Hawke’s Bay Trends

THE STATE OF OUR ENVIRONMENT

February 2024

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REGIONAL COUNCIL
TE KAUNIHERA Ā-ROHE O TE MATAU-A-MĀUI

February 2024

That's summer ticked off and it was obviously better than last summer – an easy feat. Rainfall for the season was within the normal range, though lumpy. December's rainfall was below average, January above average and February below average. February's rainfall was half of the long-term average across the region but the Plains and the south coast received closer to a third of average rainfall. The main outlier was the Ruahine Range where rainfall was within the normal range.

Soil moisture dropped close to median levels for February and in a few places, such as the Heretaunga Plains, to below those levels. February's river flows were mostly near or below average but groundwater levels were the opposite, sitting near or above average. We had hotter than usual daytime temperatures throughout summer, including February which was more than 1°C above average. But February broke summer's trend of having overnight temperatures supercharged by about 2°C and instead they were within the normal range.

Our recreational water quality finished summer in fine form thanks to the drier conditions but the same dry conditions weren't the best for air quality, enabling dust to kick up and woody debris to ignite.

Dr Kathleen Kozyniak
Team Leader Air and Land Science

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SUMMARY February 2024

Short summary - Dry! Warm too.

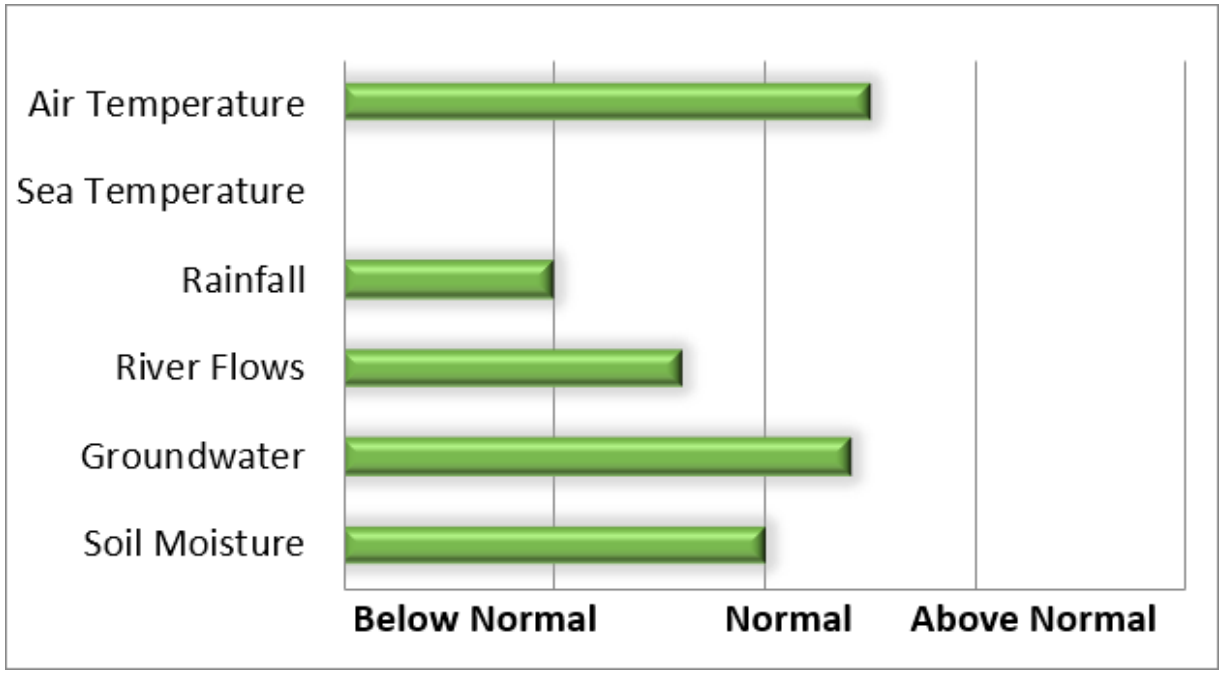
March to May Forecast

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

source : NIWA

Sea Surface Temperature

The average sea surface temperature (SST) for Hawke's Bay in February 2024 is unavailable due to the HBRC coastal water quality monitoring buoy HAWQi being removed for servicing.



