



Hawke's Bay Trends

THE STATE OF OUR ENVIRONMENT

March 2023

**HAWKES BAY**
REGIONAL COUNCIL

TE KAUNIHERA Ā-ROHE O TE MATAU-A-MĀUI

March 2023

It's a heck of a long time since I last penned "below normal rainfall". April 2022 was the last time it was warranted. Steady yourself though because March rainfall was, finally, a month of below normal rainfall and it was well below - approximately 60% of the long-term average. Tangoio, the Ruataniwha Plains and the region's south coast all had 50% or less of usual March totals while Waikaremoana, at 86%, was the one area where rainfall sat within the normal range.

Drier weather eased river flows and soil moisture fractionally lower, but both were still much higher than usual for March. Groundwater levels showed no sign of easing. They instead ran amok setting new records for the month.

Air and sea surface temperatures were unremarkable, lying close to March averages. Our recreational water quality monitoring programme wrapped up a challenging season. Impacts from February's storm linger and remain a risk to hardy souls wanting to brave the autumnal temperatures.

Dr Kathleen Kozyniak
Team Leader Marine Air and Land Science

SUMMARY March 2023

Dry! Average temperatures for autumn.

April to June Forecast

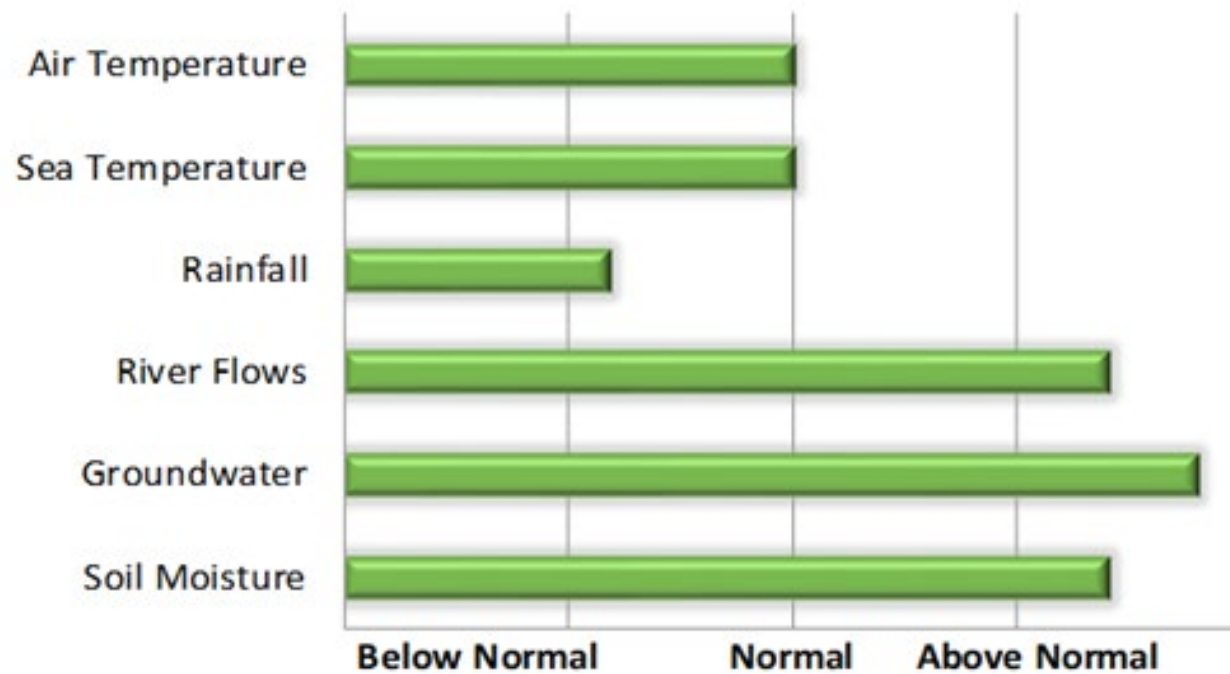
Temperature Near or above average
Rain Near normal
River flows Near normal
Soil moisture Near normal

