

» North Lakes water quality and vegetation



» Background

North Lakes is not a naturally occurring water body but are stormwater treatment ponds that were constructed as part of the North Lakes Residential Estate in 1991.

Stormwater from the roads, roofs, footpaths, gardens, lawns and carparks within the North Lakes estate all drain directly into the Lakes where it is treated before discharging into the adjacent natural wetland and North Creek. These stormwater ponds have become inhabited by many native fish, bird species and native riparian vegetation. Whilst this beneficial natural improvement has occurred the underlying function of the Lakes is to treat stormwater from the estate.

» Water levels

Did you know the Lake's water levels change depending on the amount of rain? This rain then enters as stormwater into the Lakes.

The stormwater interacts with a controlled amount of saltwater entering through a one way flow gate from North Creek and the adjoining wetland. It then exits at the outlet weir. The volume of saltwater through the flow gate on each high tide is dependent on the extent of the tide together with the internal Lake level. This interaction helps the waters mix before exiting into the natural environment.

The design and management of the Lakes including the level of saltwater influence, mixing and quality of water existing have all been approved by the various development approvals for the estate.

» Did you know...

The two Lakes now have an improved interconnection. The large open channel has replaced narrow pipes, which has allowed greater volumes of flow and improved water mixing.

» Pollutants and odour

Stormwater can pick up pollutants including litter, oil, fertilisers, pesticides, grass cuttings, animal wastes and soils from backyards and deposit them into the Lakes.

This stormwater can increase the level of nutrients and increase algal growth in the Lakes. Sunlight, increased water temperature and low water movement can also increase algal growth. At times the algae can give off an offensive odour and look unsightly. Breaking down of organic matter in nearby mangroves can also give off an offensive odour.

» Council management

In 2008 Ballina Shire Council prepared the *North Lakes Water Quality Management Plan* to address water quality maintenance and amenity concerns. The plan has progressively been implemented as resources become available with high priority actions targeted first.

» What is planned?

Council is actively looking at ways to reduce nutrient loading, fish kills, hydrology changes and odours. Management measures will include improving drainage performance, hydraulic connectivity between the two Lakes, outlet weir maintenance, vegetation management involving riparian native plantings, weed control and system monitoring.

Council will continue to seek additional resources for the ongoing management of amenity issues and poor water quality at North Lakes. Residents also play an important role in improving the water quality at North Lakes. See over the page for details of how you can help your local environment.

»» Why is riparian vegetation important?

Riparian vegetation is vegetation located on the banks of the Lakes:

- Bank stabilisation. Root systems holding the soil in place preventing erosion (without it the land may disappear).
- Shading the water providing a thermal cover that shields the Lakes from extreme temperatures that can cause algae issues and be fatal to some species.
- Providing a habitat for native species that are now present at North Lakes. This includes food, nesting and hiding places.
- Please don't feed the birds. Feeding birds such as ducks with food that is not part of their natural diet can make them sick and become a nuisance to your neighbours. Young birds may lose their ability to forage. Hand-fed birds are susceptible to illnesses that can be transferred to other birds and can also affect bird breeding cycles.
- Providing food chain support for species that feed on leaves and woody material such as logs, stumps and branches and provides food with fruits and flowers.
- Improving water quality by soaking up nutrients from the estate's stormwater as well as trapping sediment and pollutants to help keep the water cleaner.

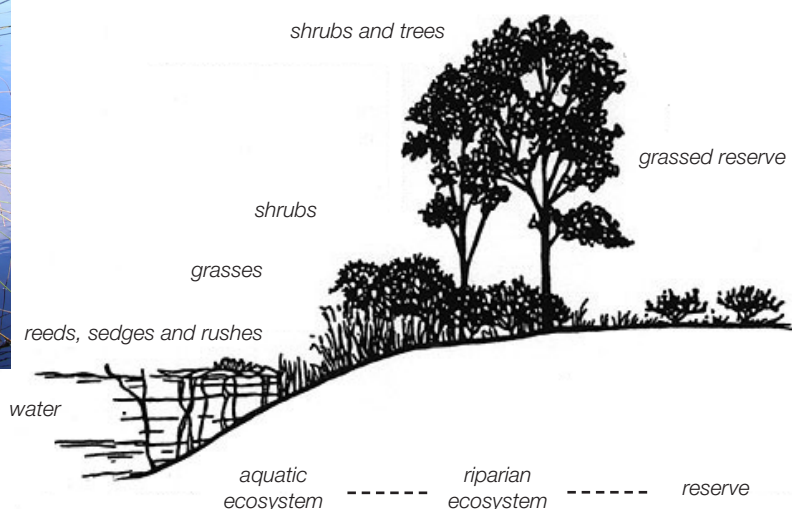


A good area of riparian vegetation will have reeds in the water, sedges (pictured above) on the wet edge, native grasses and shrubs above the waterline and native trees at the top of the embankment.

»» How can you help improve the water quality?

- Sweep footpaths and driveways – do not hose them.
- Put litter and animal poo in the bin.
- Wash the car on the grass or at a car wash – not on the driveway.
- Reduce the use of fertilisers, herbicides and pesticides (chemicals).
- Dispose of lawn clippings and green wastes responsibly by placing them in your organics bin. Garden waste dumping causes weed problems for native vegetation and the environment.
- Reduce erosion of land to prevent soil washing into the Lakes.
- Plant natives, they need less water and grow well in local soils, they also provide good habitat for animals.
- Don't mow, prune or remove the natives on the water edge as they help stabilise the bank from erosion. If you can clearly see the water edge, the land may be eroding.
- Keep your garden in your garden. Do not extend your garden past your property boundary.

Residents can also assist by keeping their landscaping and fences within their property and avoid encroaching onto public land. Encroachments are illegal and threaten the ability for maintenance access to occur. Please keep fences to the boundary.



For more information telephone Council on 1300 864 444

If your enquiry relates to pollution or fish kills contact our Public and Environmental Health Section. For all other North Lakes enquiries contact Council's Civil Services Group.