

Community update on response to fish deaths in Menindee

NSW Government agencies including the Department of Planning and Environment (DPE), the Department of Primary Industries (DPI) and WaterNSW continue to respond to fish death events on the Lower Darling-Baaka in the Menindee Lakes region.

Since mid-February fish deaths have been recorded upstream of Pooncarie, both in the main channel of the river and in off-channel wetlands and depressions, where fish became stranded as water levels dropped. Most of the dead fish are native Bony herring and non-native Carp, although increasing numbers of large-bodied native fish such as Murray cod and Golden perch are being documented.

It is unusual to see substantial numbers of Murray cod and Golden perch stranded due to flood water returning to rivers. This suggests that fish were avoiding the particularly poor water quality in the river channel during this period and were attracted to the higher quality water in the billabongs. Typically, we would expect Murray cod and Golden perch to return to the river before they are stranded in smaller channels.

Recent hot weather in the region is also exacerbating the risk of low dissolved oxygen levels in both the river and disconnected floodplain billabongs because warmer water holds less oxygen.

Menindee

Further upstream between main weir and weir 32, active steps continue to be taken where possible to alleviate pressure on the system. While mitigation options in these circumstances are limited, we are working closely with partner agencies to ensure the water releases into the Darling River have the best chance of achieving better dissolved oxygen levels, to reduce the chance of fish kills.

Such actions have included closing the inlet regulator between lakes Wetherell and Pamamaroo as it was identified that poorer quality water was entering Lake Pamamaroo from Lake Wetherell and was being drawn through the Pamamaroo outlet and discharged into the Darling River upstream from the town of Menindee, and continuing better quality releases from Lake Pamamaroo.

Monitoring is showing that the water quality now being released from Lake Pamamaroo into the Darling River at Menindee is of more suitable quality and is providing some relief for fish. Water is also being released from Lake Menindee to meet flow targets at Weir 32, downstream of Menindee town.

To maintain an oxygenated flow in the Darling River through Menindee township and reduce the risk of further fish deaths, releases from the Pamamaroo outlet will continue during the recession of flows back to regulated conditions.

Releases from Lake Menindee have also been reduced to assist in the flow of water from Lake Pamamaroo past Menindee town and through to the lower Darling River. Good flows at Weir 32 are still being achieved.

Lower Darling

In the lower Darling River, poor quality water returning from the floodplain containing large volumes of nutrients, organic matter, sediment and fish biomass is being concentrated in the river channel. The nutrient-rich return flows combined with warm, still water provide ideal conditions for the

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growth of algae and this increases the risk of large oxygen fluctuations, with high oxygen concentrations during the day from photosynthetic activity then very low oxygen concentrations overnight when photosynthesis ceases.

As the low oxygen floodwaters continue downstream, dissolved oxygen levels in the Darling River downstream of Pooncarie at Burtundy has decreased to less than 2 mg/L. Oxygenated water is being released from Menindee Lakes, but it will be some weeks before it reaches Burtundy. There may be some improvement in dissolved oxygen with lower air temperatures expected this week.

We will continue to monitor the situation closely and keep the community informed. You can [read our most recent factsheet update here](#).

Hypoxic blackwater is a naturally occurring phenomenon when large quantities of fish, bacteria, algae and other organic matter deplete the oxygen levels especially throughout the night when photosynthetic generation of dissolved oxygen by water plants and algae ceases.

While the forecast is for slightly lower temperatures over the coming week, the risk of hypoxia is still high, as warmer water holds less oxygen than cold water, and fish have higher oxygen needs at warmer temperatures.

DPI will undertake sampling of the fish population between Weir 32 and Menindee Main Weir once flooding recedes.

To report areas in NSW where fish may be struggling or a fish death event has occurred, call the NSW Fisheries Hotline on 1800 043 536.

More information can be found here:

- <https://www.industry.nsw.gov.au/water/allocations-availability/droughts-floods/drought-update/managing-drought-recovery/blackwater>
- https://www.dpi.nsw.gov.au/fishing/habitat/threats/fish-kills/_nocache