

# TĀMAKI ESTUARY REPORTING AREA

Includes Howick, Māngere-Ōtāhuhu, Maungakiekie-Tāmaki, Orākei, and Ōtara-Papatoetoe local boards

## STATE OF AUCKLAND MARINE REPORT CARD

### 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.

2018



### QUICK FACTS

**SEAGRASS** DISAPPEARED FROM THE TĀMAKI ESTUARY IN THE 1950s AND 1960s, BUT CAN NOW BE FOUND AROUND THE ESTUARY ENTRANCE

ISSUES IN THE ESTUARY REFLECT MANY DECADES OF **HUMAN IMPACT**, INCLUDING SEDIMENTATION AND CONTAMINATION FROM THE URBAN AREAS

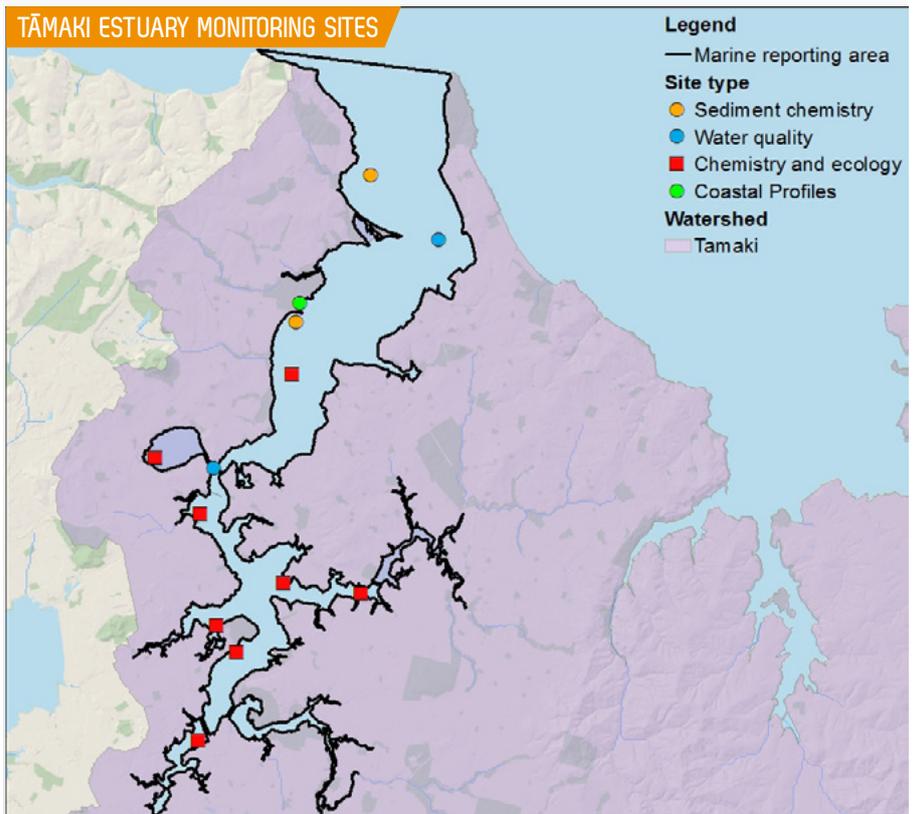
OVER THE LAST **100 YEARS**, TĀMAKI CATCHMENT HAS EVOLVED FROM A MOSTLY RURAL LANDSCAPE TO AN URBANISED AND **INDUSTRIALISED AREA**

THE TĀMAKI ESTUARY CATCHMENT REPRESENTS A SUBSTANTIAL **DRAINAGE SYSTEM** COVERING 97 KM<sup>2</sup>

DUE TO THE USE OF ANTIFOULING PAINTS, DISSOLVED AND TOTAL **COPPER CONCENTRATIONS** ARE ELEVATED IN MARINA WATERS COMPARED TO AMBIENT CONCENTRATIONS IN THE HARBOUR



### TĀMAKI ESTUARY 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 1992 at two sites, Tāmaki and Panmure. The water quality in the area is poor. Panmure has been consistently 'Poor' since monitoring began, and while water quality at Tāmaki has increased in the last two years all variables continue to exceed water quality thresholds (TR2018/015).



CONTAMINANTS  
IN SEDIMENT

Sediment quality sampling began in 1998. The Tāmaki Estuary has high levels of contaminants (particularly zinc) in its older, densely urbanised and industrialised headwater zones (e.g. Middlemore, Pakuranga, Ōtāhuhu and Panmure). Contaminants lessen with distance from the headwaters and so the estuary mouth has lower levels of contaminants. Of the nine sites regularly monitored for metals their ERC status is now as follows:-  
 - Copper - 33% are sites green, 67% are amber  
 - Lead - 78% of sites are green, 22% are amber  
 - Zinc - 78% sites are red



ECOLOGICAL  
HEALTH

The score for ecology has improved moving the grade from and E to a D. The overall ecological health grade for the Tāmaki estuary comprises of nine monitoring sites mainly located in the upper reaches of the estuary where ecological health is ranked as 'unhealthy' or 'poor'. The mid estuary site near Panmure has the highest grade of 'good'. Other sites nearer the mouth of the estuary are not monitored but are likely to have better ecological health due to more flushing

### 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)