaterNSW team.