

A scenic landscape of a lake with large trees and a fence in the foreground. The water is calm, reflecting the sky and the surrounding greenery. The trees are tall and dense, with some showing signs of autumn. A fence with wooden posts and wire runs across the foreground, partially submerged in the water. The sky is a clear, bright blue with a few wispy clouds.

Hawke's Bay Trends

THE STATE OF OUR ENVIRONMENT

February 2023

The logo for Hawke's Bay Regional Council, featuring a stylized green leaf design above the text.

HAWKES BAY
REGIONAL COUNCIL

TE KAUNIHERA Ā-ROHE O TE MATAU-A-MĀUI

February 2023

The impact of ex-tropical cyclone Gabrielle on the region has been monumental and the statistics around the event, which are still being gathered and confirmed, are staggering. The storm contributed to a February total that was 500% above normal across the region. At some sites, such as Glengarry and Pukeorapa, it was closer to 900%.

All but a few gauges reached new records for February rainfall and of course we have new summer rainfall records across all of the region. A quick reminder that January rainfall itself was an incredible 400% above normal and December was above average too. Glengarry's summer total was higher than its average annual rainfall and as mentioned elsewhere, a chunk of that was in one day.

The river flow statistics, which are still being validated, somehow managed to outdo rainfall, averaging more than 1000% above normal. Soils are saturated and the vast majority of monitored groundwater levels hit new records for the month.

February's temperatures followed a similar pattern to January's and it's not unexpected given both months were grey. Sea surface temperatures were a shade colder than usual, as were daytime temperatures. Overnight temperatures were above normal with their blankets of cloud. Water quality at our recreational swimming spots simply wasn't fit for purpose.

Dr Kathleen Kozyniak
Team Leader Marine Air and Land Science

SUMMARY February 2023

March to May Forecast

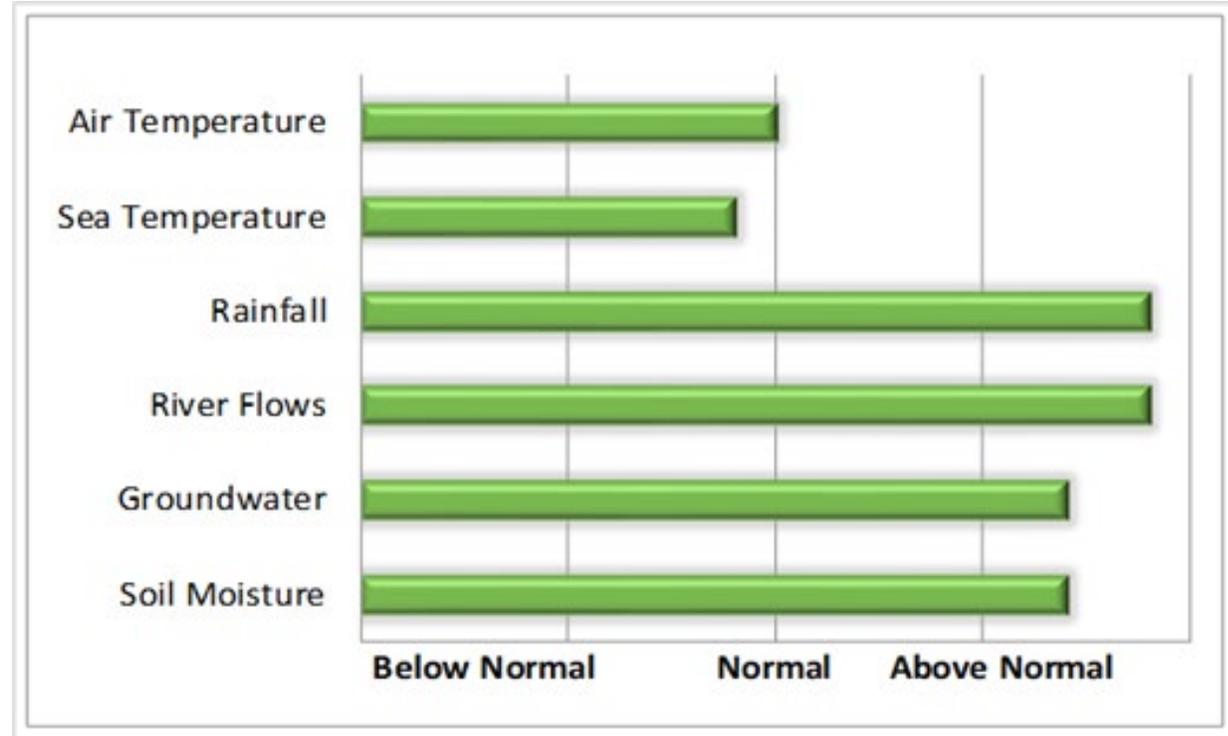
Temperature Near or above average
Rain Near or above normal
River flows Above normal
Soil moisture Near or above normal

