

MAHURANGI HARBOUR REPORTING AREA

Rodney Local Board

STATE OF AUCKLAND MARINE REPORT CARD

JULY 2014

AREA GRADE

B

QUICK FACTS

MAHURANGI HARBOUR RECEIVES RUNOFF FROM A **122-KM² CATCHMENT**

TIDAL FLOWS IN THE **MAHURANGI HARBOUR** CAN REACH VELOCITIES OF UP TO 0.7M/S DURING SPRING TIDES

LONG-TERM ECOLOGICAL MONITORING OF THE INTERTIDAL AND SUBTIDAL BENTHIC COMMUNITIES IN **MAHURANGI** HARBOUR BEGAN IN 1994

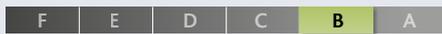
A HARBOUR-WIDE SOFT SEDIMENT SURVEY FOUND A **DIVERSE COMMUNITY** WITH 162 TAXA

WHAT MAKES UP THIS GRADE?

OVERALL GRADE



WATER QUALITY



CONTAMINANTS IN SEDIMENT



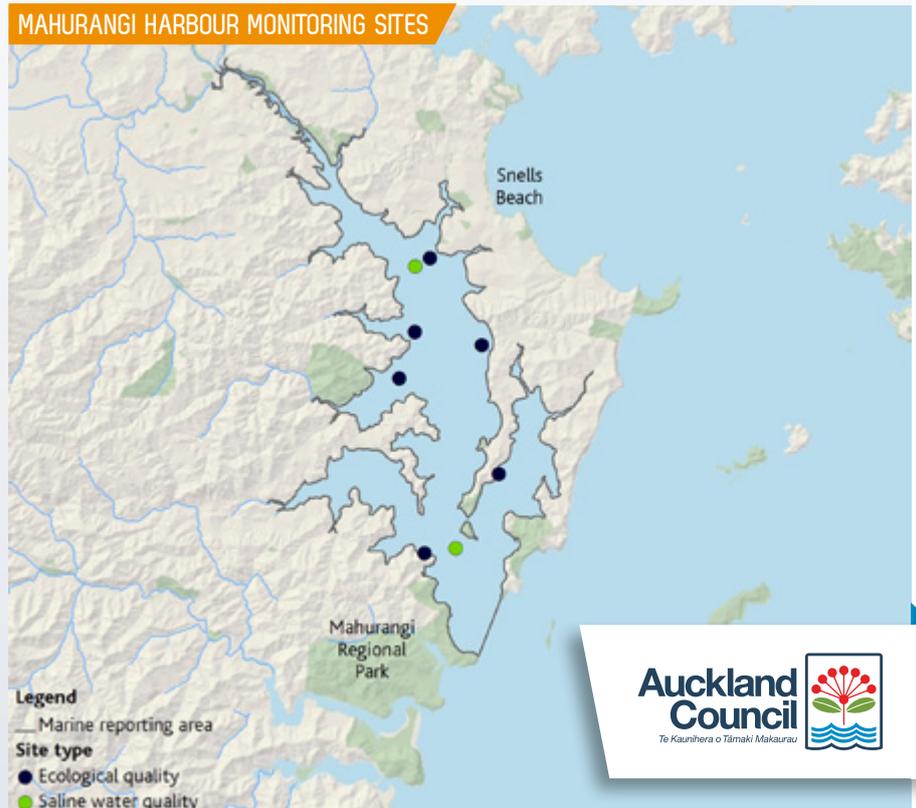
ECOLOGY



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.

MAHURANGI HARBOUR 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 is sampled at two sites and began in 1993. The water quality of the Mahurangi Harbour has been ranked as 'good'. This overall ranking of the harbour is due to 'good' water quality found at Dawson's Creek while the water quality at Mahurangi heads is ranked as 'excellent'. These grades remain the same as last year.
	CONTAMINANTS IN SEDIMENT	Sediment quality sampling was carried out in 2010. Levels of copper, lead, zinc and PAHs found in sediment were generally very low across all six sites sampled and all fell within the green ERC category. One site near Jamieson Bay had slightly elevated copper and PAH levels.
	ECOLOGICAL HEALTH	The overall ecological health grade for soft sediment ecology in the Mahurangi Harbour remained the same as last year with only two changes in individual site grades. Both Jamieson Bay and Hamilton Landing sites received an improved ranking of 'good' from 'moderately healthy'. Ongoing, detailed monitoring of ecological communities at sites has shown a moderate level of variability, likely relating to natural cyclic patterns in abundance. However, some of the patterns in the abundance of the monitored species remain consistent with those that may be associated with elevated levels of sedimentation and/or organic enrichment at the intertidal sites.

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

Auckland Council provides more than 20 environmental programmes across the region for you to get involved with and improve your local environment.

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