For more information

www.hbrc.govt.nz

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RAINFALL

Below normal, especially the Plains and southern coast. No cloud to ground lightning strikes.

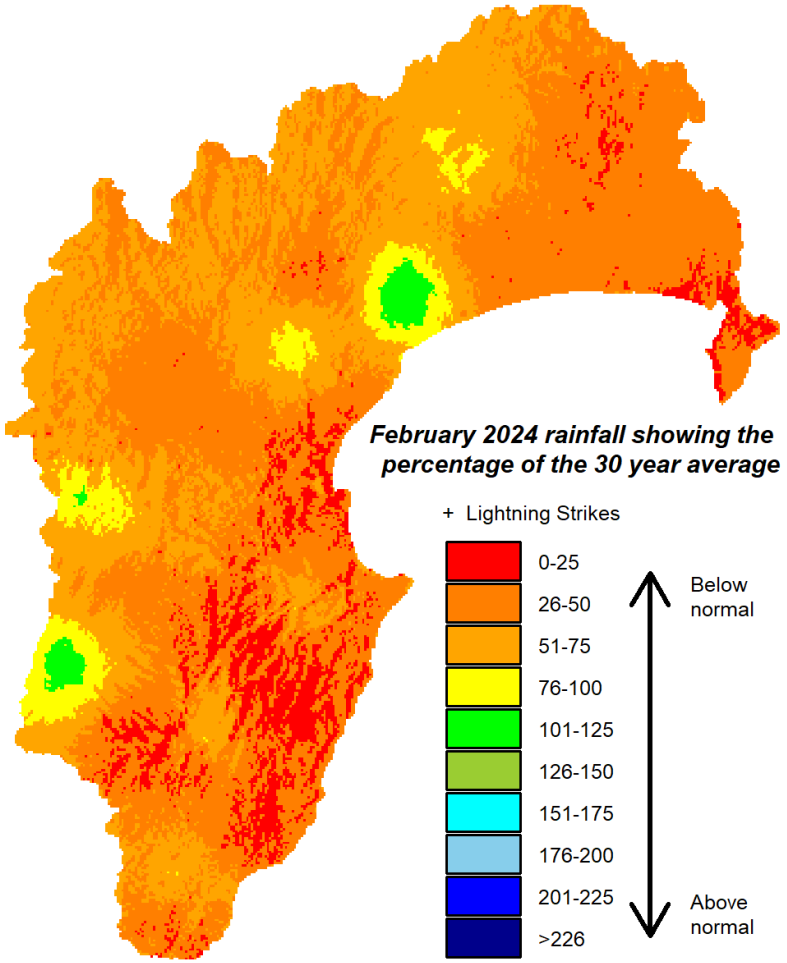
Lightning counts come from the Blitzortung.org lightning network to which HBRC contributes.

Percentage of normal December rainfall
(30 year average)

For areas in the region:

Waikaremoana	56%
Northern HB	43%
Tangoio	52%
Kaweka	54%
Ruahine	84%
Heretaunga Plains	39%
Ruataniwha Plains	36%
Southern HB	32%
Hawke's Bay Region	**50%**

For a more detailed rainfall report click here
and for a five-year monthly summary click here.