source : NIWA

For more information

www.hbrc.govt.nz

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RAINFALL

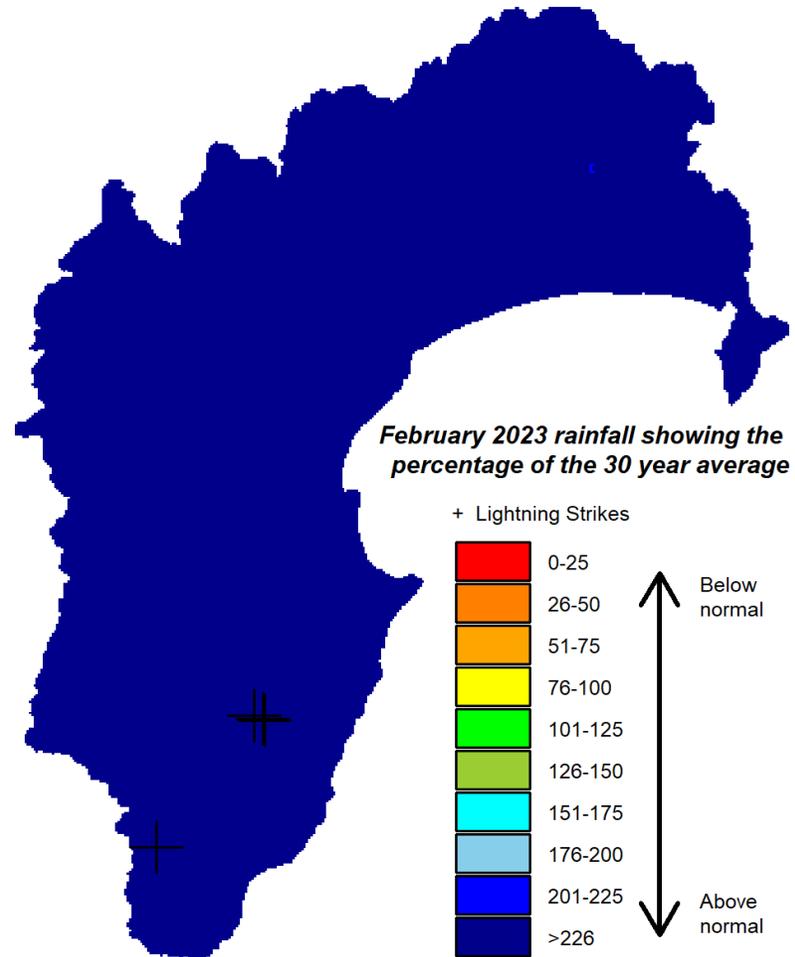
Extraordinarily above normal. 4 cloud to ground lightning strikes.

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

Percentage of normal February rainfall
(30 year average)

For areas in the region:

Waikaremoana	497%
Northern HB	378%
Tangoio	627%
Kaweka	460%
Ruahine	373%
Heretaunga Plains	479%
Ruataniwha Plains	439%
Southern HB	449%
Hawke's Bay Region	463%



AIR TEMPERATURES

Like January, cooler than usual days and warmer nights.

Mean Difference from Normal

Maximum Temperature: -0.5°C

Minimum Temperature: 1.6°C

Mean Daily Maximum: 22°C

Mean Daily Minimum: 14°C

Highest Daily: 31.5°C

Location: Napier EWS (NIWA)

