



Hawke's Bay Trends

THE STATE OF OUR ENVIRONMENT

November 2023

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This summary might be short and sweet. November was wet. Very wet. We had double November's average rainfall, though it was skewed by northern Hawke's Bay receiving four times its average. The month's river flows were above normal, groundwater levels were above normal and soil moisture was well above normal and at field capacity.

Gloomy weather didn't make for a great start to our recreational water quality reporting, with the not so stellar outcome reflecting the influence of the rain. The will to swim was likely lacking because the grey skies made for colder than usual November days. Nights were warm though, almost 1°C warmer than average. On the plus side, rain typically helps air quality and that was the case in November, giving us a good result for the month.

Dr Kathleen Kozyniak
Team Leader Air and Land Science

SUMMARY November 2023

Short summary

Wet! Cold days and warm nights.

December to February Forecast

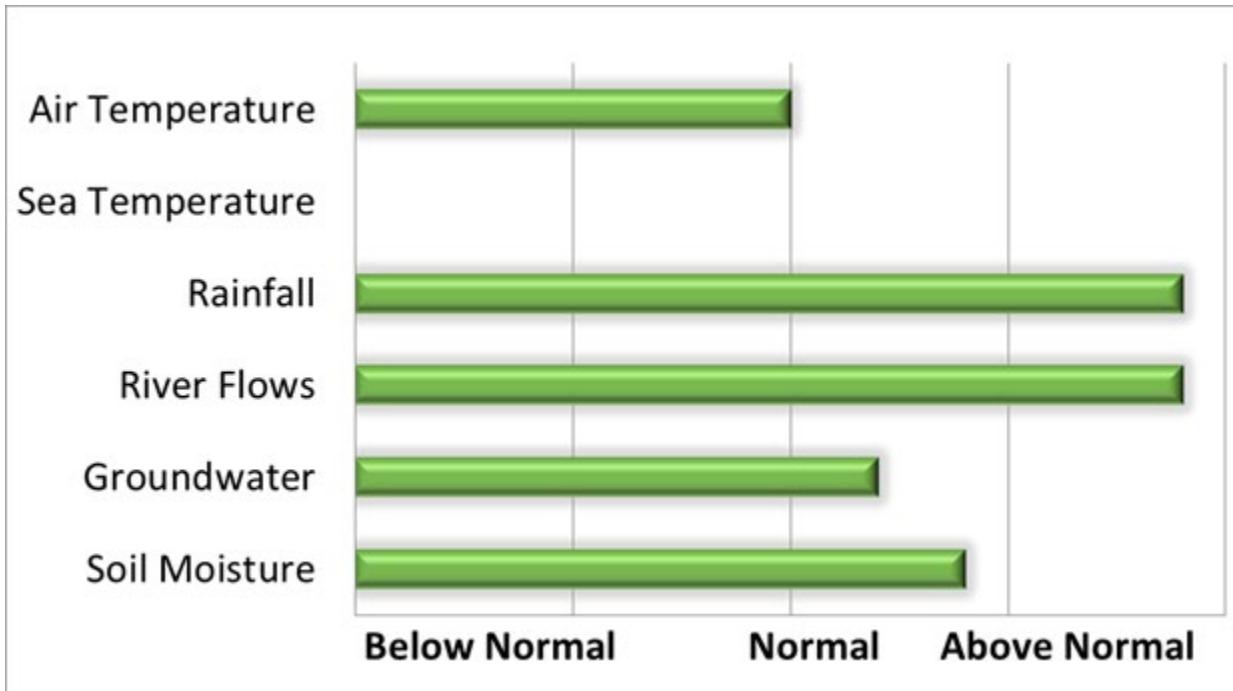
Temperature	Above average
Rain	Near or below normal
River flows	Below or near normal
Soil moisture	Below or near normal

source : NIWA

For more information

www.hbrc.govt.nz

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RAINFALL

Much wetter than usual, especially in the north.
Three cloud to ground lightning strikes.

