

Data Versus Desktop: An Assessment Of The Severity Of Cold Water Pollution In The Swampy Plains And Murray Rivers Below Khancoban Dam

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Abstract

In 2004, Khancoban Dam was listed as one of nine Dams in NSW considered to cause severe cold water pollution on the basis of a desktop study. This recent study, based on 5 years of data demonstrates that cold water releases do occur from Khancoban but that these events are not as severe or prolonged as expected. On average, there is a difference in temperature of only -2.2°C between monitoring points upstream and downstream of Khancoban Dam during summer.

Investigations into the cause of cold water releases from Khancoban Dam have found that these releases can occur both as a result of high releases from Murray 2 power station (M2) and as a result of reservoir stratification during periods of low generation at M2, although releases from the power station are the dominant cause. When high releases are occurring from the power station, the reservoir is isothermal meaning that modifying the dam intake to selectively withdraw water from different levels would have no impact on the temperature of releases during these periods.

In terms of ecological implications, the presence of Khancoban Reservoir appears to be having a minor impact on the percentage of time that breeding temperature thresholds are exceeded during the breeding seasons of a number of native fish expected to occur in the area.