

We acknowledge the Traditional Owners and Custodians of the Land on which we work and live as the first people of this country.

HAWKESBURY-NEPEAN REPORT CARD WATER IN NGURRA

The lifeblood of Dharug Ngurra (Country) is water — physically and spiritually it binds together all living things. Caring for Ngurra has sustained generations of Dharug people and is vital to all that now rely on the health of its water. The Hawkesbury-Nepean Waterkeeper recognises the importance of First Nations cultural values of the River and advocates for caring for Ngurra that ensures Country is managed in a holistic and culturally respectful way — now and in the future.¹

WHO LIVES HERE?

The Hawkesbury-Nepean River is rich with all types of life. We asked locals to tell us about what animals they have seen living in and along the river (known as the riparian zone), between Yarramundi and Sackville. Locals identified these animals while walking, kayaking, fishing, or swimming.

Bass¹

Mullet²

Carp³

Eel⁴

Long Neck Turtle⁵

Water Dragon⁶

Pelican⁷

Duck⁸

Purple Swamp Hen⁹

Platypus¹⁰

Flying Fox¹¹

Visit our website for a full list of animals and for further information on our Hawkesbury-Nepean River Report Card.



SCAN TO LEARN MORE



HOW HEALTHY IS OUR RIVER?

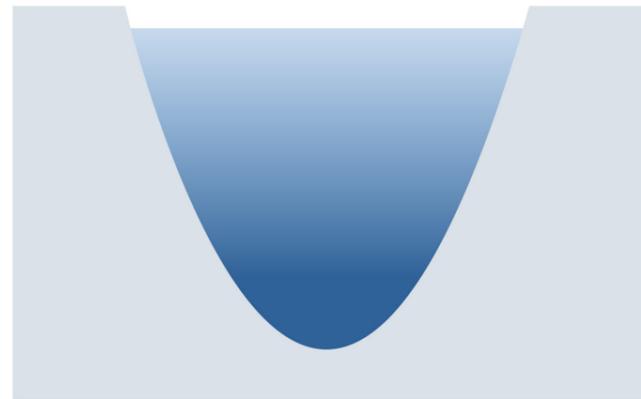
Sackville

VISIBILITY

Turbidity is important for many reasons. High turbidity levels hide bacteria, impacts aquatic plant growth as it reduces light penetration and can hide things that can be a drowning risk. Low turbidity levels in our river are needed for safe swimming and is what we should be aiming for.

During our 12 weeks of sampling, turbidity ranged from 0 – 27 NTU across all three sites, which is within guidelines*

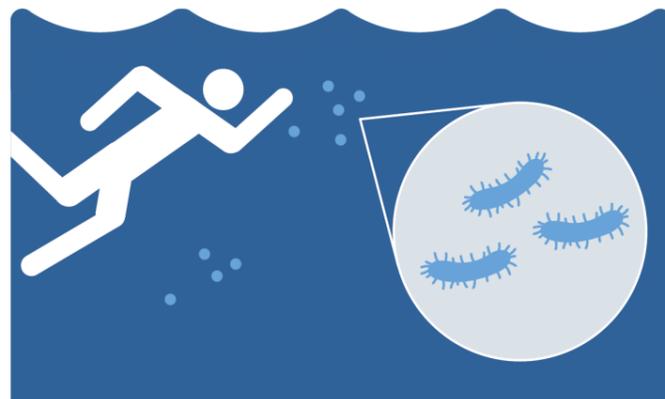
* The guideline value for low lying rivers is 50 NTU (Australian and New Zealand Guidelines for Fresh and Marine Quality, 2000). NTU = nephelometric turbidity unit (scientific measurement)



Yarramundi

BACTERIA

Swimming during periods of high levels bacteria in the water may make humans quite sick. To assess bacteria in rivers we measure enterococci. These levels can vary widely throughout the river depending on local sources and recent rainfall. Levels above 40 CFU/100 are not recommended for safe swimming.



Out of the 12 weeks our sampling took place, 4 weeks had levels outside of the recommended guideline values.*

* The guideline value of levels above 40 CFU/100 is not recommended for safe swimming (Australian Govt. Guidelines for managing risks in recreational water, NHMRC, 2008).

CFU = colony-forming units (scientific measurement)

21ST CENTURY POLLUTANTS

Plastic pollution is a growing global problem and there is little known about the impact of microplastics on freshwater rivers like the Hawkesbury-Nepean. Using citizen science, our first step to understanding this issue is to determine the presence of microplastics in our rivers' sediments.



4 pieces of microplastics on average were found per 3 gram sample (a teaspoon). This was greatly dominated by microfibres.

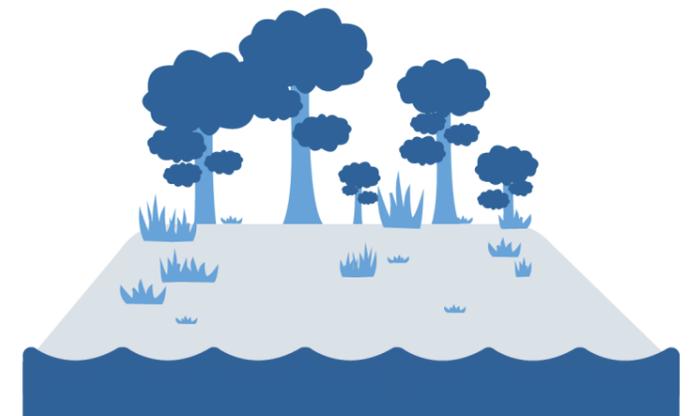
Windsor

RIPARIAN HEALTH

Citizen scientists conducted a Rapid Appraisal of Riparian Condition (RARC) during a training workshop at Yarramundi. This indicator tells us how healthy the riparian zone is for a range of animals and vegetation communities. This pilot assessment indicated that the condition of the riparian zone at Yarramundi needs major improvements.

The index score* for Yarramundi was 22.75 which is considered 'very poor'.

* Index scores less than 25 is considered 'very poor' on the RARC scale (Rapid Appraisal of Riparian Condition for the southern tablelands of NSW, n.d.)



Funding acknowledgement: This Hawkesbury-Nepean River Health report card was co-funded by Western Sydney University, Streamwatch, LandcareNSW, and a Sydney Water Community Grant.

Disclaimer: This report card contains data generated by citizen scientists and Western Sydney University students. Although the data has been screened, there are no warranties regarding its accuracy or completeness. The data collected here is mostly voluntary. The data presented represents post-flood conditions (2021 March), and was taken pre- and post-COVID lockdown.

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Hawkesbury-Nepean Waterkeeper members:



Learn more: westernsydney.edu.au/harwest