

# Tuggerah Lakes catchment



The Tuggerah Lakes estuary consists of three inter-connected coastal lagoons – Tuggerah Lake, Budgewoi Lake and Lake Munmorah. The estuary is located in the Wyong Shire on the Central Coast of New South Wales, approximately 100 kilometres north of Sydney. The wider Tuggerah Lakes catchment area covers more than 700 square kilometres and encompasses nearly 90 per cent of the Wyong Shire.

As rivers run down towards the coast, the land flattens out and the water pools, forming the Tuggerah Lakes estuary. Here, freshwater mixes with the small amount of seawater that enters via The Entrance channel. In the past, the channel closed periodically, but it is now kept open by regular dredging to maintain water levels and help prevent nuisance flooding of low-lying urban development.

## Catchment geography

The three lakes cover an area of approximately 77 square kilometres; have a shoreline perimeter of approximately 105 kilometres and an average depth of 1.7 metres. The main sources of water feeding into the lakes come from Wyong River and Ourimbah, Wallarah, Tumbi Umbi and Saltwater creeks. These streams naturally bring sediments with them, particularly after large rainfall events. Downstream in the lakes, the result is brownish coloured water and sediment-based estuarine beds, typical of these types of coastal lagoons.

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Fine sediment creates turbidity (cloudiness) and often carries excess nutrients, both of which can result in lower water quality and increased health problems for the lakes.

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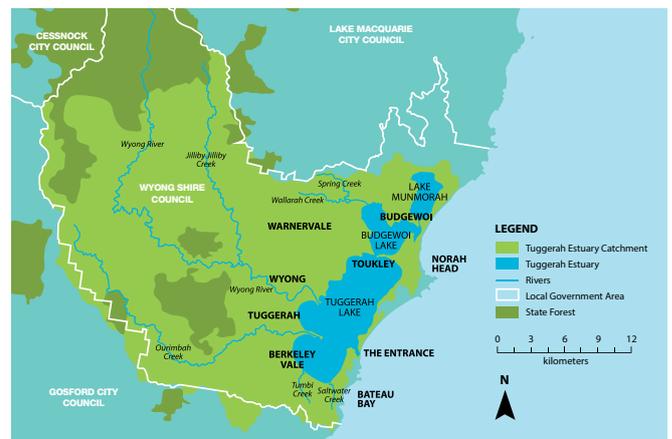


Diagram of Tuggerah Lakes catchment showing the area of Wyong Shire, the catchment, the lakes and main river and creek flows.

## Blowing in the wind

Water circulation patterns in the lakes are mainly driven by wind, with minor influence from freshwater and temperature. The small amount of seawater entering the lake has little effect on overall movement. Wind pushes floating seagrass leaves onto the shoreline. Seagrass is a natural part of the lakes' ecology, providing an important habitat and food source for many animals as well as collecting sediment and stabilising lake beds with its network of roots.

## Fauna and flora

Tuggerah Lakes catchment is a haven of biodiversity, being home to approximately 427 species of native mammals, birds, amphibians, reptiles and fish, as well as many invertebrates, such as insects and crabs.

The rivers and creeks in the catchment provide habitat for frogs and insects, freshwater fish, freshwater mussels and platypus.

Image above: Tuggerah Lake, Chittaway Bay



The lower lying wetlands provide food and shelter for wading birds while also filtering sediments and pollutants from the water. Wetland plants take up excess nutrients, helping to prevent the over fertilisation of the Tuggerah Lakes estuary further downstream. In the brackish water of the lake basins, prawns, fish and seahorses can be found in and around the seagrass meadows. Saltmarshes fringe the lakes' edges, attracting wading birds and fish who feast on the smorgasbord of microorganisms found there.

### Tuggerah Lakes Estuary Management Plan

Wyong Shire Council has been restoring and rehabilitating streambank, wetland and saltmarsh habitats under the Australian Government's Caring for our Country initiative with the aim of improving the overall health and water quality of the Tuggerah Lakes catchment. About 360 hectares of wetlands have been rehabilitated, 30 hectares of saltmarsh foreshore have been restored and 28 kilometres of degraded streambanks have been repaired along Wyong River and Ourimbah, Spring and Tumby Umbi creeks to prevent erosion. Additionally, many community education programs have been held to engage with local groups and individuals about the Estuary Management Plan.

Wyong Shire Council is also upgrading its stormwater treatment system to reduce the amount of sediment, pollutants and nutrients entering the lakes and affecting the water quality. It is also building and upgrading recreational foreshore facilities to bring people back to the foreshores and waterways and to meet the needs of a rapidly growing population.

### How you can help

- Keep fertiliser use to a minimum or plant native vegetation that does not require fertiliser.
- Use a carwash or wash your car on the lawn.
- Launch boats from public boat ramps only.
- Always walk or ride on paths provided.
- Leave saltmarsh areas to grow, don't mow to the shoreline.
- Deposit garden waste and grass clippings in compost or your green waste bins.
- Join a local Landcare group.
- Put litter and dog poo in the bin.

For more information about Tuggerah Lakes estuary go to [www.loveourlivinglakes.com.au](http://www.loveourlivinglakes.com.au)

**did you know...**

The salinity levels of the Lakes can vary depending on weather patterns; high rainfall will bring large volumes of water down the rivers, diluting the salt, while hot and dry weather creates evaporation and higher concentrations of salt.

Images above, left to right: The Entrance channel, *Sarcocornia quinqueflora* – commonly found in saltmarshes around Tuggerah Lakes, Peron's Tree Frog – an inhabitant of streambanks in the upper catchment, Little Egret – often seen in wetlands and around the saltmarshes of Tuggerah Lakes

