

MAHURANGI HARBOUR REPORTING AREA

Rodney Local Board

STATE OF AUCKLAND MARINE REPORT CARD

2018



QUICK FACTS

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

MUSSEL REEF RESTORATION IS BEING TRIALLED IN THE HARBOUR, SUPPORTED BY BIOMARINE, NORTH ISLAND MUSSELS AND THE NATURE CONSERVANCY

LONG-TERM **ECOLOGICAL MONITORING** OF THE INTERTIDAL SANDFLAT COMMUNITIES IN MAHURANGI HARBOUR BEGAN IN 1994

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

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**

WATER QUALITY

F	E	D	C	B	A
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CONTAMINANTS IN SEDIMENT

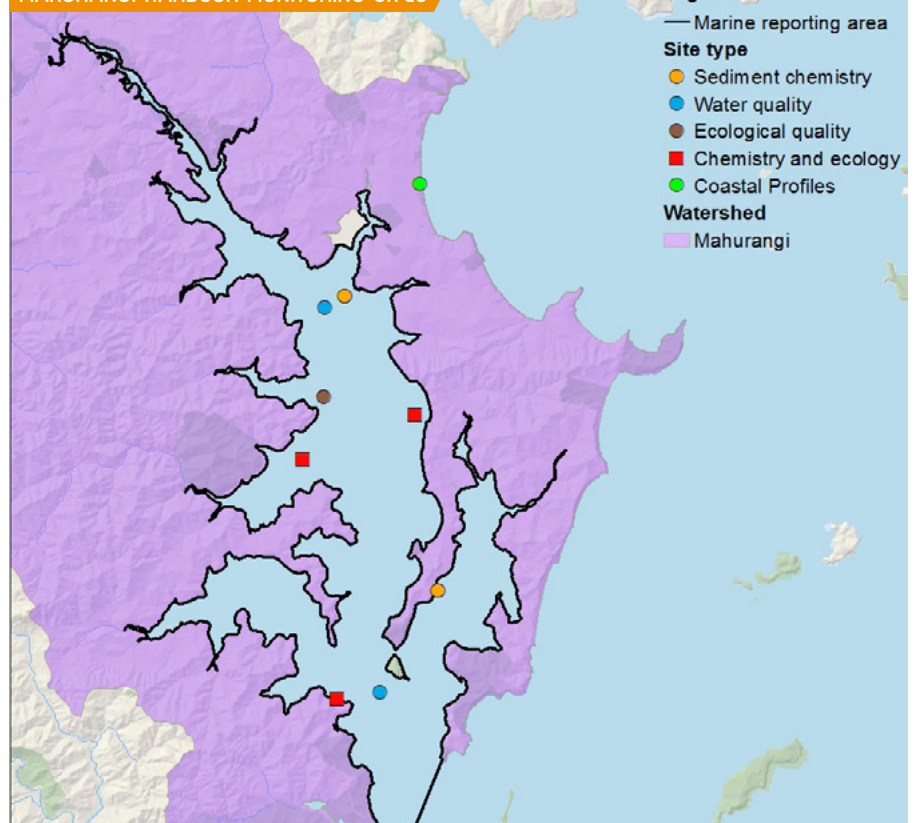
F	E	D	C	B	A
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ECOLOGY

F	E	D	C	B	A
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These grades represent a summary of results from individual sites and are not designed to track trends. Each programme samples at a number of representative sites across Auckland and collects parameters specific to the programme which are amalgamated to provide the grade. More detailed analyses are presented in technical reports available on Knowledge Auckland. See the back page for monitoring results and interpretation. Note that the water quality scores have been assessed using an updated methodology which may result in a change to the grade unrelated to a change in quality.

MAHURANGI HARBOUR MONITORING SITES



MONITORING BACKGROUND AND INTERPRETATION

Water quality: To measure the health of our marine waters, a comprehensive range of parameters are measured, including nutrients, turbidity, salinity, and pH. Overall water quality is assessed using 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 calculated by comparing average values from the last three years to water quality objectives. The methods used to calculate the scores for 2018 have changed and sites have been split into open water and estuary sites to better reflect the differing water circulation conditions. This more conservative approach means some water quality grades are lower than in previous years due to the change in index rather than a change in water quality. See Technical Report 2018/027 on Knowledge Auckland for more information on the methodology change.

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. 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: Check Safeswim (safeswim.org.nz) for live information on water quality and swimming conditions at your favourite swimming spots.

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 overall water quality grade for the harbour remains good (same grade in 2014, 2016). Sites in the Mahurangi showed the least exceedances of thresholds for monitored sites in the region.
	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 overtime some sites fluctuate around the grade 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, which undertakes monitoring and research to provide information and evidence to inform the council's activities and reporting. More report cards can be found at: aucklandcouncil.govt.nz/environment. The report card series includes reporting on freshwater, terrestrial, marine, air, soil, capacity for growth, demographics and quality of life.

For more information: e-mail rimu@aucklandcouncil.govt.nz or call us on 09 301 0101.

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: aucklandcouncil.govt.nz