

MAHURANGI HARBOUR REPORTING AREA

Rodney Local Board

STATE OF AUCKLAND MARINE REPORT CARD

AUGUST 2016

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 DIFFERENT SPECIES

THE HARBOUR, FORMED BY SEA LEVEL RISE AT THE END OF THE
LAST ICE AGE, REACHED ITS MAXIMUM EXTENT OF
23 KM² 6000 YEARS AGO

WHAT MAKES UP THIS GRADE?

OVERALL GRADE



WATER QUALITY



CONTAMINANTS IN SEDIMENT

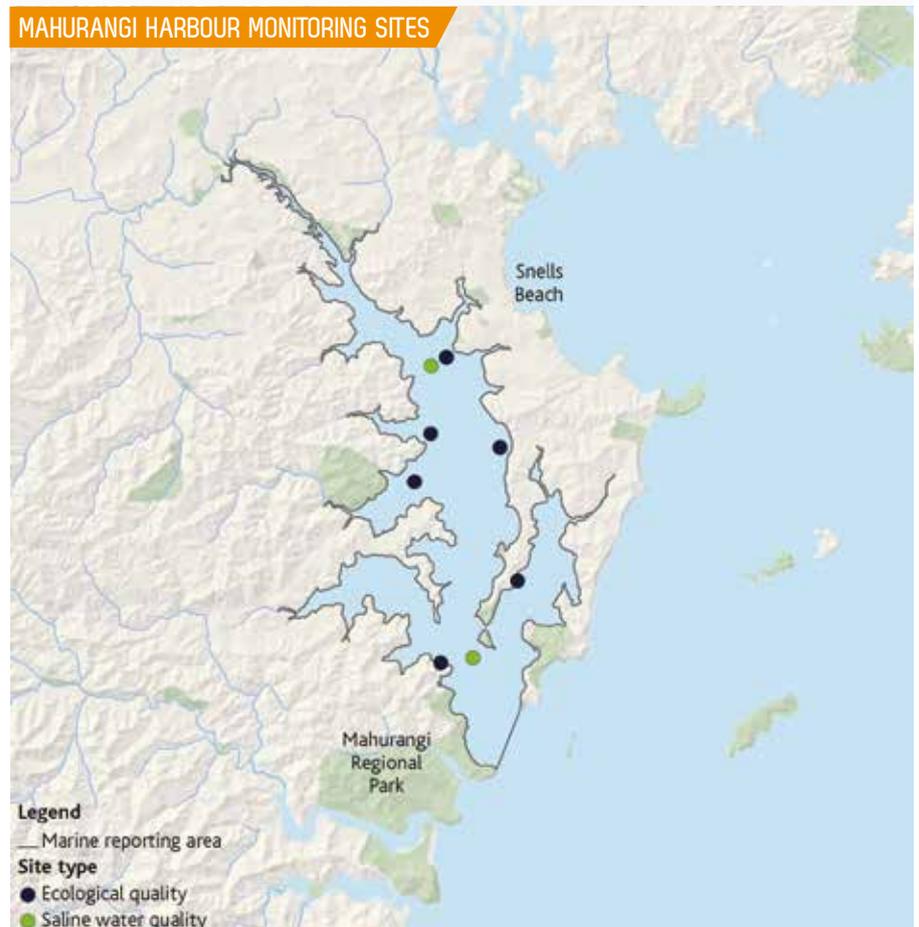


ECOLOGY



The overall environmental health grade 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. Note that from 2016 the 'contaminants in sediment' and 'water quality' scores have been assessed using an updated method which may result in a change to the scores unrelated to a change in quality. See the back page for monitoring results and interpretation. These grades represent a summary of averaged results from individual sites and are not designed to track trends. Individual site results will vary and localised issues may not be represented by the overall grades. More detailed analyses are presented in technical reports.

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 with the scores being converted into four water quality categories (excellent, good, fair and poor). The calculation of the water quality index has changed this year with the addition of a site from both the Kaipara and Manukau harbours into the list of 'reference sites'. This may cause changes in the grades which are due to the adjustment within the water quality index rather than real changes in the environment.

Contaminants in sediment: Auckland Council tests for zinc, copper and lead every two to five years. Environmental Response Criteria (ERC) are used: green indicates low levels of contaminants, amber indicates some elevation and red indicates relatively high levels). Note that from 2016 a nationally consistent but less conservative scoring system has been applied and may result in an apparent improvement in the score for contaminants and the overall grade. The most recent results can be found in technical report TR2016/020.

Ecology: At selected harbour and estuarine sites, species living in or on intertidal sand flats are counted. Results are classified according to a five-point health index (TR2012/012), which ranges from 'extremely good' to 'unhealthy with low resilience'. Ecology is also monitored more frequently at sentinel sites, every two to three months for soft sediment sites.

Bathing beach water quality: Tests for microbiological (enterococci) contamination are carried out in summer as part of the Safeswim programme 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 2014 report card.



CONTAMINANTS
IN SEDIMENT

Sediment quality sampling was carried out in 2010. Levels of copper, lead and zinc 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 levels.



ECOLOGICAL HEALTH

The overall ecological health grade for soft sediment ecology in the Mahurangi Harbour remains the same as 2014. All sites are currently ranked as moderately healthy which is a decrease for some sites. However over time some sites vary around the boundary of poor to moderate or some moderate to good. 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 Auckland Council's Research and Evaluation Unit (RIMU), which provides the mandatory and critical evidence to support the council's decision-making, activities and reporting. Report cards and the latest full State of the Environment Report can be found at aucklandcouncil.govt.nz/stateofauckland

To view technical publications visit

aucklandcouncil.govt.nz/EN/planspoliciesprojects/reports/technicalpublications/Pages/home.aspx

For more information: e-mail RIMU@aucklandcouncil.govt.nz
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GET INVOLVED

Auckland Council provides more than 20 environmental programmes across the region that you can get involved in. To find out more on how you can help visit the Auckland Council website.