

Darwin Harbour Beaches

Summary

Three Darwin Harbour beaches were closed in the dry season due to levels of microbiological water quality indicators being greater than guidelines.

Nature of system

- Estuarine system likely to be well mixed via tidal inflows and outflows
- Many stormwater drains enter tidal creeks or directly onto beachfront areas
- Mangrove habitat and inter-tidal mudflats in some parts
- A large proportion of the catchment has been urbanised
- Cyanobacteria blooms (e.g. maiden's tresses and sea sawdust) typically occur as a natural event in most years in the dry season and can wash ashore



Potential sources of pollution

- Sediment, nutrient, bacteria, commercial and other human-related pollutants in stormwater runoff from rural, urban (e.g. residential, recreational facilities and areas, commercial areas) and diffuse sources in the catchment
- Sediment, nutrient, bacteria, and other pollutants from point sources (e.g. wastewater discharges, stormwater drains, recreational facilities and areas, commercial areas) to waterways



Sailing at Vestey's Beach

Darwin Beaches monitoring 2011

This section presents the results of beach water quality monitoring for the period of 3 May to 24 October 2011.

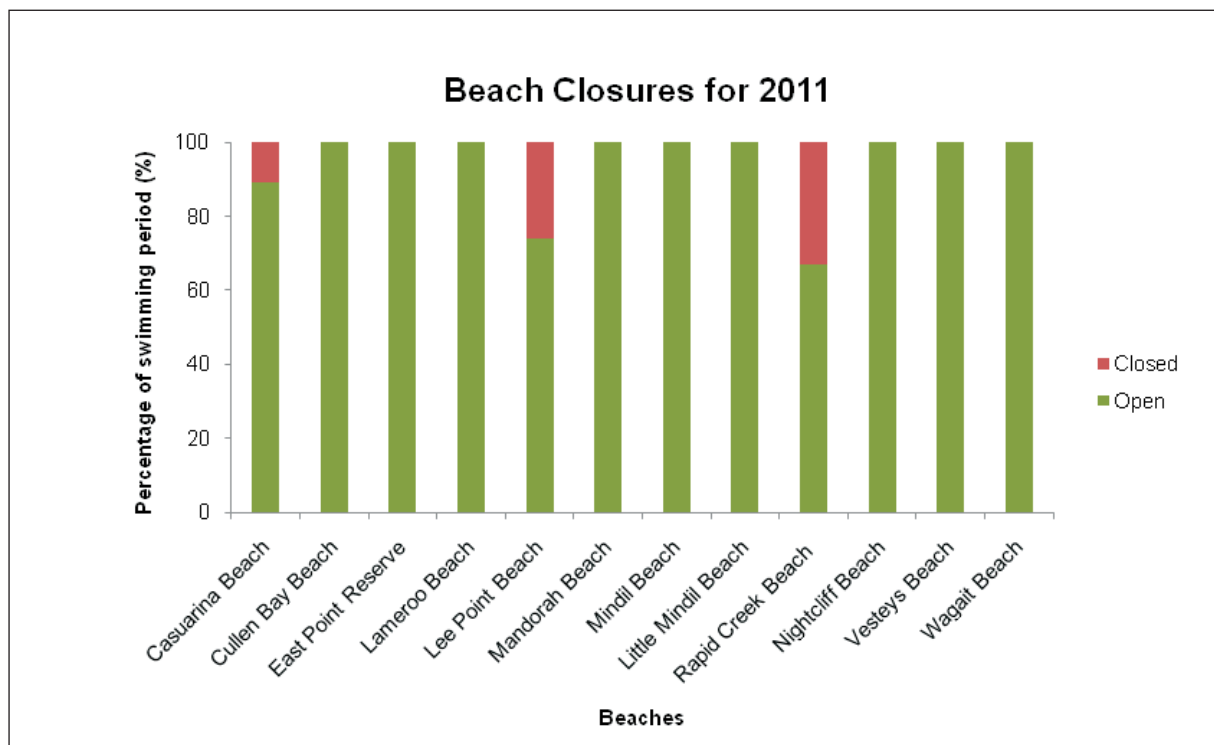
From 1 May to 30 September, beaches are monitored to determine the risk to swimmers associated with bacteria levels. The following trigger levels were used by the Department of Health to determine whether beaches were suitable for swimming and are described in the 'Interpreting the Report Cards' section of this document. The three modes of compliance are:

- Green Mode (open for swimming) – All samples to be less than or equal to 50 enterococci per 100mL.
- Amber Mode (open for swimming) – All samples between 51 and 200 enterococci per 100mL.
- Red Mode (closed for swimming) – Two consecutive samples within 24 hours greater than 200 enterococci per 100mL.

These criteria are drawn from the National Health and Medical Research Council 2008 Guidelines for Managing Risks in Recreational Water, which were formally adopted on 6 July 2011 by the *NT Public and Environmental Health Act 2011*.

Between 1 October and 30 April, beaches are closed to swimming due to the higher danger posed to swimmers during this period by the presence of Box Jellyfish. During this period in 2011–12, sampling of bacteria at beaches is being conducted to investigate the impact of rainfall on bacteria levels. Knowledge gained can be used to design future public health signage and further inform public education campaigns.

The figure below provides a summary of the closure results between 3 May and 24 October 2011. Most beaches are sampled weekly with the exception of Mandorah and Wagait which are sampled monthly.



Between 3 May and 24 October 2011, Casuarina Beach and Lee Point Beach were closed once to swimming and Rapid Creek Beach was closed on two occasions. Other beaches remained open.

Although individual sampling results in red mode occurred more frequently, two consecutive red mode samplings are required for a beach closure.

In August 2011, the Territory Government established the Darwin Harbour Beach Water Quality Taskforce to investigate the sources of bacteria on Darwin Harbour beaches. The Taskforce is chaired by Professor Andrew Campbell from the Charles Darwin University and includes senior officers from the Department of Health, the Department of Natural Resources, Environment, The Arts and Sport, the Power Water Corporation, the Darwin City Council and the City of Palmerston. The taskforce is also consulting with the Darwin Harbour Advisory Committee and the Rapid Creek Catchment Advisory Committee.

The Taskforce will report its findings and recommendations through two reports. The initial report will outline what is known and what is still to be determined about the sources of bacteria on Darwin Harbour beaches. The final report will outline actions to address sources of bacteria and recommend an ongoing monitoring program for Darwin Harbour beaches.

Data and results obtained from all 2010 and 2011 testing and analysis are now available on 'Greening the Territory' and NRETAS website and will continue to be updated regularly.

For results of sampling at Darwin beaches and the status of beaches for swimming visit the Department of Health's website:

http://www.health.nt.gov.au/Environmental_Health/Beach_Water_Quality/index.aspx



Rocky foreshore near Nightcliff jetty