Lowest Daily: 6.4°C

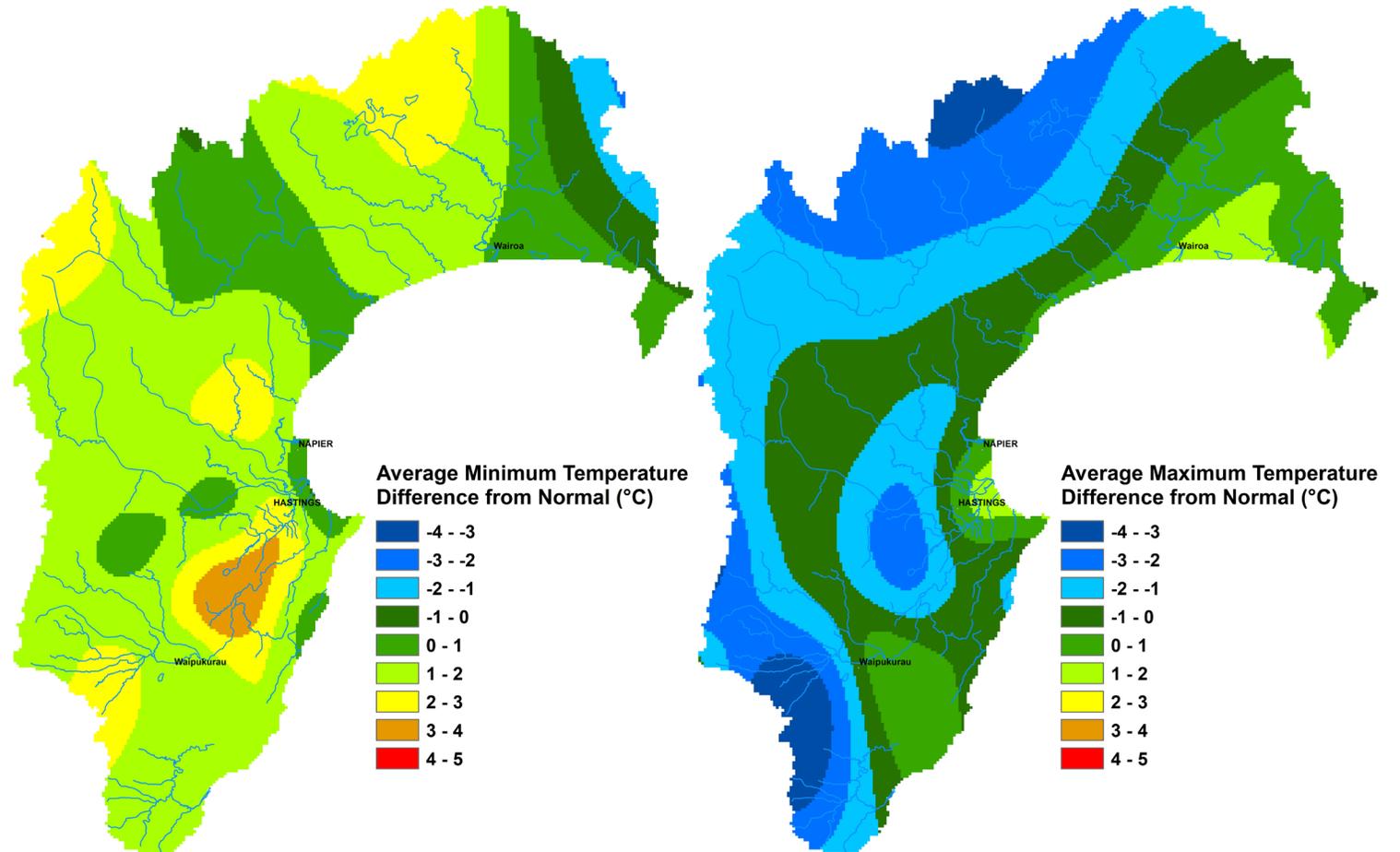
Location: Taharua Climate

SEA SURFACE TEMPERATURES

The average sea surface temperature (SST) for Hawke's Bay in February 2023 was 19.9°C . This was 0.4°C below the long term average for this month*.

This data was collected from the HBRC coastal water quality monitoring buoy HAWQ_i which has been located 4km off the coast of Whirinaki since December 2012. HAWQ_i collects data on water temperature, salinity and clarity at a range of depths as well as weather information. Check out real time data from HAWQ_i [here](#).