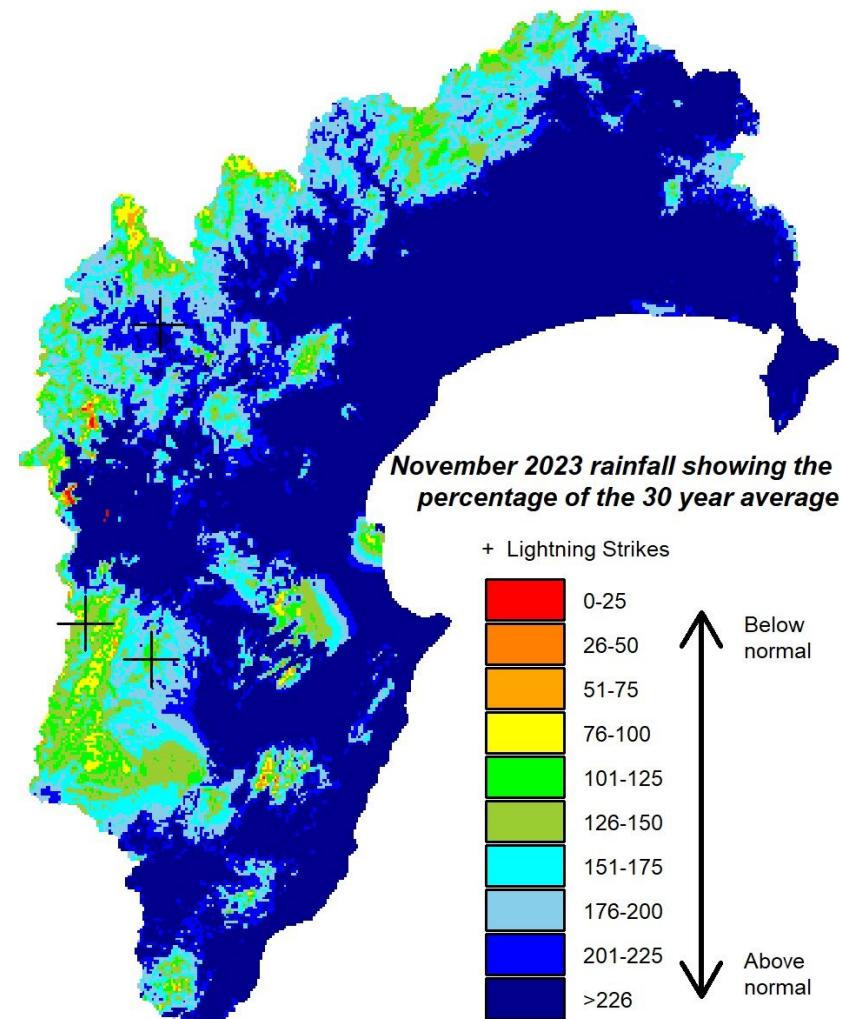
Lightning counts come from the Blitzortung.org lightning network to which HBRC contributes.

Percentage of normal November rainfall
(30 year average)

For areas in the region:

Waikaremoana	%
Northern HB	%
Tangoio	%
Kaweka	%
Ruahine	%
Heretaunga Plains	%
Ruataniwha Plains	%
Southern HB	%
Hawke's Bay Region	%

For a more detailed rainfall report click [here](#) and for a 5-year monthly summary click [here](#).



AIR TEMPERATURES

Temperatures – mixed, below average days and warm nights (opposite to last month).

