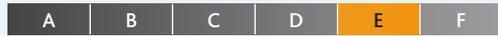


MANUKAU HARBOUR REPORTING AREA 2018

Includes Maungakiekie-Tamaki, Franklin, Papakura, Otara-Papatoetoe, Manurewa, Mangere-Otahuhu and Waitakere Ranges Local Boards

STATE OF AUCKLAND FRESHWATER REPORT CARD

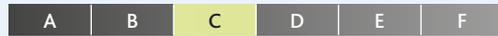
WATER QUALITY



HYDROLOGY



HABITAT QUALITY



BIODIVERSITY



The grades are made up of the following indicators:

Water quality: Water samples are tested for a range of parameters including temperature, pH, dissolved oxygen, nutrients and E. coli. The results for each site are compared against reference sites for Auckland to produce a water quality index.

Hydrology: Stream reaches are assessed for how well connected they are to upstream and downstream reaches, and the floodplain.

Habitat quality: The diversity and quality of habitats both in the streams and in the riparian margins is assessed.

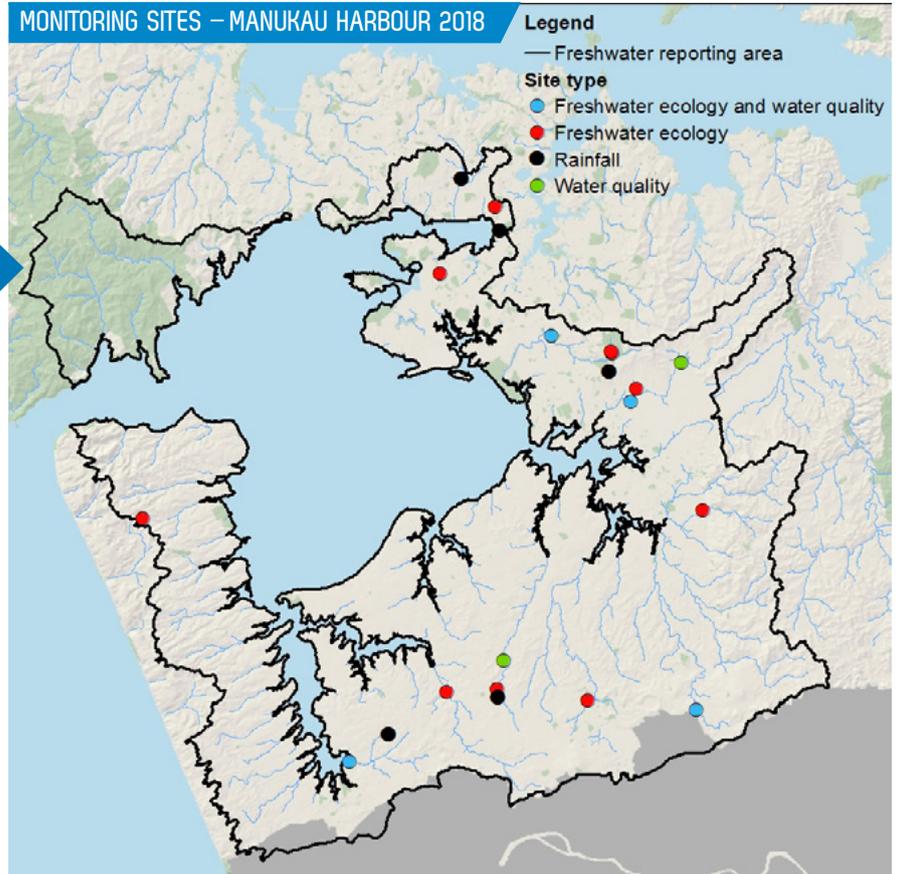
Biodiversity: Field assessments are made to determine the type and amount of native plants and animals. Stream macroinvertebrate samples are also collected to assess the diversity and tolerance levels of the macroinvertebrate community.

Each indicator is made up of several parameters. These grades represent a summary of indicator results from 2016 and 2017 from individual sites which are amalgamated for each reporting area to provide an indicator grade.