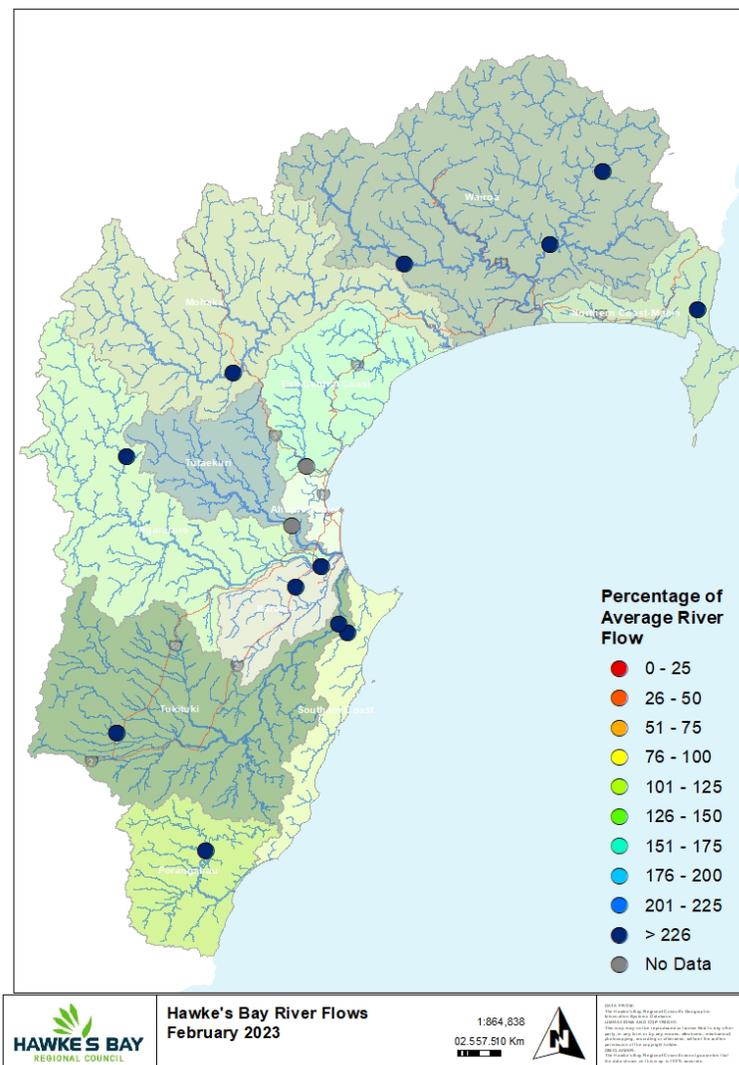
**Note that long term data has experienced some patchiness due to the challenges of electronic devices interacting with salt water and servicing requirements so the long term average in this instance only includes 10 prior Februarys.*



RIVER FLOW

Percentage of average February flows
for areas in the region:

Northern Coast – Mahia	682%
Northern HB – Hangaroa River	1682%
Northern HB – Wairoa River	925%
Northern HB – Waiau River	578%
Mohaka	492%
Esk-Central Coast	NA
Tūtaekuri	NA
Karamu	1138%
Ngaruroro – Kuripapango	560%
Ngaruroro – Chesterhope	970%
Southern Coast	759%
Tukituki – Tukipo River	1356%
Tukituki – Tukituki River	1034%
Porangahau	2265%
Hawke's Bay Region	1037%



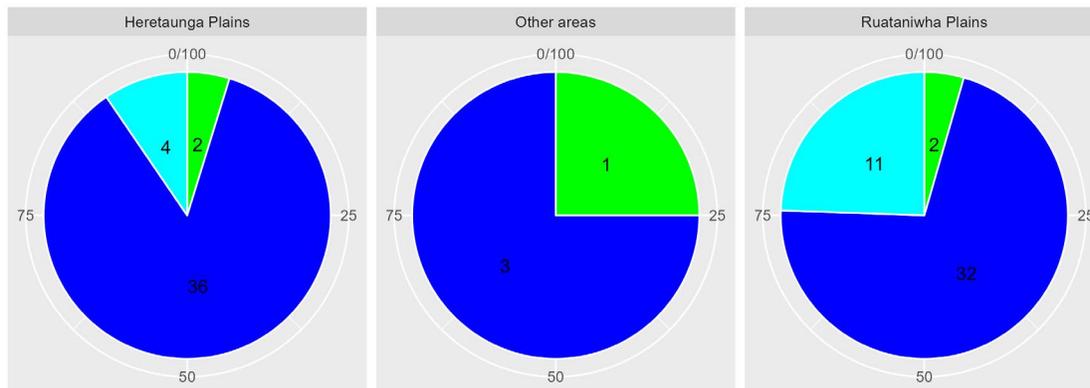
GROUNDWATER & SOIL MOISTURE

Soil Moisture: Saturated.

