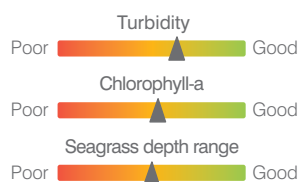


Report Card 2012





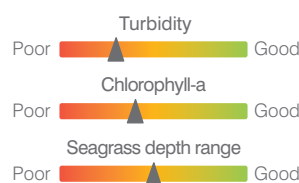
Results



Lake Munmorah

B **C** 2010

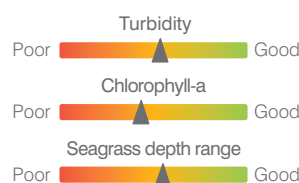
The ecological health in Lake Munmorah was good with improved results achieved since 2010. Water clarity was good with relatively low turbidity levels and moderate seagrass depth range. Unfortunately, high summer rainfalls contributed to elevations in algal (chlorophyll-a) levels.



Budgewoi Lake

C **C** 2010

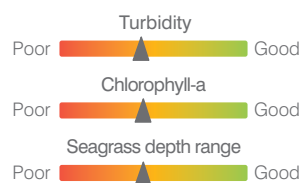
Budgewoi Lake achieved similar results to those in 2010. Water clarity was poor with high turbidity levels recorded however seagrass depth range was moderate as were algal levels.



Tuggerah Lake North

C **B** 2011 **B** 2010

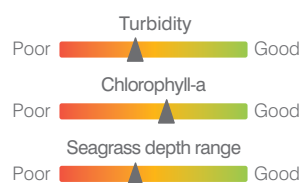
Ecological health in the northern part of Tuggerah Lake was fair in 2012 having declined slightly from the previous year. Water clarity was fair with only moderate turbidity and seagrass depth range recorded. Algal levels were higher than in 2011 and can be attributed to high summer rainfall and nutrient loads from the catchment area.



Tuggerah Lake Central

C **B** 2011 **C** 2010

Tuggerah Lake Central achieved a fair grade in 2012 with moderate turbidity, seagrass depth range and algal levels recorded. These results were slightly down graded from 2011 and can in part be explained by the higher than usual summer rainfall in the Wyong Shire catchment area.

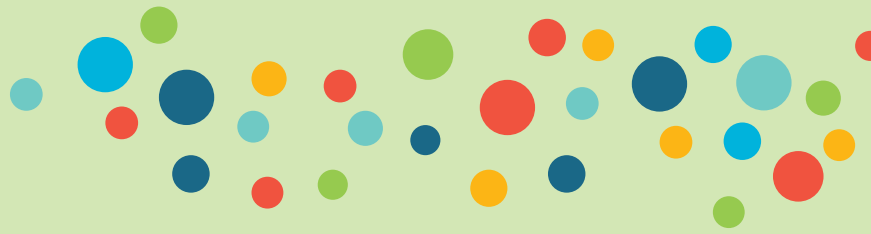


Tuggerah Lake South

C **B** 2011 **D** 2010

The southern part of Tuggerah Lake saw a fall in its report card grade from good in 2011 to fair in 2012, due largely to an increase in algal levels. Water clarity remained consistent with high turbidity levels recorded and low seagrass depth range.

Tuggerah Lakes Estuary



The Grades explained

- A Excellent** The indicators meet all benchmarks for more than most of the year. Equal to the best 20% of scores in NSW.
- B Good** The indicators meet all benchmarks for most of the year. Equal to the next 30% of scores in NSW.
- C Fair** The indicators meet some benchmarks for part of the year. Equal to the middle 30% of scores in NSW.
- D Poor** The indicators met few benchmarks for part of the year. Equal to the next 15% of scores in NSW.
- E Very Poor** The indicators never meet benchmarks. Equal to the worst 5% of scores in NSW.



Management actions

Tuggerah Lakes estuary is dependant on the broader catchment area – whatever comes down the rivers and enters the stormwater ends up in our lakes. What we all do impacts the estuary, by working together we can improve and protect it.

What council is doing to help

- Constructing gross pollutant traps, wetlands and rain gardens to reduce sediment, litter and nutrient loads from the catchment.
- Protecting and improving natural wetlands, riparian vegetation and saltmarsh, to help reduce erosion and filter runoff before it enters the estuary.
- Dredging The Entrance channel to maintain exchange with the ocean.
- Removing excess seagrass wrack and floating algae to enhance the water quality of the estuary.