Mean Difference from Normal

Maximum Temperature: -0.5°C
Minimum Temperature: 0.9°C

Mean Daily Maximum: 18 °C

Mean Daily Minimum: 10°C

Highest Daily: 28.5 °C

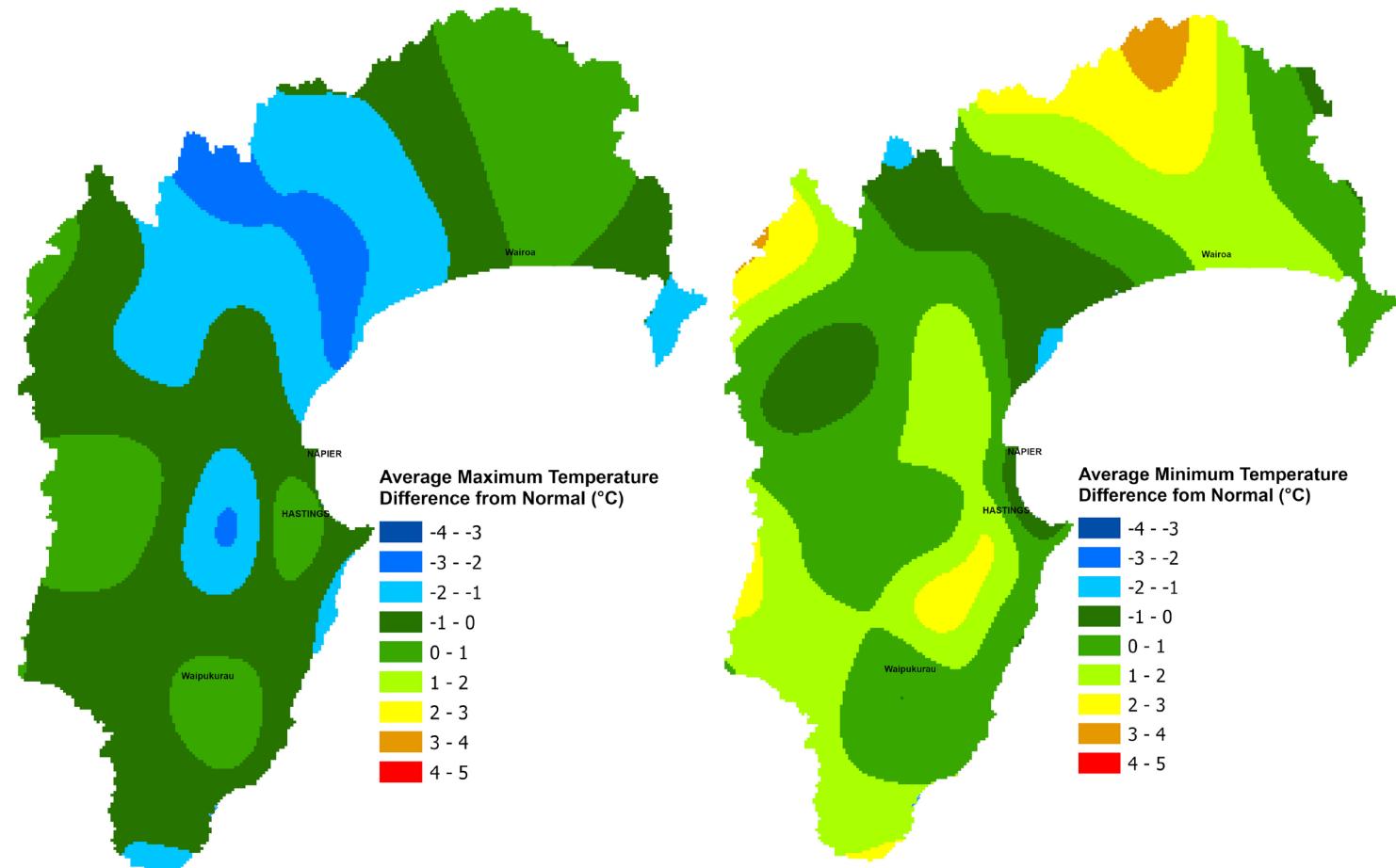
Location: Wairoa North Clyde EWS (NIWA)

Lowest Daily: -0.9 °C

Location: Taharua Climate

Sea Surface Temperature

The average sea surface temperature (SST) for Hawke's Bay in November 2023 is unavailable due to the HBRC coastal water quality monitoring buoy HAWQi being removed for servicing.

