

NOBBYS SURF LIFESAVING CLUB RISK ASSESSMENT

WATER QUALITY

BACKGROUND

There are a number of water quality issues at the beach and/or in Newcastle Harbour that must be considered before undertaking any aquatic activity.

The Australian and New Zealand Conservation Council (2000) has developed *Water Quality Guidelines for Fresh and Marine Waters* (ANZECC Guidelines). In relation to Recreation there are two types of guidelines and two types of recreational activities.

1. Primary Contact Recreation Guidelines are the most stringent of the guidelines and provide water quality limits for a range of pollutants. If waters meet primary contact recreation guidelines they are suitable for swimming.
2. Secondary Contact Recreation Guidelines are less stringent and provide water quality limits for a range of pollutants. If waters meet these limits but do not meet the primary contact guideline limits then the water is suitable for water craft, paddle where the activity may lead you to fall into the water or be splashed by the water in the eyes, ears, nose or mouth, but generally not swimming in the water.

Without testing water for bacteria and algae there are some common sense approaches to recreating in water safely.

Nobbys SLSC is situated on the southern side of the Hunter River and as a result can be subject to water quality issues from the Hunter River after a regional rainfall event. A regional rain event would be one that is high intensity, covers a large area for a couple of days (Newcastle, lake Macquarie, port Stephens, Maitland areas, Cessnock, Dungog) and causes the Hunter River to turn brown. The currents generally run north along the east coast and as a result under normal conditions most of the plume of river water heads out of the breakwall and heads north. However under an extended north easterly swell and sea and easterly swell and sea this water may impact Nobbys Beach. There are also a number of stormwater discharges that occur on the southern side of Nobbys SLSC, but Nobbys SLSC is largely protected from major stormwater discharges due to its proximity and lack of catchment area.

As a general rule of thumb it is recommended that you don't swim (primary recreation) in the ocean within 3 days of a large regional rainfall event. This is due to the concentration of bacteria as a result of catchment runoff containing dog poo, fertilisers and sewage surcharges. This bacteria can cause ear, nose and throat infections and gastroenteritis. Sunlight and salt water are natural disinfectants of bacteria and will degrade the bacteria, the natural mixing with the ocean will also dilute this polluted water.

Newcastle Harbour is also subject to catchment wide inputs of pollutants from upstream and from local industry in the Port. After significant regional rainfall events the harbour should not be used for recreation until the water clarity has improved. You will see that the water turns brown and has a large proportion of rubbish floating in it including logs and sticks.

There are also a number of harmful algae that can cause health issues for swimmers. This can range from diatoms causing surfers itch and stinging eyes to algae that can have diarrhetic, amnesic or neurotoxic effects. These toxic algae are rare and the NSW Office of Water has a framework for managing algal blooms on beaches which has been communicated to council lifeguards by NCC.

The follow guidelines are recommended for Training Events and Nippers in respect of Water Quality and have been developed by reviewing the ANZECC Guidelines and applying them to Nobbys Beach and Newcastle Harbour:

PRIMARY CONTACT

Avoid swimming:

- At all times in Newcastle Harbour, water quality issues, clarity issues, water depths,
- Where water is murky (turbid);
- Where water has a strange smell or odour that does not seem normal, this could be a sewage odour, chemical smell or petrol smell
- Where there is a strange colour in waves (green, pink, orange) which signifies a phytoplankton bloom;
- Where there is a huge substantial build-up of froth and foam;
- Where there is a slick on the surface that looks like an oil sheen or petrol sheen
- Where significant flotsam and jetsam is present, (floaties in the water such as litter, rubbish, sticks, logs, dead cows);
- Water temperature is below 15 or above 30 (this only applies to swimming for a length of time)
- Within 3 days after significant regional rain

SECONDARY CONTACT

This is mainly in relation to Newcastle Harbour. Swimming should not be encouraged but paddling on boards and skis is fine, including the occasional falling off into the water when:

- There is no significant flotsam and jetsam in the water;
- Water clarity is ok, it doesn't have to be very good, but should not be visually brown, green, pink or orange or any other strange colour, Roll overs should only be undertaken when water is very clear;
- It has been more than 3 days since the end of a regional rainfall event and all of the above conditions are met;

However, you should try not to fall off your craft;

Natasha Ryan

Director of Surf Sports, Nobbys SLSC

B App Sc (Environmental Assessment and Management) (Hons)

Grad Dip (Natural Resource Management) Maj Limnology and Aquatic Botany

Dip Govt (Management)