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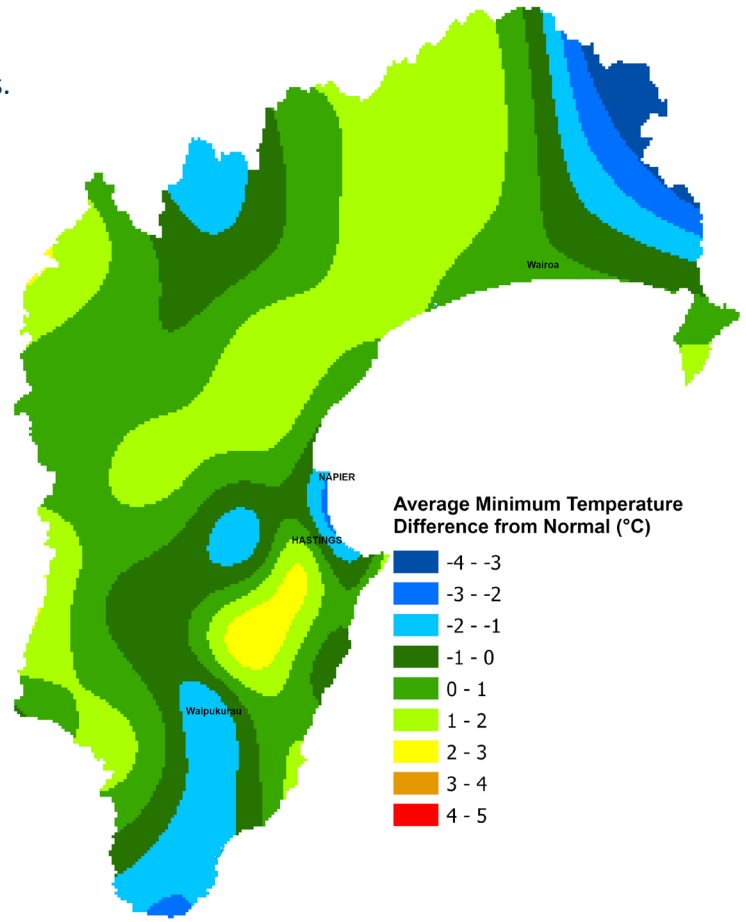
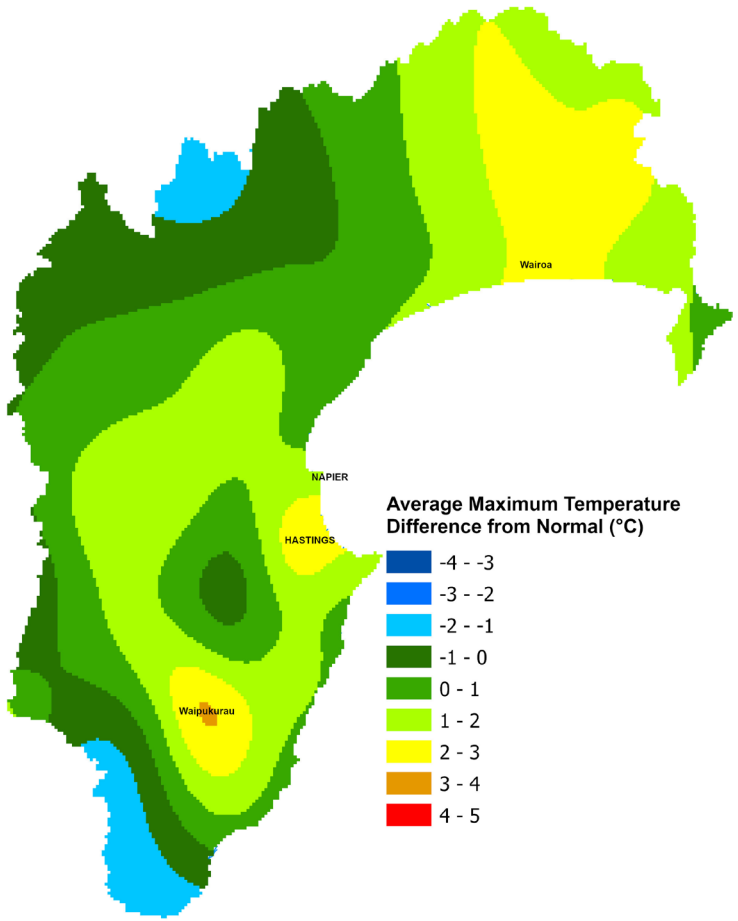
AIR TEMPERATURES

Temperatures – Above average days, average nights.