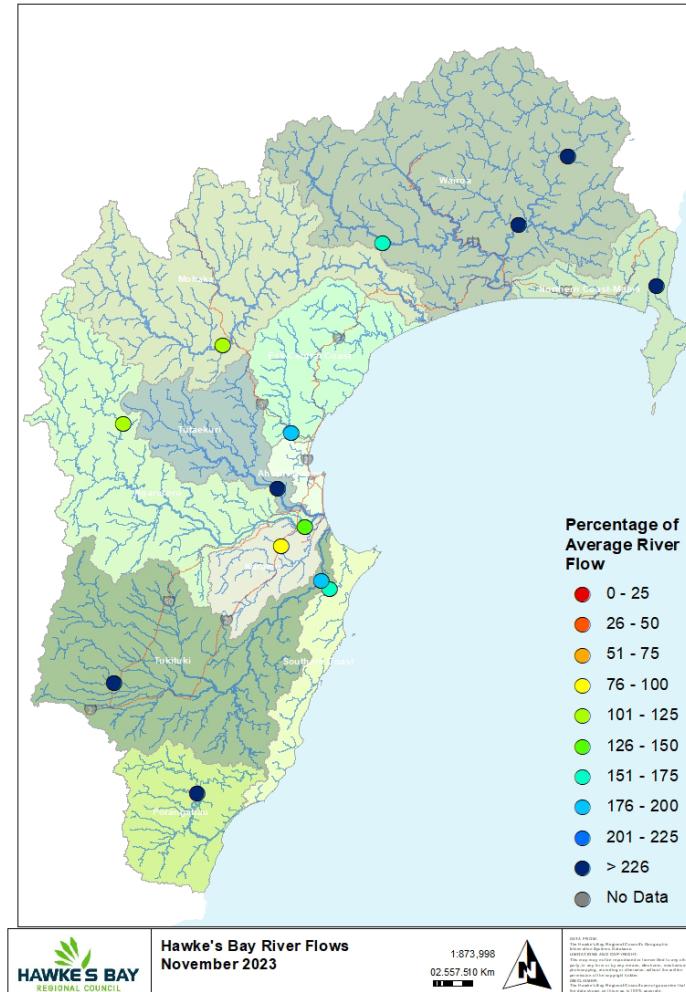


RIVER FLOW

Percentage of average November flows
for areas in the region:

Northern Coast – Mahia	618%
Northern HB – Hangaroa River	439%
Northern HB – Wairoa River	438%
Northern HB – Waiau River	162%
Mohaka	104%
Esk-Central Coast	177%
Tūtaekuri	253%
Karamu	92%
Ngaruroro – Kuripapango	112%
Ngaruroro – Chesterhope	137%
Southern Coast	153%
Tukituki – Tukipo River	228%
Tukituki – Tukituki River	181%
Porangahau	502%
Hawke's Bay Region	257%

For a more detailed river flow report click [here](#).



Hawke's Bay River Flows
November 2023



1:873,998
02.557.910 Km
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GROUNDWATER & SOIL MOISTURE

