

TĀMAKI STRAIT REPORTING AREA

Includes Franklin, Howick, Orākei and Waiheke local boards

STATE OF AUCKLAND MARINE REPORT CARD

JULY 2014

AREA GRADE

C



QUICK FACTS

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

TĀMAKI STRAIT IS **335.36 KM²** IN SIZE

LESS THAN **10%** OF THIS AREA IS INTERTIDAL WHILE THE REMAINDER IS DOMINATED BY SUBTIDAL SOFT SEDIMENT HABITATS

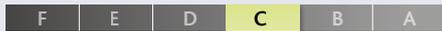
TE MATUKU BAY IN WAIHEKĒ ISLAND HAS A RELATIVELY UNDEVELOPED RURAL CATCHMENT, AND THE MONITORING SITE ACTS AS A "REFERENCE" SITE

WHAT MAKES UP THIS GRADE?

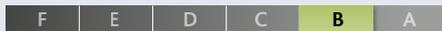
OVERALL GRADE



WATER QUALITY



CONTAMINANTS IN SEDIMENT



ECOLOGY

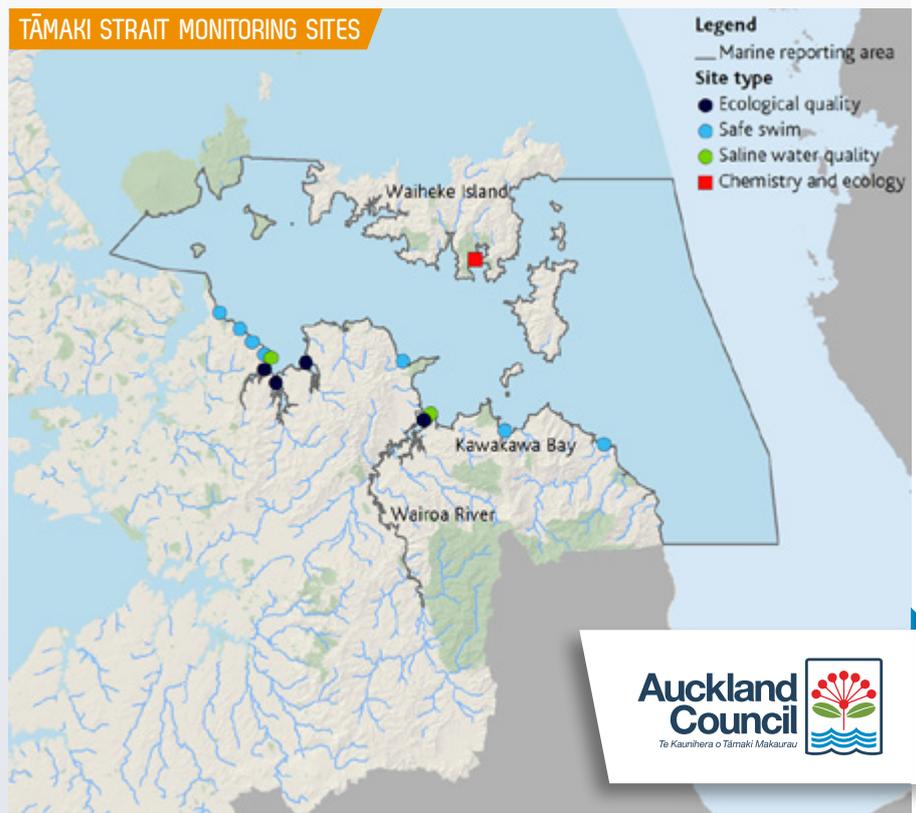


The overall environmental health score from A to F is based on the average of the scores for water quality, contaminants in sediment and ecology. Bathing Beach scores are not included in this grade.

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.

SPOTLIGHT ON WAIROA RIVER: The Wairoa River drains a large catchment into a relatively small estuary, and consequently discharges high levels of sediment into the Tāmaki Strait. A water quality buoy is to be deployed to provide near real time data on the quality of water draining from the Wairoa River. This information will be used to assess sediment and bacteria loads to the Tāmaki Strait. This will provide accurate information on whether these waters are safe for shellfish collection, recreational use and to a healthy marine environment.

TĀMAKI STRAIT 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 2009. The water quality of Tāmaki Strait has been ranked as 'fair'. Of the two monitored sites, one site had 'good' water quality while the second site had 'poor' water quality. These water quality grades are the same as last year.



CONTAMINANTS
IN SEDIMENT

Sediment quality sampling in Tāmaki Strait estuaries was mostly carried out in 2010. These estuaries had very low concentrations of contaminants. All three sites sampled in each of the predominantly rural Turanga, Waikopua and Mangemangeroa estuaries fell into the ERC green category for copper, lead, zinc and PAHs. Te Matuku Bay on Waihekē Island is a rural reference site with very little urban activity and a catchment dominated by regenerating bush and pasture. Te Matuku Bay has been sampled since 1998, most recently in 2013, and also falls into the ERC green category for all contaminants monitored.



ECOLOGICAL HEALTH

The overall ecological health grade for the Tāmaki Strait reporting area remains the same as last year. It is important to note that the ecology grade for this area is derived only from the monitored estuarine sites and may not represent the wider associated coastal environment. Of the 22 sites included in this score, ecological health is generally ranked as 'good' near the mouth of the estuary, declining to 'moderate' and 'poor' further up the estuary. Some sites had lower grades than last year, while others showed an improved grade. There was no overall consistent pattern of change and individual site changes likely reflect natural variability.

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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