<u>Mean Difference from Normal</u>
Maximum Temperature: 1.3°C
Minimum Temperature: 0.4°C

Mean Daily Maximum: 23°C
Mean Daily Minimum: 12°C
Highest Daily: 32.4°C
Location: Crownthorpe
Lowest Daily: 2.7°C
Location: Ngamatea Climate



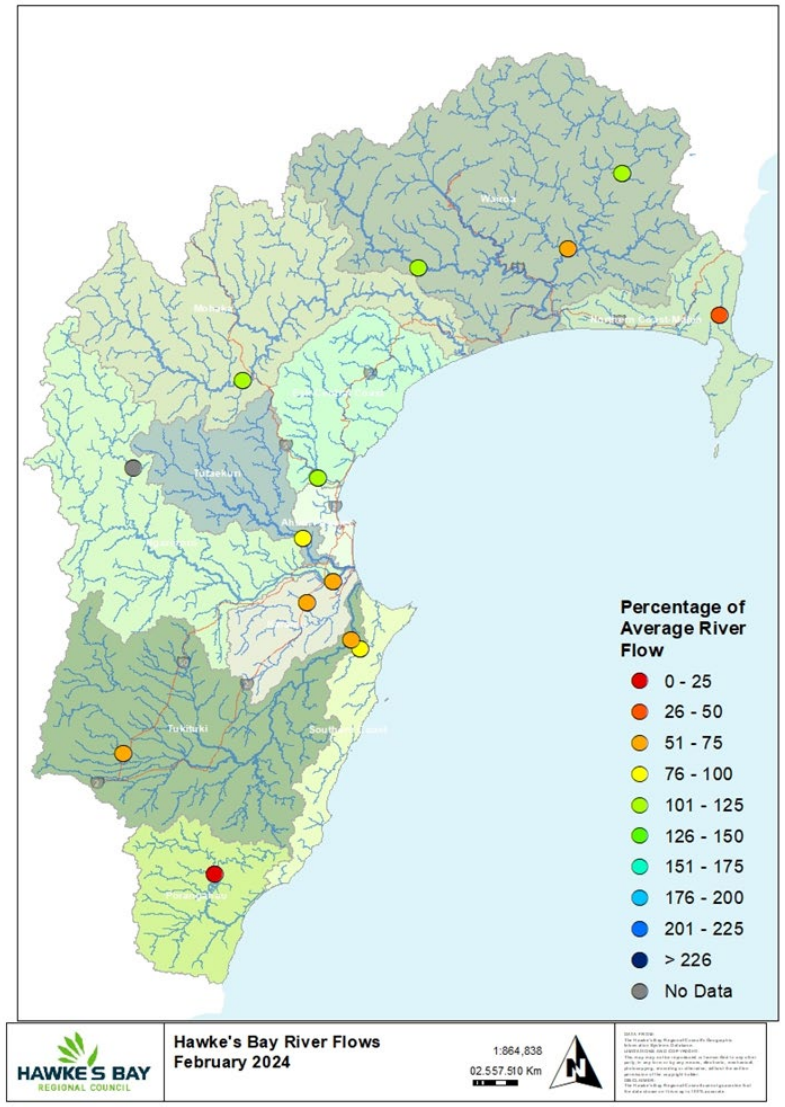


RIVER FLOW

Percentage of average February flows for areas in the region:

Northern Coast – Mahia	50%
Northern HB – Hangaroa River	125%
Northern HB – Wairoa River	61%
Northern HB – Waiau River	125%
Mohaka	118%
Esk-Central Coast	113%
Tūtaekuri	95%
Karamu	58%
Ngaruroro – Kuripapango	NA
Ngaruroro – Chesterhope	62%
Southern Coast	96%
Tukituki – Tukipo River	52%
Tukituki – Tukituki River	66%
Porangahau	23%
Hawke's Bay Region	**80%**

For a more detailed river flow report click here.