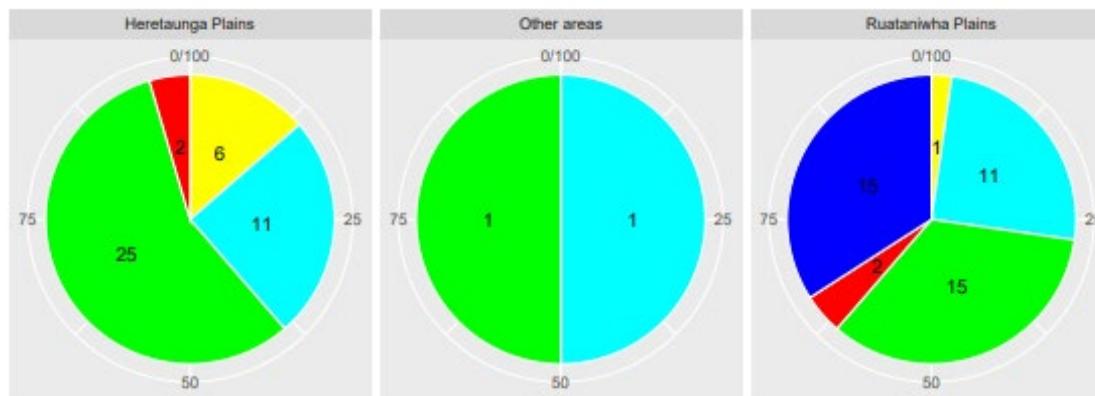
Soil Moisture: Well above average

For a more detailed soil moisture report click [here](#).

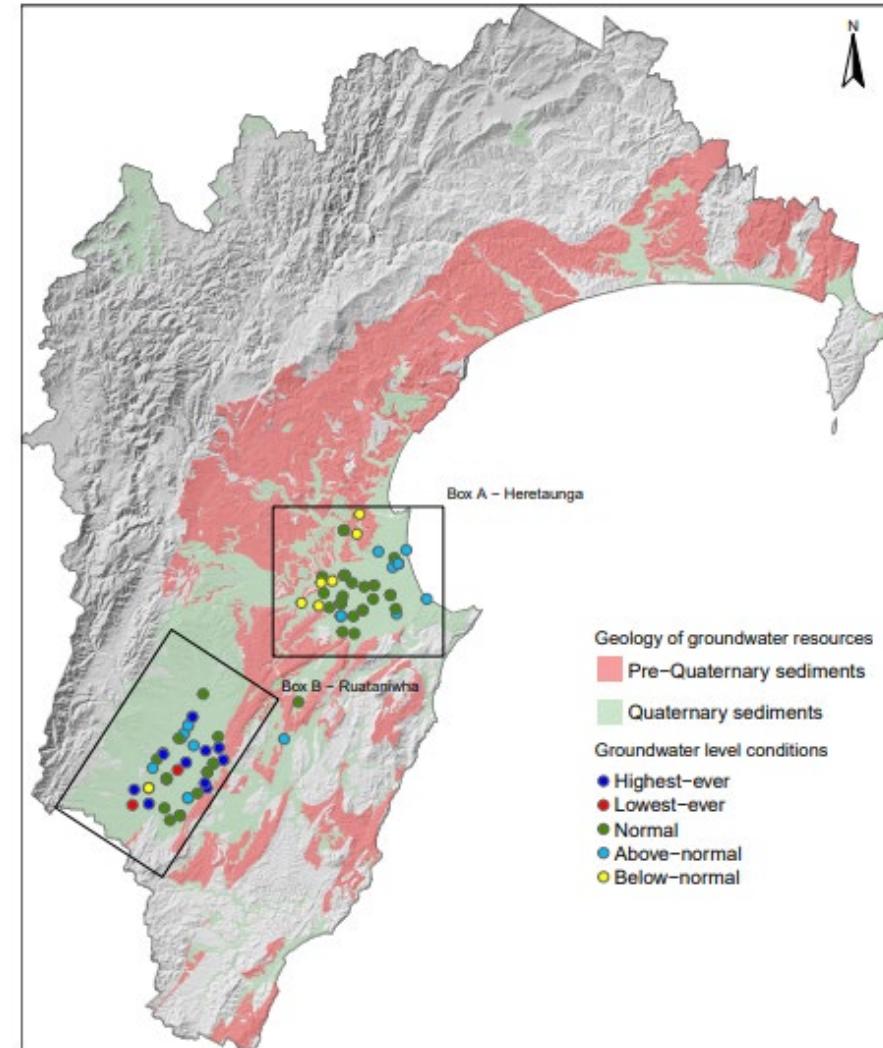
Current state of Groundwater levels:

This report compares groundwater levels in November with historic readings to evaluate current conditions. To assess these conditions, we have grouped groundwater levels at each well relative to their monthly percentiles.

