

GREAT BARRIER REPORTING AREA

Great Barrier Local Board

STATE OF AUCKLAND FRESHWATER REPORT CARD

JULY 2014

AREA GRADE

A



QUICK FACTS

THE REPORTING AREA CONSISTS OF GREAT BARRIER ISLAND AND LITTLE BARRIER ISLAND WHICH COVER

320KM²
OF LAND REPRESENTING 6.5% OF THE REGION

THE REPORTING AREA HAS THE LARGEST NATIVE VEGETATION

(92%)
OF ANY OF THE REPORTING AREAS

WHAT MAKES UP THIS GRADE?

OVERALL GRADE



WATER QUALITY



FLOW PATTERNS



NUTRIENT CYCLING



HABITAT QUALITY



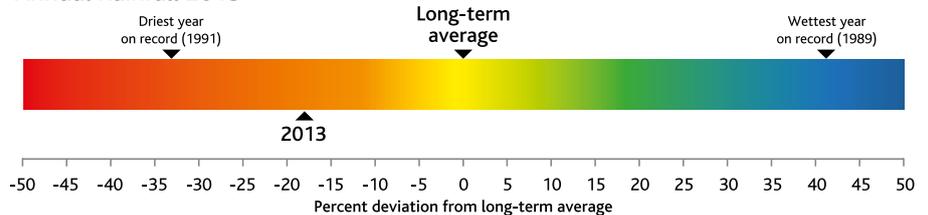
BIODIVERSITY



THE EXTENT OF IMPERVIOUS SURFACE (HARD SURFACES) IS LIKELY TO BE LOWER THAN THE REGIONAL AVERAGE OF

9%

Annual Rainfall 2013



Total rainfall in 2013 (1396 mm) was 18.4% less than the long term average (1712 mm). There are 29 years of rainfall record from the Port Fitzroy and Claris rain gauges.

The overall grade is made up of five indicators:

Water quality: Water samples are tested for temperature, oxygen concentration, turbidity and the levels of pH, ammonia and nutrients (nitrogen and phosphorus). The results of this testing are compared against guidelines for Auckland to produce a water quality index.

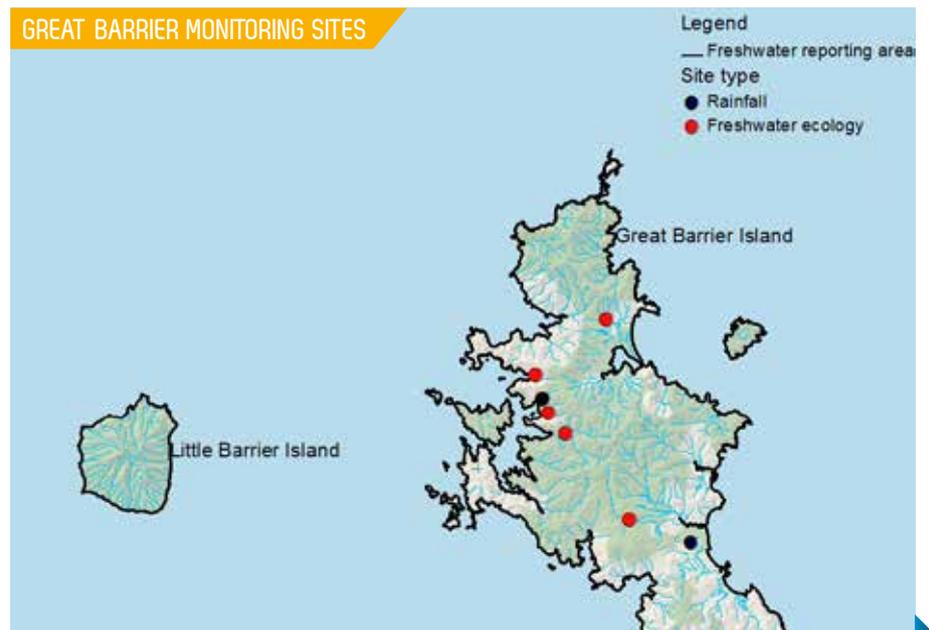
Flow patterns: This involves monitoring the hydrologic connectivity of the river to upstream and downstream reaches and the floodplain using the Stream Ecological Valuation (SEV), which is a method of assessing the ecological health of our rivers.

Nutrient cycling: This involves monitoring the inputs and processing of minerals, particulates and contaminants using the SEV biogeochemical functions.

Habitat quality: This involves monitoring the diversity and quality of habitats using the SEV habitat provision functions.

Biodiversity: Field assessments and samples are collected to assess the type and amount of native plants and animals using the SEV biodiversity functions.

GREAT BARRIER MONITORING SITES



MONITORING BACKGROUND AND INTERPRETATION

Auckland Council's State of the Environment (SoE) monitoring programme 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, after all, you can't manage what you don't monitor.

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

water quality and ecology, while rivers that drain from urban catchments typically have poor water quality and ecology.

The Great Barrier reporting area is predominantly forested and as a result the health of the area's rivers is likely to be excellent.

Rivers in this reporting area tend to have riparian margins with lots of trees and bush, which provide shade, leaf litter and woody debris to the stream and anchor the stream banks. The absence of urban development means there is very little channel modification or pollution from discharges or stormwater.

The data used to produce this report card is from:

River name	Site location	Measurements	Date range
Native forest average*		Water quality	2011-2013
Kaiaraara Stream	DOC hut	SEV	2013
Kaitoke Creek	Hot Springs Track	SEV	2013
Karaka Bay Stream	Karaka Bay Road	SEV	2013
Mabey Stream	Mabey Road	SEV	2013
Rarohara Bay Stream	DOC reserve	SEV	2013
Tryphena Stream	Medland Road	SEV	2013

**It is impossible to monitor every characteristic of every freshwater environment, hence for some areas, such as Great Barrier, we monitor ecological health but have used results from similar catchments to infer water quality.*



Kaiaraara Stream



Mabey Stream

FIND OUT MORE

This report card is part of a series prepared by the Auckland Council's Research, Investigations and Monitoring Unit, which undertakes monitoring and research to provide information and evidence to inform the council's activities and reporting. Auckland's environment must be healthy and resilient in order

to support life and lifestyle. More report cards can be found at: aucklandcouncil.govt.nz/stateofauckland. The report card series includes reporting on freshwater, terrestrial, marine, air, soil, capacity for growth, demographics and quality of life.

GET INVOLVED

Auckland Council provides more than 20 environmental programmes across the region for you to get involved with and improve your local environment.

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