

Estuary Health & Water Quality Report Card 2024-25

Overall Grade **B**

Estuary Health Condition Ratings

- A** Very Good
- B** Good
- C** Fair
- D** Poor
- E** Very Poor

Recreational Water Quality

● % of occasions meeting primary and secondary contact recreational water quality guidelines

- Primary contact
- Secondary contact



Estuary Health Condition

Water quality, including nutrients and estuary health indicators are measured every month at 9 sites. The estuary health condition grading is based on chlorophyll *a* and turbidity levels from November to the end of April.

Results were slightly better overall compared to last year, with six sites being in very good condition and two in good condition. The exception to this is a site at Burroo Bay where it was rated as being in poor condition due to consistently high nutrient and turbidity levels. Overall, the Lake received a B (Good) grade, which was the same as last year. This shows the resilience of the Lake, but it is important nutrient and sediment loads coming into the lake from a number of sources are reduced for its long-term health.

Recreational Water Quality

Three sites were sampled over summer for enterococci levels to give an indication of recreational water quality for primary (safe for swimming) and secondary contact (safe for boating and watercraft activities only). All sites had a higher compliance in meeting the recreational water quality guidelines than the year before. This is a great result, particularly in regard to secondary contact activities such as boating where Ski-Way Park had 100% compliance for the first time since we started sampling, and the other sites had 94%. For estuarine sites swimming is still not recommended for three days after rain.

For more detailed information on the monitoring program, visit wollongong.nsw.gov.au/lake-illawarra

Estuary health indicators

Chlorophyll *a* is a measure of microscopic algae biomass in water. Excessive input of nutrients from catchment runoff can increase chlorophyll *a* levels, leading to algal blooms and detrimental effects on estuarine plants and animals.

Turbidity is a measure of light scattered by suspended particles such as sediment, algae and dissolved material in the water. Having low turbidity levels in the estuary is important for seagrasses, fish and other organisms.

What's Happening?



For more information, visit
wollongong.nsw.gov.au/lake-illawarra



Using eDNA to investigate the biodiversity in our creeks and lake

Both councils recently partnered with DPRID Fisheries on an environmental DNA (eDNA) monitoring project across our catchment and lake. eDNA is genetic material shed by organisms into water, allowing us to detect species through simple water samples. All animals and plants release traces of DNA through sources such as fur and scales which eventually wash into creeks and waterways. This method helps identify biodiversity, including threatened or invasive species, and track changes in fish populations. Sampling was conducted at 19 catchment sites by Council staff, Stream Hill Landcare, and students from Yallah TAFE and the University of Wollongong, while Fisheries focused on lake sites. It has given us some interesting insights into the biodiversity of our creek systems. For example, Platypus eDNA was found at several places along Macquarie Rivulet but also at other locations in the catchment we didn't know they were living. Data analysis still being finalised, but in the meantime, you can check out some of the results at the Wilderlab website.

Community volunteers champions of care and clean-ups!

Across our community, passionate individuals are helping care for Lake Illawarra-restoring habitats, raising awareness, and cleaning upstream creeks, especially after rain. Council's long-running 'Rise & Shine' program has recently focused monthly clean-ups along the lake foreshore, removing 42 tonnes of waste in the past year. Efforts have targeted plastic waste, which poses serious risks to wildlife and ecosystems. Large plastics can entangle animals or break down into microplastics, contaminating soil, water, and the food chain. Removing plastics early helps prevent long-term damage and supports lake health. If you would like to help out in clean up events visit Rise & Shine | City of Wollongong to find out more.



Water Sensitive Urban Design in the catchment

Our city's position between the escarpment and coast creates complex water flows, making stormwater management challenging. To protect Lake Illawarra and local creeks, Wollongong and Shellharbour councils are updating planning rules to support Water Sensitive Urban Design (WSUD) to reduce stormwater entering our waterways. WSUD treats stormwater as a resource, helping reduce pollution, manage flooding, and mimic natural water cycles. Features like rain gardens, swales, and wetlands also improve water quality while adding greenery, biodiversity, and climate resilience to our suburbs.



Lake Illawarra Entrance Options Study

In November 2024, the University of NSW Water Research Laboratory (WRL) delivered the 'Lake Illawarra Entrance Channel: Management Options Assessment report'. The study reported on five shortlisted options (from a previously investigated list of 50 options), their costs and expected trade-offs in implementation against a 'Leave as is' base case. Nearly 400 community submissions were received, and findings were presented to Councillors in May 2025. Wollongong and Shellharbour councils have since written to the NSW Premier requesting the NSW Government undertake a strategic business case to progress a long-term entrance management option for the lake.

Improving our natural vegetation around the lake and catchment

Once again, a massive amount of work has been undertaken to improve the condition of natural vegetation around the Lake and its catchment. Approximately \$665,000 was spent in the past year to improve 268 hectares of natural areas. This included planting 16,000 native tubestock, blocking illegal vehicle access that causes erosion, extending native vegetation into previously mown areas, and stabilising erosion hotspots with native lake edge species. A huge thank you to all the Bushcare and Landcare volunteers who help Council deliver this vital work.