

RIVER SNAP

CAPTURE. CONNECT. CONSERVE.

ABOUT RIVER SNAP

In May 2023, Western Sydney University, in partnership with Hawkesbury City Council and through the Hawkesbury-Nepean Waterkeeper Alliance, launched the River Snap initiative. This citizen science project empowers community members to contribute to monitoring the ecological health and usage of the Hawkesbury-Nepean River.

Inspired by the [CoastSnap Beach Monitoring](#) program used to monitor marine environments along NSW beaches, River Snap focuses on fresh water ecosystems. Citizen scientists, primarily local residents and visiting tourists, capture images of the river using smartphones from designated River Snap stands. The first pilot installation is located at [Howe Park, Windsor](#). It is strategically located along a walking track overlooking the river towards Macquarie Park.

The River Snap project facilitates longitudinal monitoring of key environmental indicators, such as water quality, riparian health, and bank morphology. The data collected provides valuable insights into the river's ecological indicators, while also capturing patterns of engagement and recreational use of the waterway, enhancing our understanding of the river's broader social value.

RIVER SNAP COMMUNITY GALLERY



Lucy, 13 May 23



Matteo, 15 Dec 23



Drew, 6 April 2024



Katie, 22 July 2024



OUR RIVER

The Hawkesbury-Nepean River is a river of national importance. It holds deep cultural, ecological, economic, agricultural, and recreational value for Western Sydney.

Flowing through nine local government areas in Greater Sydney, it is fed by several key tributaries, including the Warragamba River, Grose River, Colo River, and Macdonald River, as well as South and Eastern Creeks. The river (and its tributaries) faces serious challenges. Increased urban development, climate change, and unsustainable land use are putting significant pressure on the river and its surroundings, as well as biodiversity such as our iconic platypus. The Hawkesbury-Nepean catchment is one of the most complex floodplains in Australia, home to millions of local residents. Between 2020 and 2022, the region experienced six floods, after almost three decades without major flooding. These recent floods have added to the environmental pressures and had a significant impact on our local communities.¹

¹ NSW Reconstruction Authority (2024). Hawkesbury-Nepean River Flood Study. Available at: https://www.nsw.gov.au/sites/default/files/noindex/2024-06/2024_HNR_Flood_Study_Overview_LR.pdf

PILOT REVIEW: HOWE PARK

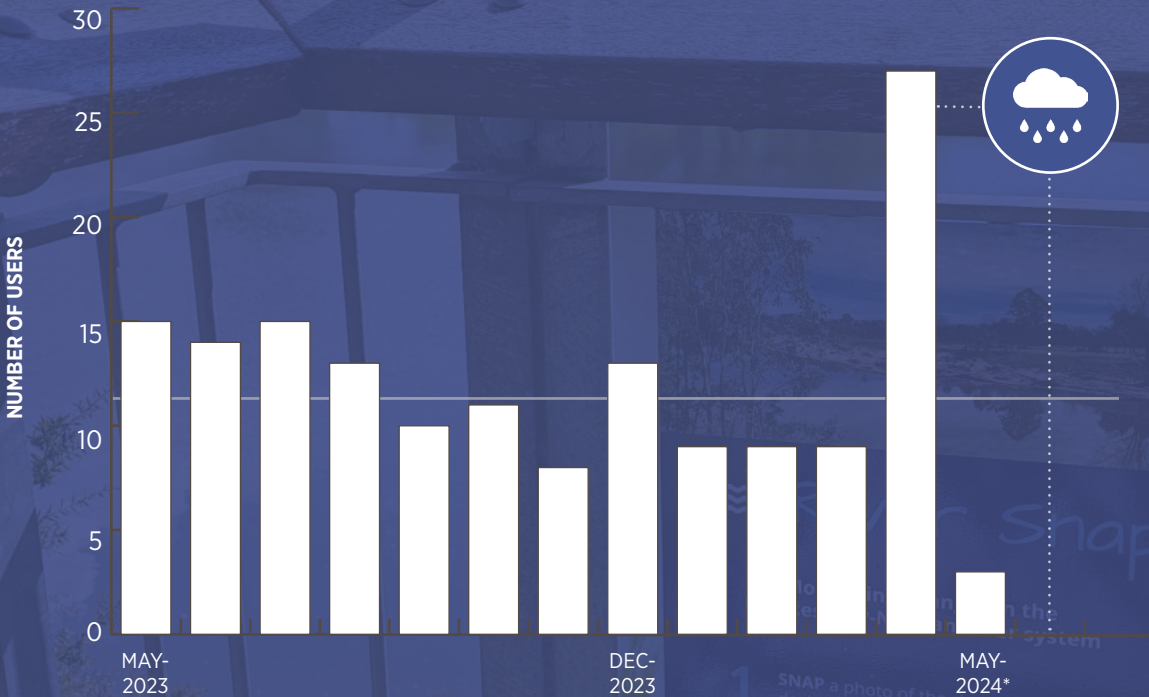
COMMUNITY ENGAGEMENT RIVER SNAP METRICS



156
photo submitted during the 12 month project pilot period (May 2023 - May 2024).