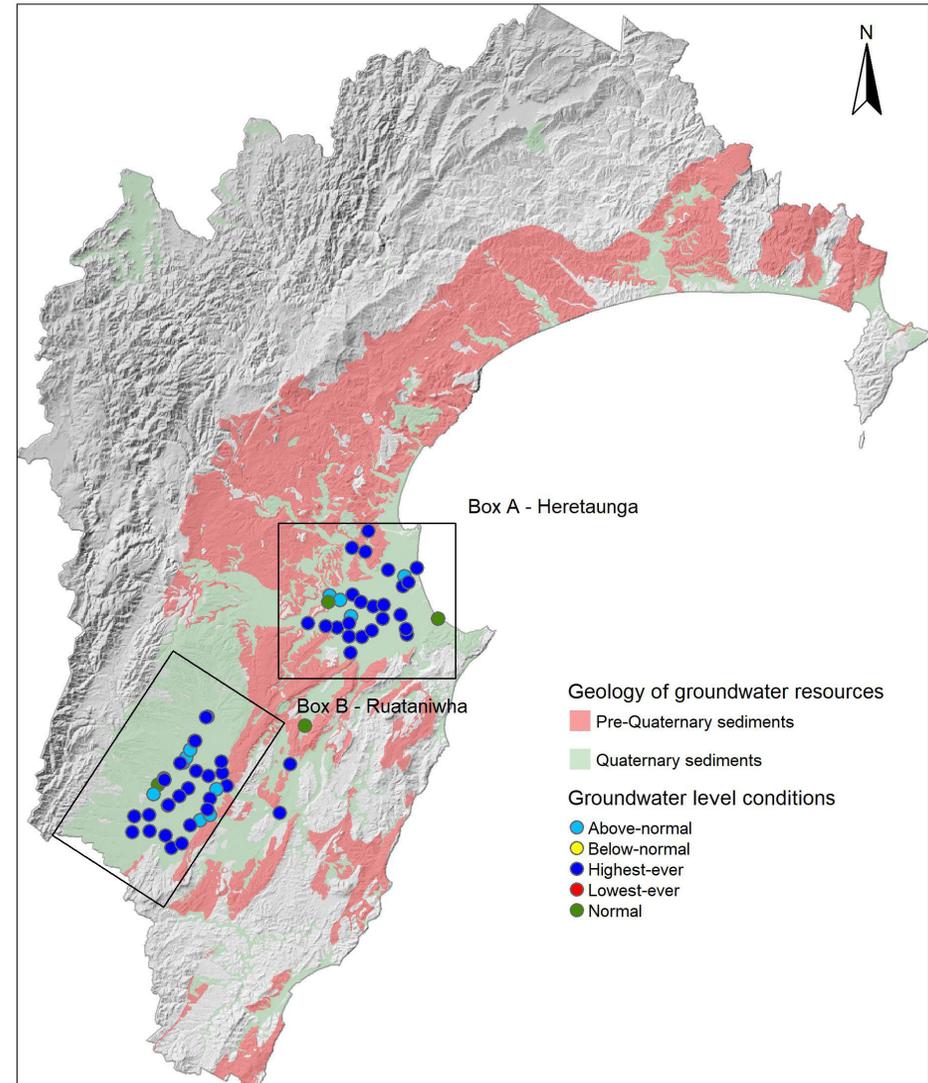
Current state of Groundwater levels:

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.



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





RECREATIONAL WATER QUALITY

February continued the poor season for recreational water quality, with sampling coming to a halt in the wake of Cyclone Gabrielle. Due to this, only one sampling run was completed at the beginning of February, and the results are only indicative of pre-cyclone conditions. Before halting sampling, there were a number of non-rainfall related exceedances.

These were almost entirely contained to our slow-moving coastal streams/lagoons, with the exceptions of Port Sandy Beach and Pandora Pond, both of which were cleared with follow-up samples. March will bring a close to the recreation water quality season, in which we hope to see a return to 'sunny Hawke's Bay'.

**Note no map this month*

LONGER FORECAST

The influence of the La Niña has lingered, as we know all too well, but neutral conditions are expected to establish soon. The possibility of an El Niño developing later in the year remains.

The model predictions for the next three months aren't that encouraging though. The easterly flow may still nag us due to sea level pressure remaining lower than usual to the north of the country and higher than normal south of us. But there are hints that the easterly flow might not be as dominant as it has been. Normal or above normal rain is seen as the likely outcome sadly and temperatures above normal – if only at night once again.

Dr Kathleen Kozyniak
Team Leader Marine Air and Land Science