

EAST COAST/DEVONPORT REPORTING AREA

Includes Devonport-Takapuna, Hibiscus and Bays and Waiheke local boards

STATE OF AUCKLAND MARINE REPORT CARD

JULY 2014

AREA
GRADE

A

QUICK FACTS

WHAT MAKES UP THIS GRADE?

OVERALL GRADE



WATER QUALITY



CONTAMINANTS IN SEDIMENT



The overall environmental health score from A to F is based on the average of the scores for water quality, contaminants in sediment and ecology. Bathing Beach scores are not included in this grade.

These grades represent an average of the results from the individual sites. Individual site results will vary and localised issues may not be represented by the overall grades.

OF THE NINE BATHING BEACHES TESTED DURING SUMMER 2013/14 **>99% PASSED** RECREATIONAL BACTERIA GUIDELINES

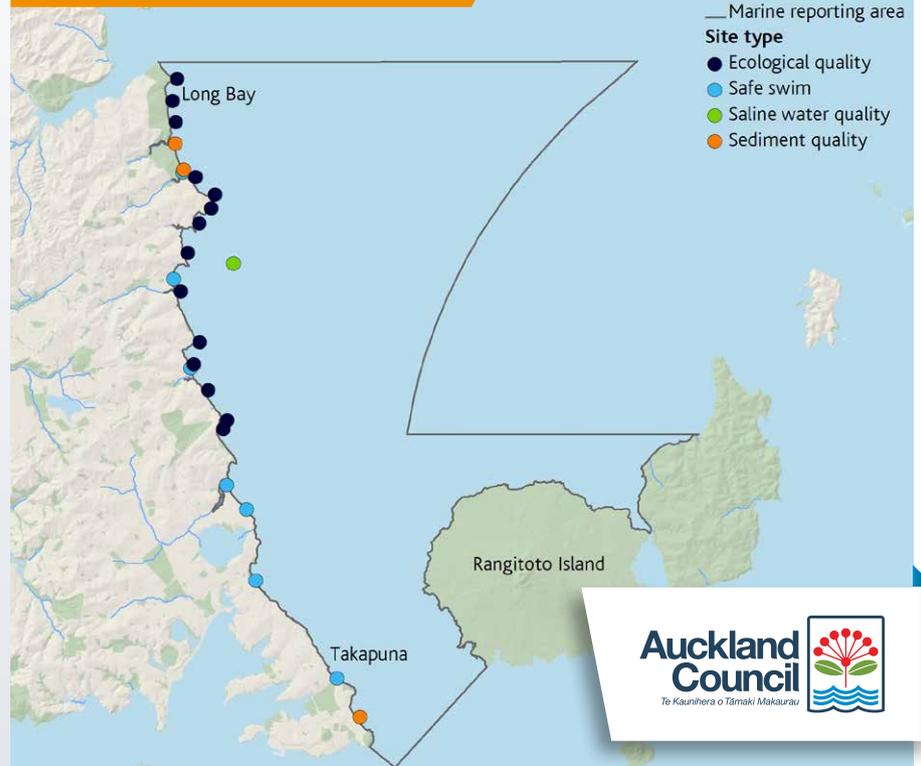
CYCLONE WILMA BROUGHT HIGH RAINFALL RESULTING IN INCREASED FINE SEDIMENT ACCUMULATION RATES IN NEAR-SHORE ENVIRONMENTS

LONG BAY-OKURA MARINE RESERVE WAS FORMALLY ESTABLISHED IN **1995**

OVERALL SPECIES ASSEMBLAGES **ON ROCKY REEFS** REMAIN SIMILAR TODAY TO WHEN MONITORING BEGAN IN **1999**

SPOTLIGHT ON BEACH WATER QUALITY: A water quality buoy has been set up north of the Takapuna boat ramp. The buoy provides near real time measures of the water and enables the public to directly access data that describes the quality of water that they may be swimming in. The buoy also allows for a closer examination of the health of our coastal waters in response to large events such as storms and heavy rainfall.