1000+
impressions with River Snap photos via social media, expanding the projects reach and educational value.



2
major flooding events occurred during the pilot project period (April and June 2024).

Average monthly submissions
(12 snaps)

SOCIAL VALUES AND PRIMARY USE



Walking, picnicing, swimming, fishing, bushcare, boating, and canoeing were the most popular recreational activities observed.



October
was the busiest month observed for recreations activities and use of the river.

* The River Snap site was offline for 8 weeks (May - July 2024) due to flooding damage on-site, pausing data collections.

RIPARIAN HEALTH

A riparian zone is the vegetated area along the edge of a waterway. These zones are essential for waterway health and quality as they reduce erosion, filter pollutants, and provide habitat and food for wildlife. They also help regulate water temperature, benefiting aquatic species and supporting overall biodiversity.

Through the pilot period, the amount of riparian vegetation coverage changed, with the lowest level observed in August 2023 at 15% (Figure 1) and the highest recorded in February 2024 at 90% (Figure 2). The period leading up to August 2023 was particularly dry, coinciding with winter and experiencing minimal monthly rainfall. However, as rainfall levels increased, vegetation cover also improved. As the Riversnap was offline in May through to July 2024 due to flooding (and impacting data collection), the impacts of the rising flood waters on this riparian zone are still being understood.



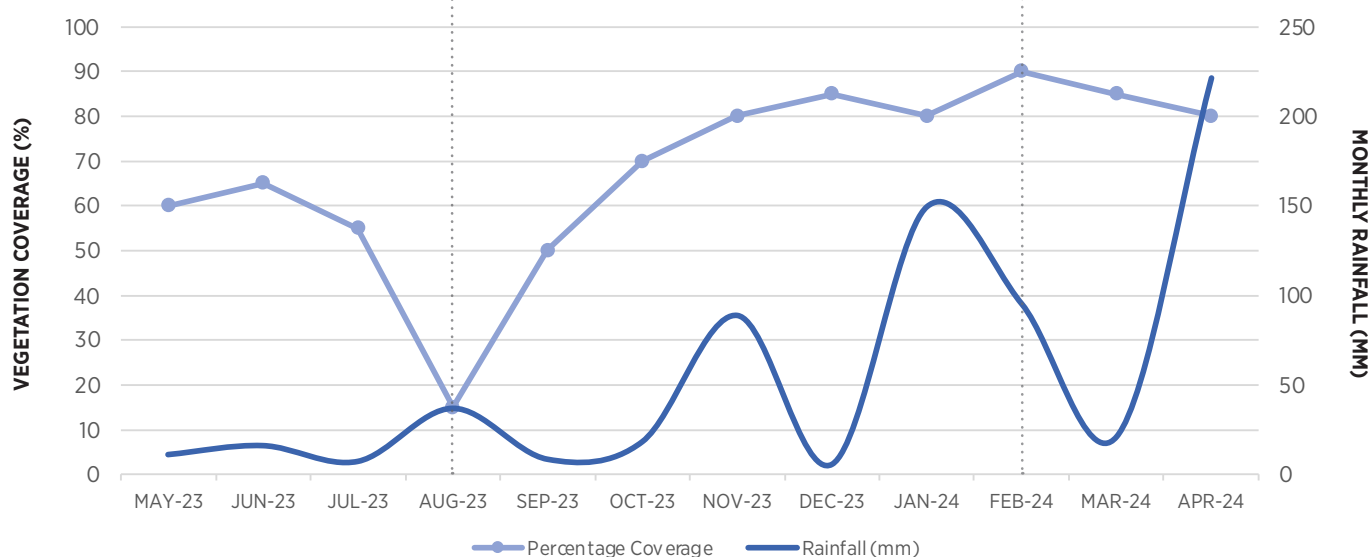
WATCH: ENVIRONMENTAL CHANGES IN REAL-TIME

Scan the QR code to see the impact of seasonal changes and floods on our river and riparian zone over time!

Watch this short timelapse video, created using our citizen science photos, to observe how the river and surrounding environment changes throughout the year (May 2023 - July 2024).



SEASONAL DIFFERENCES AND ITS INFLUENCE ON RIPARIAN ZONES



RIVER SNAP is an initiative of the Hawkesbury-Nepean Waterkeeper Alliance and the pilot was funded by Western Sydney University's strategic initiative fund. For collaborative opportunities and project expansion, please contact the team at Western Sydney University (costs may apply).

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