source : NIWA

For more information

www.hbrc.govt.nz

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RAINFALL

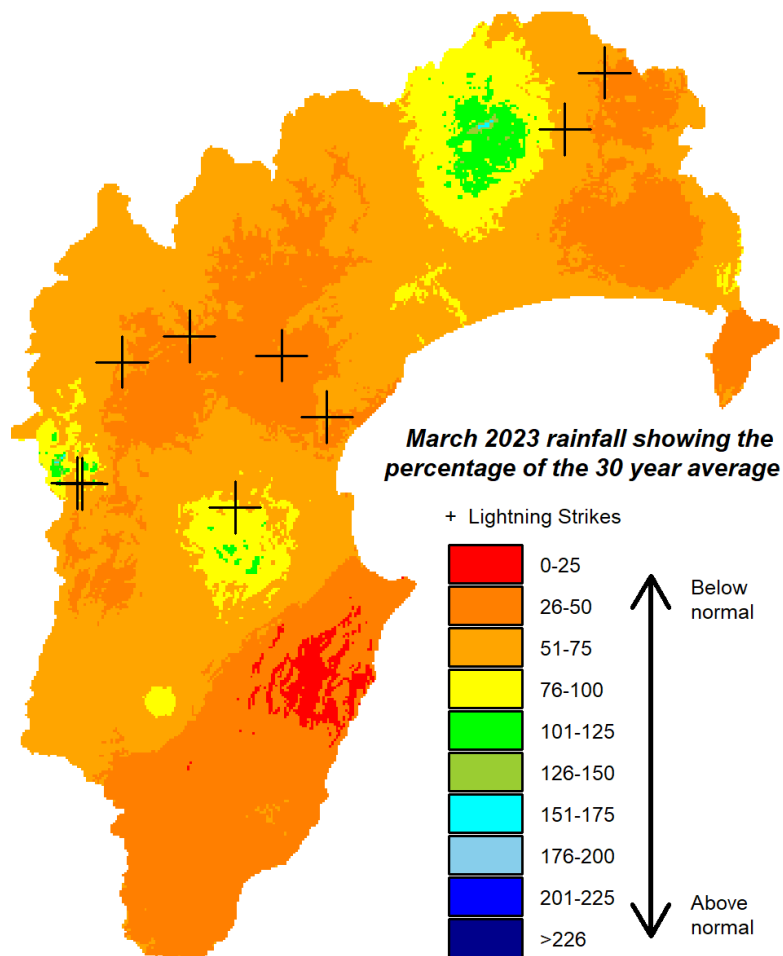
Well below normal, especially in southern areas.
9 cloud to ground lightning strikes.

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

Percentage of normal March rainfall
(30 year average)

For areas in the region:

Waikaremoana	86%
Northern HB	66%
Tangoio	50%
Kaweka	60%
Ruahine	62%
Heretaunga Plains	72%
Ruataniwha Plains	48%
Southern HB	28%
Hawke's Bay Region	59%



AIR TEMPERATURES

Steady as she goes - near normal.

Mean Difference from Normal

Maximum Temperature: 0.3°C

Minimum Temperature: -0.1°C

Mean Daily Maximum: 21 °C

Mean Daily Minimum: 11°C

Highest Daily: 28.7 °C

Location: Whakatu EWS (NIWA)

