

## MANUKAU HARBOUR REPORTING AREA

Includes Franklin, Manurewa, Māngere-Ōtāhuhu, Maungakiekie-Tāmaki, Ōtara-Papatoetoe, Papakura, Puketāpapa, Waitākere Ranges and Whau local boards

# STATE OF AUCKLAND MARINE REPORT CARD

### WATER QUALITY

F E D C B A

### CONTAMINANTS IN SEDIMENT

F E D C B A

### ECOLOGY

F E D C B A

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.

## 2018

## QUICK FACTS

BETWEEN 45 AND 65% OF MANUKAU HARBOUR'S WATER SQUEEZES THROUGH THE 2KM WIDE **HARBOUR MOUTH**

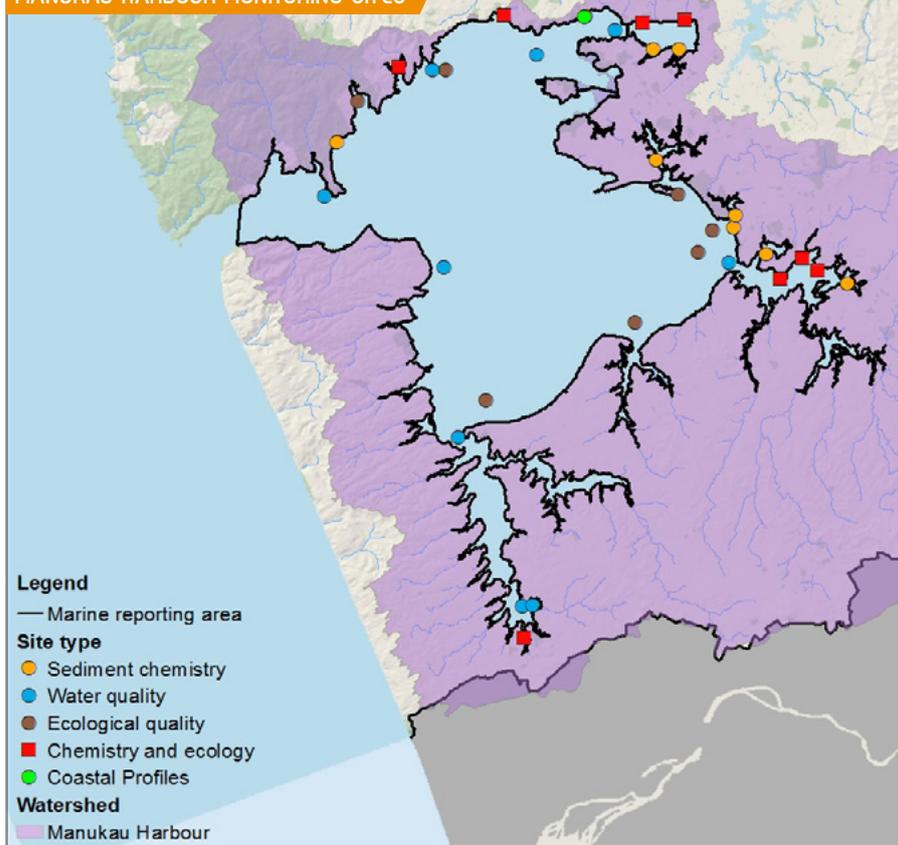
AT LOW TIDE HALF OF THE 340KM<sup>2</sup> HARBOUR IS EXPOSED, **CREATING VAST SAND AND MUD FLATS** IMPORTANT FOR MANY MIGRATORY BIRD SPECIES

MORE THAN 8 SPECIES OF SHARKS FREQUENT THE HARBOUR, THE MOST COMMON BEING THE **RIG SHARK**

AUCKLAND COUNCIL HAS BEEN MONITORING WATER QUALITY, ECOLOGY AND CONTAMINANTS IN THE **MANUKAU HARBOUR SINCE 1987**

THE HARBOUR IS A RELATIVELY **SHALLOW BASIN** WITH A SPRING TIDE RANGE OF 2.8 M AND AVERAGE **DEPTH OF 6.1 M**

### MANUKAU 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](http://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](http://foodsafety.govt.nz) for more information.

## MONITORING RESULTS



WATER  
QUALITY

Marine water quality monitoring began in the Manukau harbour in 1987, with a network of six sites. Since this time two sites have been added to the programme, one at the harbour mouth in 2009 and one in Waiuku Town Basin in 2012. The overall water quality of the Manukau Harbour remains poor with sites exceeding water quality thresholds for all variables except dissolved oxygen. Although improvements are being seen with nutrient concentrations decreasing at Manukau Harbour sites, they are still markedly above threshold levels.



CONTAMINANTS  
IN  
SEDIMENT

Sediment quality sampling began in 1998. Concentrations of contaminants are generally low in Manukau Harbour, with the exception of the north eastern area including Māngere Inlet. Contamination in Māngere Inlet may be partly related to historic industrial pollution. The low contaminant concentrations in the wider Manukau Harbour are due to a mixture of factors, including the large size and extensive mixing of the harbour and a relatively small watershed with a small proportion of urban area and fairly recent urbanisation. With the new scoring system introduced in 2016 only three sites in Māngere Inlet exceed the ERC amber threshold for zinc, these were Tararata, Harania and Anns. Four additional sites have also been sampled in the Drury Creek area. While these additional sites are ERC green they are muddier than was expected.



ECOLOGICAL  
HEALTH

The overall ecological health grade has decreased from 2016 from a D to an E in 2018. The health grades within the harbour vary greatly, with sites in the wider harbour ranked as 'extremely good' and 'moderate', while sites in tidal arms like Māngere Inlet and Pahurehure rank as 'unhealthy'. An increase in muddiness has been observed at a number of 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](http://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](mailto: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](http://aucklandcouncil.govt.nz)