

Hunter Community Environment Centre.



Fish kill results raise more questions than answers

MEDIA RELEASE

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Citizen scientists with the Hunter Community Environment Centre were startled to encounter a fully-grown deceased Eagle ray, and multiple dead fish in Wyee Bay during a citizen science event on Saturday August 6th, the [day after the Mannering Park fish kill](#).

The [results of the NSW EPA investigation into the fish kill published August 30th](#) “... indicate the most likely cause of the deaths was from a combination of factors” including:

- elevated temperatures in the bay due to cooling water discharges from Vales Point power station
- Cool nights in the first week of August and a shift to northerly winds, with the strongest winds on August 4.
- This may have caused cold lake water to enter the bay and resulted in a turnover of the water column, potentially leading to a disturbance of the sediments
- The sampling results for Total nitrogen and Total phosphorus were above the guideline values, which may indicate that disruption of sediment has occurred.

HCEC spokesperson Paul Winn says, “The EPA’s results raise more questions than answers, particularly around the effects of thermal pollution on the lake ecosystem.

Thermal pollution is known to have caused an almost total loss of seagrass in Wyee Bay, however studies into the broader ecosystem effects have not been undertaken.¹

The recent fish kill has revealed that the full extent and risks to marine life in Southern Lake Macquarie of thermal pollution are largely unknown.”

What will happen to the species that have taken up residence in Wyee Bay due to artificially heated waters, like the Eagle ray, Green sea turtle and certain fish species when the power stations close?”

Water temperatures taken in Wyee Bay by HCEC citizen scientists on August 6th, reveal 10-17 degrees Celsius above ambient lake temperature. Readings in Wyee Bay ranged from 21-27 degrees Celsius.

Scientific literature suggests² that to avoid impacts on aquatic ecosystems, thermal discharge should be less than 5 degrees Celsius above ambient temperature.³

“The installation of a smart buoy at Wyee Point is a good start, but we believe that the Lake Macquarie community deserve a more detailed study into the full effects of thermal pollution on the lake’s marine life.”

¹ <https://apps.epa.nsw.gov.au/prpoeoapp/ViewPOEONotice.aspx?DOCID=-1&SYSUID=1&LICID=761>

² Hanafiah, M.M. 2013. Quantifying Effects of Physical, Chemical and Biological Stressors in Life Cycle Assessment. Ph.D. Thesis, Radboud University Nijmegen, Nijmegen, The Netherlands, 2013; Chapter 4 Characterization Factors for Thermal Pollution in Freshwater Aquatic Environments, pp. 69–126 <http://repository.uibn.ru.nl/bitstream/handle/2066/111217/111217.pdf>

³ Laws, E.A. 2000. Aquatic Pollution: An Introductory Text; John Wiley and Sons: New York, NY, USA, 2000;

Call for comment

Paul Winn
HCEC Senior Researcher
0498475431