Lowest Daily: 0.1 °C

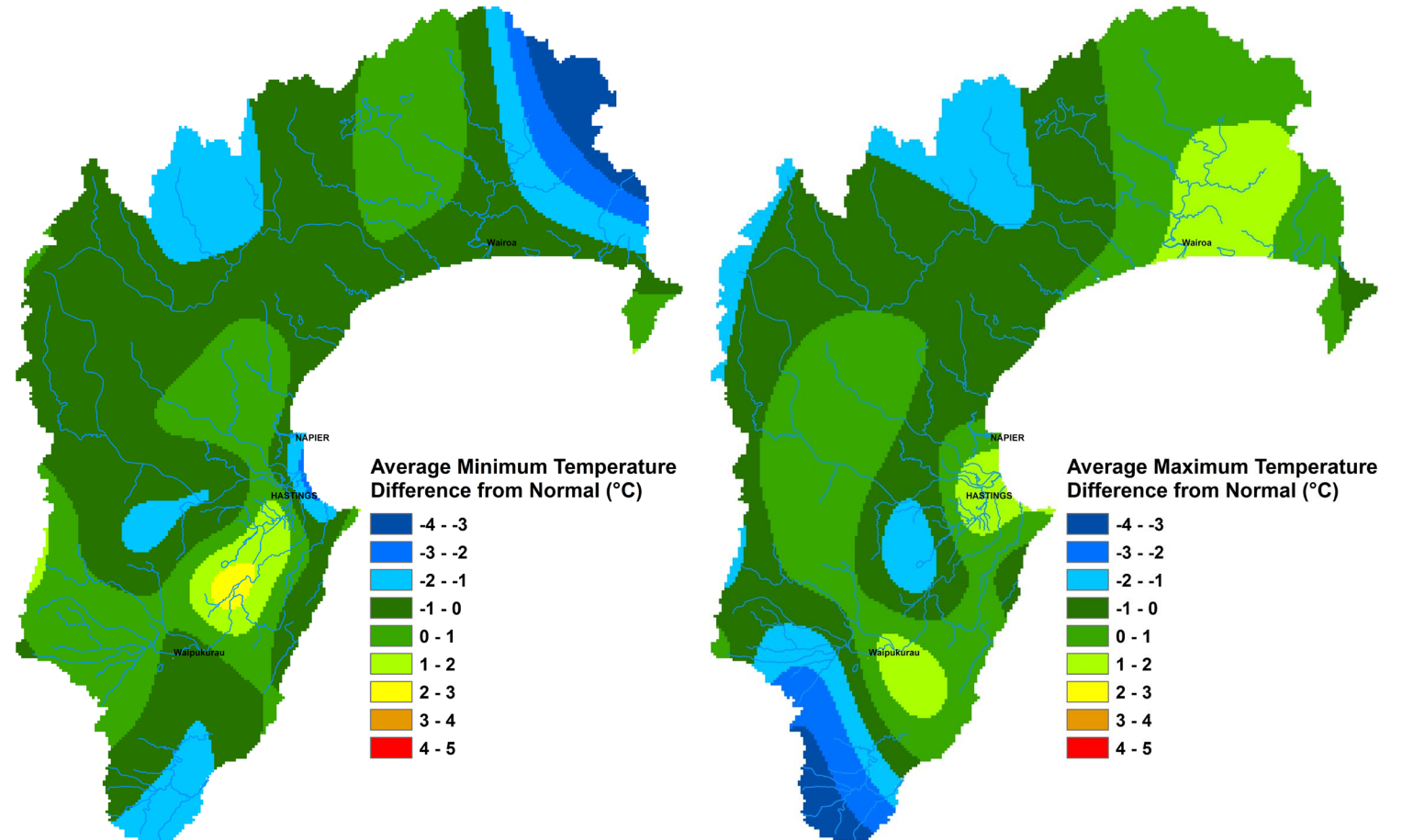
Location: Taharua Climate

SEA SURFACE TEMPERATURES

The average sea surface temperature (SST) for Hawke's Bay in March 2023 was 19.5 °C. This was 0.1 °C higher than the long term average for this month*.