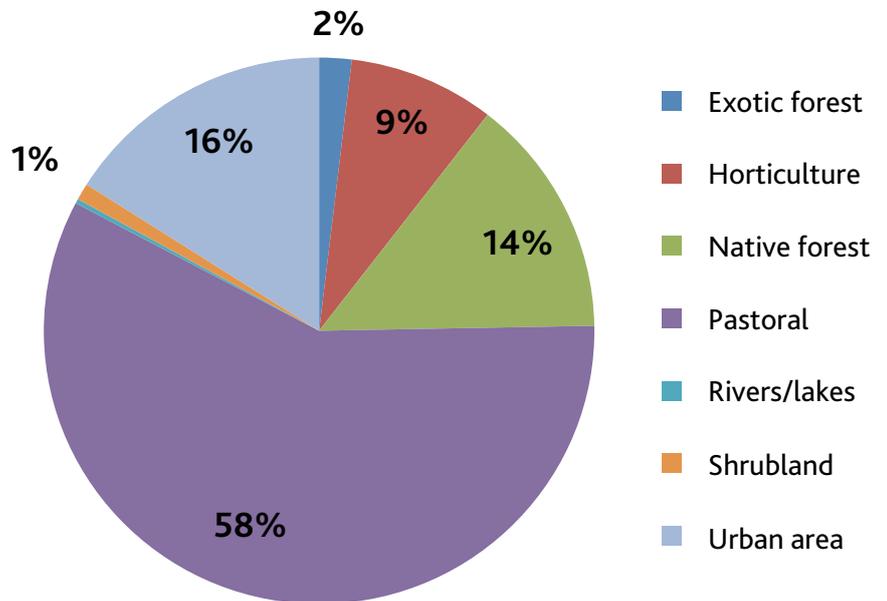
These report cards are not designed to track trends or report on National Policy Statement for Freshwater (NPS-FM) attributes which relate to specific parameters and bands. Note that grades given to amalgamated results or indicators here do not relate to the grades assigned to individual parameters in the NPS-FM.

More detailed analyses on sites and trends are presented in technical reports available on Knowledge Auckland.

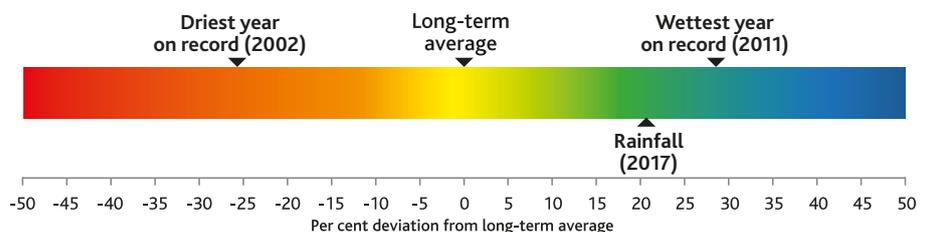
MONITORING SITES – MANUKAU HARBOUR 2018



MANUKAU LAND COVER



MANUKAU RAINFALL



Mean rainfall in 2017 (1620 mm) was 21 per cent greater than the long-term average (1339 mm). The longest rainfall record in the Manukau Harbour area is 34 years at Puhinui.

MONITORING BACKGROUND AND INTERPRETATION

Auckland Council's State of the Environment (SOE) monitoring has been building a record of Auckland's environment for more than 25 years. This information is critical to the effective management of Auckland's natural environment.

The monitoring programme shows there is a strong relationship between the health of the rivers and the type of land cover in the surrounding catchment. Rivers that drain forested catchments (particularly native forests) typically have excellent water quality and ecological health, while rivers that drain urban catchments

generally have poor water quality and ecological health. The health of rivers in the Manukau Harbour catchment is considered to be impaired. Urban development has led to a high level of impervious surface in the area, which prevents rainfall from soaking into the ground.

This has follow-on effects for rivers in the area leading to high water temperatures, changes to the natural flow patterns and increased pollution from contaminated stormwater.

SPOTLIGHT ON MANUKAU HARBOUR

The Manurewa Local Board is supporting a restoration project in the lower reaches of the Puhinui Stream. The aim of this project is to protect the inanga population which spawn in this reach. Over the last two years work has gone into inanga spawning and population surveys, weed control, and native plantings. Over 7,000 plants have been planted along the stream banks. This will reduce erosion, improve rearing and spawning habitat, improve water quality, and provide habitat for other wildlife.

The next stage of the project will involve setting up a bait station network to control rats and mice to reduce predation during the spawning season.

Furthermore, approximately 75,000 trees were planted in Puhinui Reserve this winter with support from the Mayor's Million Trees, MPI, Vector, Otara-Papatoetoe LB, Sustainable Coastlines, Auckland Council, NZ Defence Force and number of community groups.



Some successful planting completed in the Puhinui Reserve in July 2018



Volunteers hard at work on the banks of the Puhinui Stream

FIND OUT MORE

This report card is part of a series prepared by the 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