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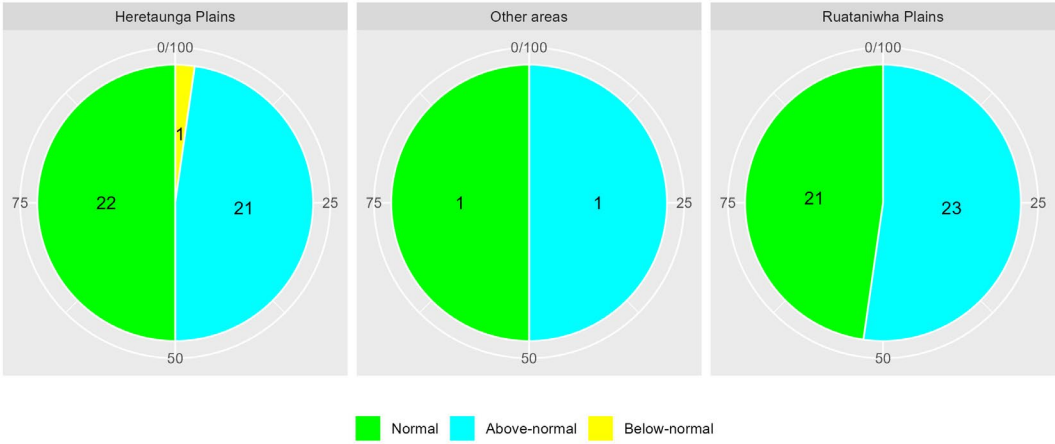
GROUNDWATER & SOIL MOISTURE

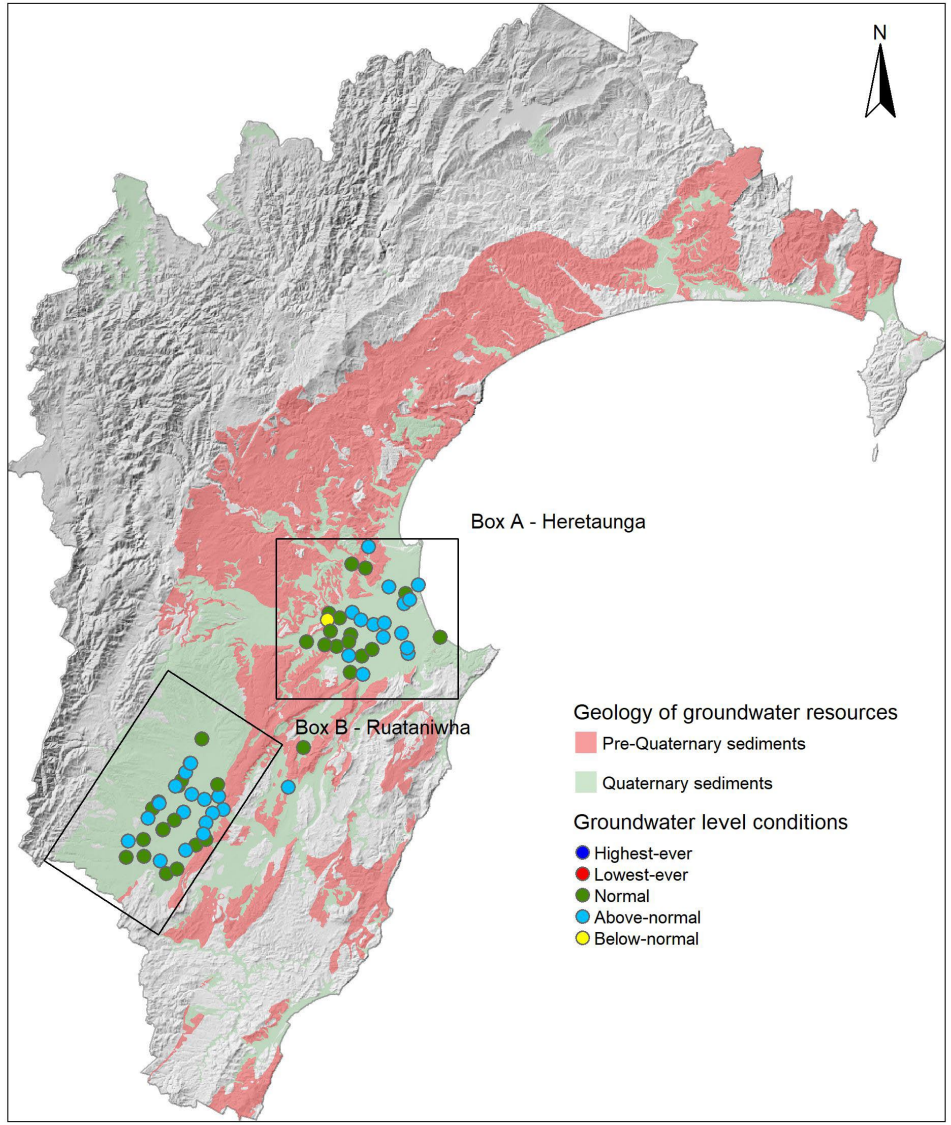
Soil Moisture: Near average.