What you can do to help

- Wash your car on the grass or at a car wash.
- Use less fertilizer on your lawn or grow a native garden which doesn't need fertilizer.
- Place your garden waste and lawn clippings in the green bin.
- Pick up your dog's poo and take it with you.
- Always put litter in the bin.
- Protect saltmarsh and wetlands by never mowing to the water's edge.
- Never dump garden waste in reserves and stormwater channels.
- Keep to formed trails and boat ramps.

Keeping our estuary healthy is the responsibility of everyone who lives in, works in or visits our Shire. We all impact the lake, let's make our impacts positive.





Introduction

This document is the first Report Card for the Tuggerah Lakes estuary. The estuary health data presented here was collected in Tuggerah, Budgewoi and Munmorah Lake basins during the summer of 2011/2012.

The estuary was divided into five zones (see map), with each zone receiving an estuary health grade based on the data collected there. As Council continues to collect data we should be able to establish whether long-term trends indicate the health of the estuary is improving or declining. The data will also allow us to be more informed when identifying target areas in need of rehabilitation and conservation.

The Tuggerah Lakes Estuary

Located in the Wyong Shire on the New South Wales Central Coast, the Tuggerah Lakes estuary consists of three interconnected coastal lagoons – Lake Munmorah, Budgewoi Lake and Tuggerah Lake which opens to the sea at The Entrance.

The lakes spread over 70 square kilometres, and stretch from Killarney Vale in the south to Lake Munmorah in the north. The catchment area is much larger spanning 670 square kilometres and covers most of Wyong Shire. It includes the five major tributaries of the Wyong River, Ourimbah, Wallarah/Spring, Tumbi and Saltwater Creeks.

The Tuggerah Lakes estuary is a very special place with a remarkable variety of landscapes, scenery, wildlife and flora. The health and beauty of the estuary is vital to the district's strong tourism industry. It is also the playground for many recreational pursuits and supports a significant commercial fishing industry and recreational fishing activities.

Methods

The report card is like a health check for our estuary: it compares the current ecological health of the Tuggerah Lakes estuary with ideal estuary health.

To calculate the report card grades, scientists from the NSW Office of Environment and Heritage (OEH) have assessed three important indicators of estuary health:

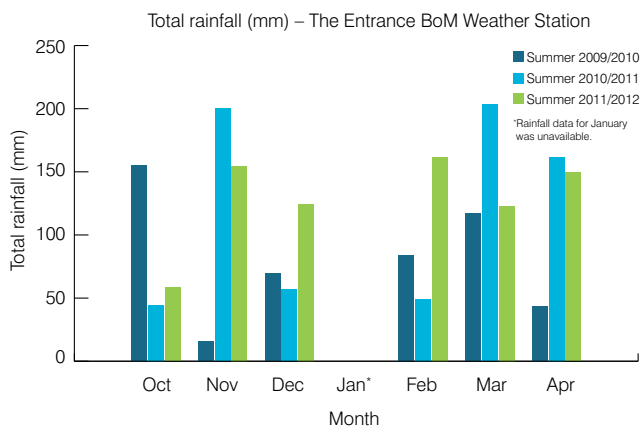
- Chlorophyll-a – is an indication of levels of microalgae and nutrients in the water. High levels of chlorophyll-a indicate high inputs of nutrients which can lead to algal blooms.
- Turbidity – refers to the amount of sediment suspended in the water and indicates water clarity.
- Seagrass depth range – is a biological indicator of water clarity. Seagrass growth depends on how deep light penetrates through the water.

A healthy estuary has low levels of both microalgae and turbidity (noting that this system is sediment based and wind driven so will always look turbid to some degree).

The information collected by OEH scientists is converted into a grading system which compares the health of waterways across the state. Where available the report card also shows data from previous years for comparison.



Rainfall



The summer of 2011/2012 was particularly wet and saw higher than usual rainfall in the Wyong Shire catchment area. The extra rain resulted in increased sediment and pollutant loads entering the estuary and had a negative impact on water quality.

The Tuggerah Lakes Estuary Report Card for 2012 was produced using data collected as part of the Restoration of Tuggerah Lakes through Improved Water Quality Management Program. For more detailed information about sampling methods and grade calculation go to: www.loveourlivinglakes.com.au

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CARING
FOR
OUR
COUNTRY



Wyong
Shire
Council
CENTRAL COAST