EAST COAST/DEVONPORT MONITORING SITES



MONITORING BACKGROUND AND INTERPRETATION

Water quality: To measure the health of our marine waters, a comprehensive range of parameters including nutrients, turbidity, salinity, pH (and more) are measured. Results are classified according to the Water Quality Index, which was developed by the Canadian Council of Ministers of the Environment in 2001 and adapted by Auckland Council. Scores are based on the averages over the last three years and exclude 'bathing beach water quality'. Check out report TR2013/031.

Contaminants in sediment: Auckland Council tests for zinc, copper and lead every two to five years. Other contaminants such as PAHs (polycyclic aromatic hydrocarbons, by-products of burning fuels) and arsenic are also monitored. Environmental Response Criteria (ERC) are used: green indicates low levels of contaminants, amber indicates some elevation and red indicates relatively high levels (as outlined in *Blueprint for monitoring urban receiving environment*, ARC TP 168, 2004 and ANZECC guidelines). Check out report TR2012/041.

Ecology: At harbour and estuarine sites, seabed-dwelling (benthic) species are counted and contaminants in sediments and sediment grain size are measured every two to five years, with the most contaminated sites sampled most frequently. Results are classified according to a five-point health index outlined in Health of

estuarine soft-sediment habitats: continued testing and refinement of state of the environment indicators, Auckland Council technical report, TR2012/012, which ranges from 'extremely good' to 'unhealthy with low resilience'. Ecology is also monitored more frequently at selected sites, every two to three months for soft sediment sites and annually for subtidal rocky reefs. There is currently no reporting indicator for reef ecology. Check out report TR2013/027.

Bathing beach water quality: Tests for microbiological (enterococci) contamination are carried out in summer as part of the Safeswim programme and are in line with Ministry for the Environment guidelines. These results are reported as a 'Quickfact' and are calculated from all tests carried out at all monitored beaches in the Harbour. 'Bathing beach water quality' has not been included in the overall score as it relates to human health and is based on a different method of assessment (number of alerts). Individual results for monitored beaches are provided on the Safeswim section of the Auckland Council website.

Warning: These State of the Environment indicators DO NOT measure or indicate food quality or safety; refer to foodsafety.govt.nz for more information.

MONITORING RESULTS

	WATER QUALITY	Marine water quality sampling began in 1993 and is sampled at one site. The water quality of the East Coast has been ranked as 'good'. This grade is the same to last year as we have seen consistent levels of phytoplankton, suspended sediment and dissolved oxygen in the water column.
	CONTAMINANTS IN SEDIMENT	Sediment quality sampling began in 1998. Contaminant build up in sediments in this area is limited by relatively high wave energy, which tends to disperse fine sediments and associated contaminants widely. Contaminant concentrations are therefore low in these more open coastal areas. Similar to the 2013 report cards, of the three sites monitored for the contaminants copper, lead, zinc and PAHs, only the PAH level at Cheltenham Beach exceeded the ERC amber threshold.
	ECOLOGICAL HEALTH	There are no soft sediment monitoring sites in this area so a grade for ecological health cannot be produced. However, a number of subtidal reefs around the region are monitored. The number and abundances of species on these monitored reefs remain relatively stable since monitoring began in 1999, with most changes and variation likely driven by regional-scale processes. Other than a general increase in invasive species, there were no signs of degradation in reef ecosystems, and in particular no evidence of change at Long Bay in relation to the coastal development.

FIND OUT MORE

This report card is part of a series prepared by the Auckland Council's Research, Investigations and Monitoring Unit, which undertakes monitoring and research to provide information and evidence to inform the council's activities and reporting. Auckland's environment must be healthy and resilient in order

to support life and lifestyle. More report cards can be found at: aucklandcouncil.govt.nz/stateofauckland. The report card series includes reporting on freshwater, terrestrial, marine, air, soil, capacity for growth, demographics and quality of life.

GET INVOLVED

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