Groundwater levels measuring between their monthly minimum and 25th percentile are considered below-normal, groundwater levels measuring between the 25th and 75th percentiles are classed as normal, and groundwater levels measuring between the 75th-maximum are considered above-normal. Wells with less than 5 years of record are excluded from the analysis.



■ Highest-ever ■ Lowest-ever ■ Normal ■ Above-normal ■ Below-normal



AIR QUALITY

Air Quality: Good. No exceedances

Figure 1: PM₁₀ levels in the Napier, Hastings and Awatoto airsheds during November 2023.

PM₁₀ exceedances:

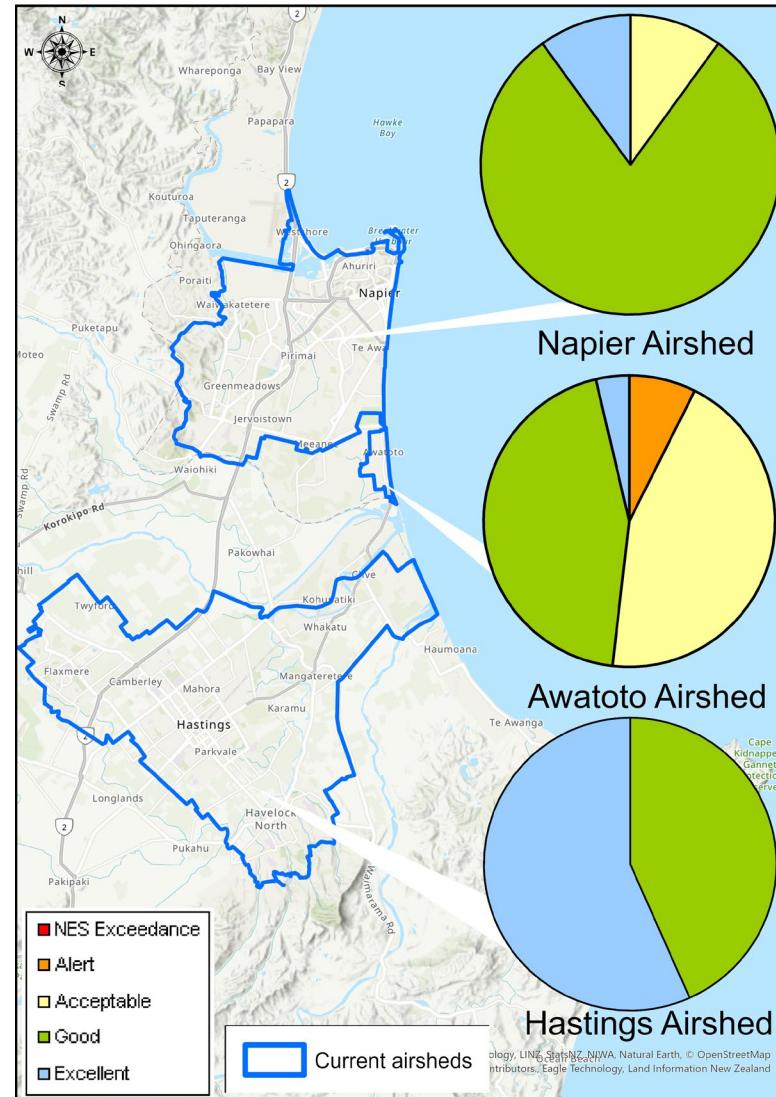
The National Environmental Standard (NES) for particulate matter (PM₁₀) of 50 micrograms per cubic metre (24 hour average) was not exceeded in the Napier, Hastings and Awatoto airsheds during November 2023.

The monitoring sites are located at:

- Marewa Park in the Napier airshed.
- St Johns College in the Hastings airshed.
- Waitangi Road in the Awatoto airshed.

Further information is available at www.hbrc.govt.nz

For a more detailed air quality report click [here](#).