For a more detailed soil moisture report click here.

Current state of Groundwater levels:
This report compares groundwater levels in February 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.





AIR QUALITY

Air Quality: Two exceedances!

Figure 1: PM_{10} levels in the Napier, Hastings and Awatoto airsheds during February 2024.

<u>PM_{10} exceedances:</u>

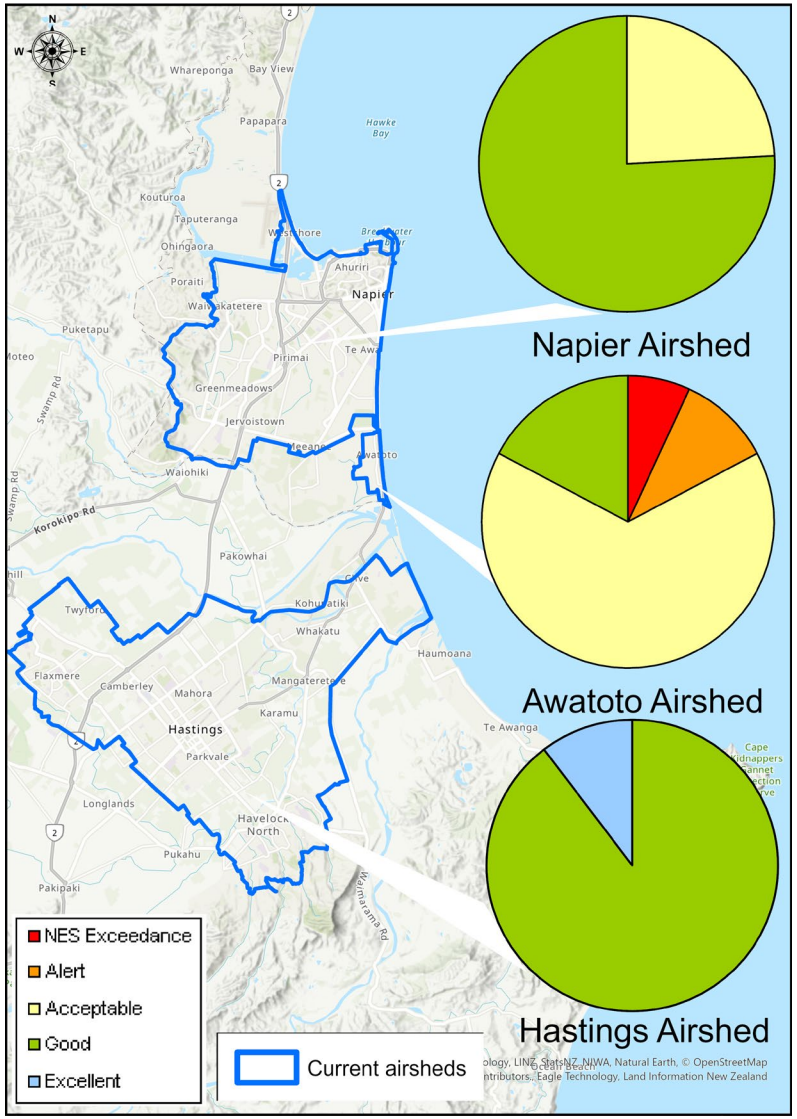
The National Environmental Standard (NES) for particulate matter (PM10) of 50 micrograms per cubic metre (24 hour average) was exceeded twice in the Awatoto airshed, and not exceeded in the Napier or Hastings airsheds during February 2024.

