

## Draft summary of Menindee fish death investigations – DPI Fisheries - 8 March 2024

---

A fish death event has been impacting adult Golden Perch within the Menindee Weir 32 weir pool since 10 February 2024. It is estimated more than 1,000 fish have died during the event. Daily mortalities appear to have peaked during the current incident around 26 February, with numbers of dead and distressed fish steadily declining since.

Water quality parameters that typically impact fish health have remained within or near normal range during this period. This includes dissolved oxygen, temperature, salinity and pH. Testing for pesticide residue and other toxins completed in early February by NSW DCCEEW and EPA have not shown any adverse results.

NSW DPI has undertaken extensive analysis of affected fish to investigate other potential causes of death. Samples were collected and submitted to NSW DPI's Elizabeth Macarthur Agricultural Institute for testing. Examination found no evidence of the presence of Epizootic Haematopoietic Necrosis Virus (EHNV) and Red Spot Disease (also known as Epizootic Ulcerative Syndrome (EUS)) which are fish diseases found in the Murray-Darling Basin. Testing for betanodavirus was also undertaken, following reports that some affected fish appeared to be swimming unusually, but no evidence of betanodavirus was detected. All deceased fish showed evidence of the external parasite *Lernaea sp.*, often referred to as anchor worm. *Lernaea* is a common parasite throughout the Basin and are often found on fish that are suffering impacts from other environmental factors. [Lernaea](#) infestations are often seasonal, with worst infestations evident in late summer and early autumn. It is not normally fatal to fish except in extreme circumstances and is unlikely to be the primary or sole cause of the fish deaths in this event.

Bacteriological testing detected the presence of [Aeromonas](#) bacteria in a small number of affected fish. However, their presence is likely to be secondary to initial damage to the skin caused by the presence of *Lernaea* attaching to the skin, gills, and soft tissues of fish which causes ulcers and severe irritation. There was no evidence to suggest that these bacteria were the direct cause of these mortality events.

DPI Fisheries also submitted samples to independent experts for post-mortem and parasitological examination. All samples exhibited elevated parasite loads, including various arthropods and nematodes. This is consistent with fish that are suffering a broad range of stressors, however presence of parasites in wild fish is not an unusual finding and there is no evidence to indicate that any of these parasites were the primary cause of mortality. The external advice also confirmed the presence of *Lernaea* on all deceased fish.

At this stage there is no single factor that can be identified as the cause of recent fish deaths. It is likely the combined impact of variable water quality over recent years, elevated temperatures over summer and the ongoing impacts of recent mass fish death events are contributing to broader impacts on the health of Golden Perch in the Menindee weir pool, making them susceptible to a range of diseases and parasites.

Government agencies are pursuing investigations into the causes of the fish deaths, with further water quality, toxicology analysis and sampling of sediments to be undertaken in coming weeks. Agencies will continue to monitor the numbers of deaths and consider any available management responses should circumstances change.