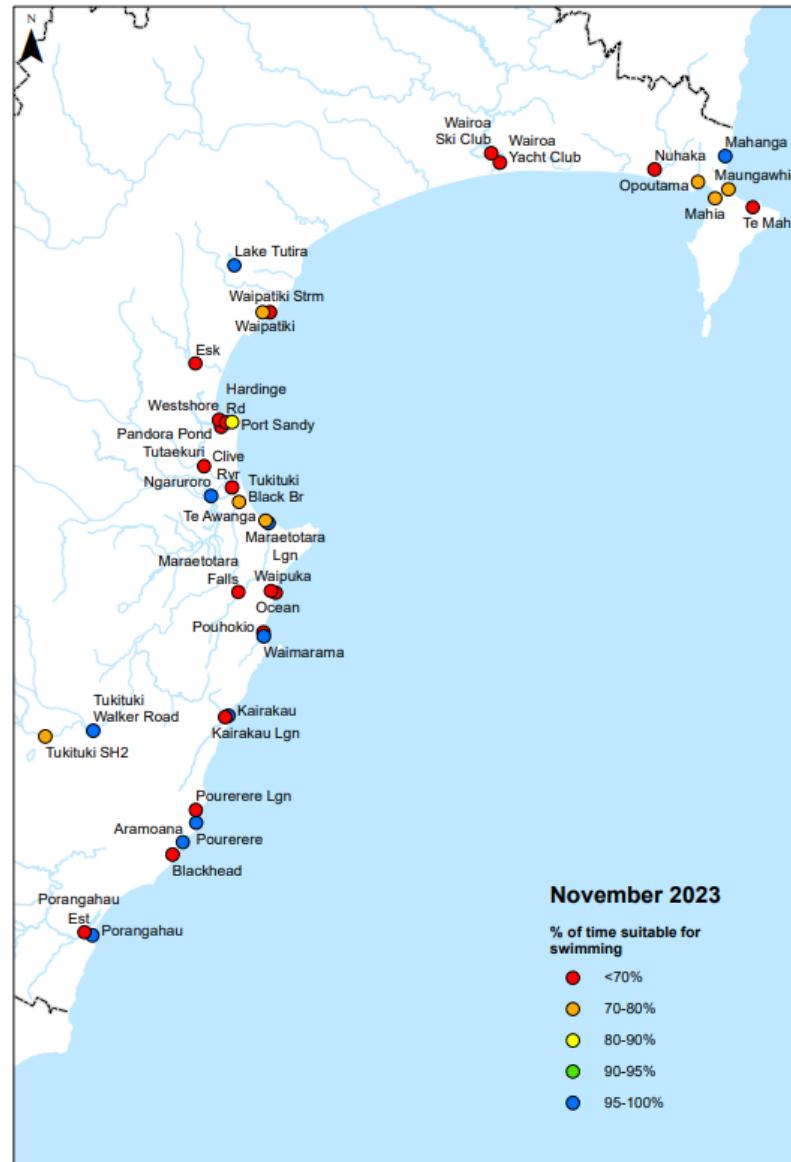


Recreational Water Quality

A wet month brought a significant number of rainfall related exceedances across the Bay. Aside from the usual high performing southern beaches and a few central sites, many of our lagoons and rivers underperformed due to these wetter conditions.

Lets hope for some clearer weather this December!

Further information is available at www.hbrc.govt.nz



LONGER FORECAST

The El Niño event will be with us for the summer and is expected to extend into autumn. The positive Indian Ocean Dipole (IOD) is past its peak and is expected to ease through December. The seasonal forecast models continue with the same story as recent months – an expectation of higher than normal pressure over northern New Zealand and lower than normal to the south of the country. That, in theory, gives us a westerly dominated wind flow.

That backdrop leads us to the same forecasts as previous months of near or below normal rainfall and warmer than usual temperatures. The forecasts obviously haven't been spot on lately and having the warmer than usual seas around and north of us have blurred the picture, as below normal rainfall is helped by colder than average seas. Thoughts are that storm activity that has kicked off December, particularly in the tropics, should ease and we may see some drier weather come our way.

Dr Kathleen Kozyniak
Team Leader Air and Land Science