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

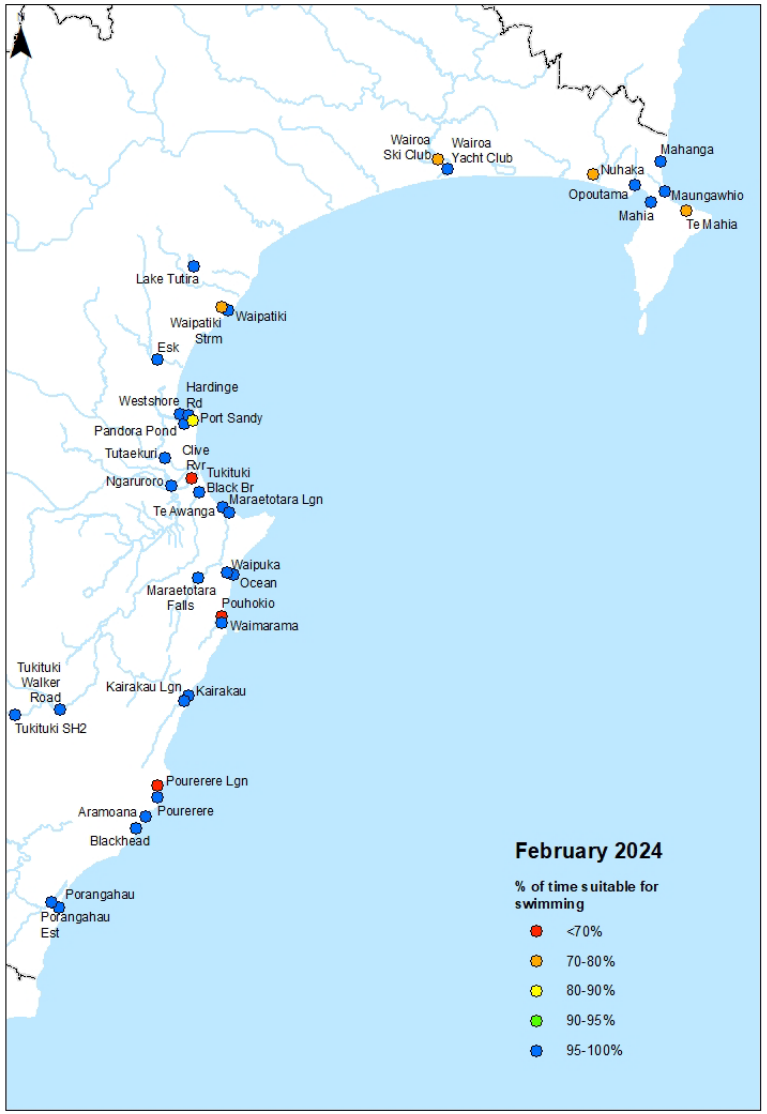
For a more detailed air quality report click here.



Recreational Water Quality

February saw a great month for recreational water quality, with the odd rain event bringing some exceedances to a handful of river and estuary sites. However, the usual high performing southern beaches were joined this month by many of the northern and central beach spots with 100% swimmability, making for a month of enjoyable recreational bathing for the region.

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



LONGER FORECAST

The El Niño remains present but it's in a weakening phase and a return to neutral conditions is expected during autumn. La Niña conditions have a good chance of developing later in the year. The Madden Julian Oscillation is again expected to bring energy to weather systems in tropical waters north of New Zealand and the threat of storms arriving from the north remains. Sea temperatures persist with being warmer than usual around us.

During autumn, higher than normal mean sea level pressure is expected north of the country and lower to the south, which promotes a westerly flow. Rainfall is forecast to be near normal, aided by those warm seas which are also expected to help bring warmer than average temperatures. The predicted rainfall may come as reasonable dumps between longer dry spells. It's possible that if southward-moving remnants of enhanced tropical activity during March skirt our shores then we could replicate February's low rainfall.

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