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

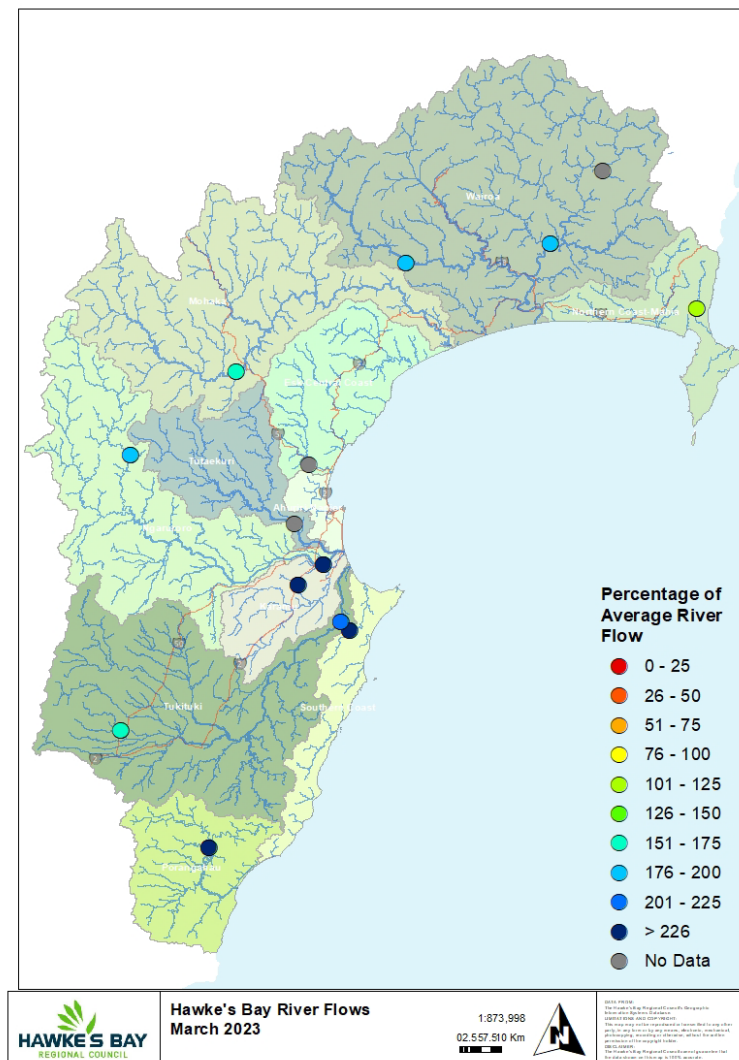
**Note that long term data has experienced some patchiness due to the challenges of electronic devices interacting with salt water and servicing requirements so the long term average in this instance only includes 9 prior March's.*



RIVER FLOW

Percentage of average March flows
for areas in the region:

Northern Coast – Mahia	114%
Northern HB – Hangaroa River	NA
Northern HB – Wairoa River	195%
Northern HB – Waiau River	178%
Mohaka	168%
Esk-Central Coast	NA
Tūtaekuri	NA
Karamu	429%
Ngaruroro – Kuripapango	177%
Ngaruroro – Chesterhope	328%
Southern Coast	411%
Tukituki – Tukipo River	166%
Tukituki – Tukituki River	217%
Porangahau	820%
Hawke's Bay Region	291%



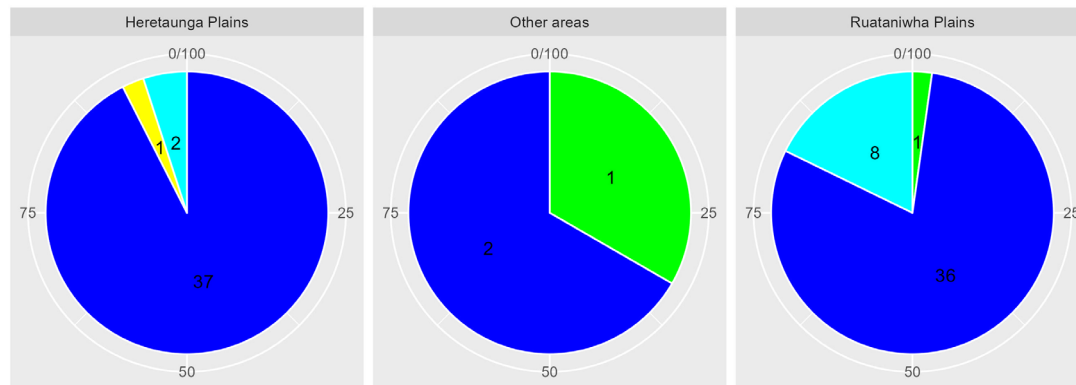
GROUNDWATER & SOIL MOISTURE

Soil Moisture: Well above normal

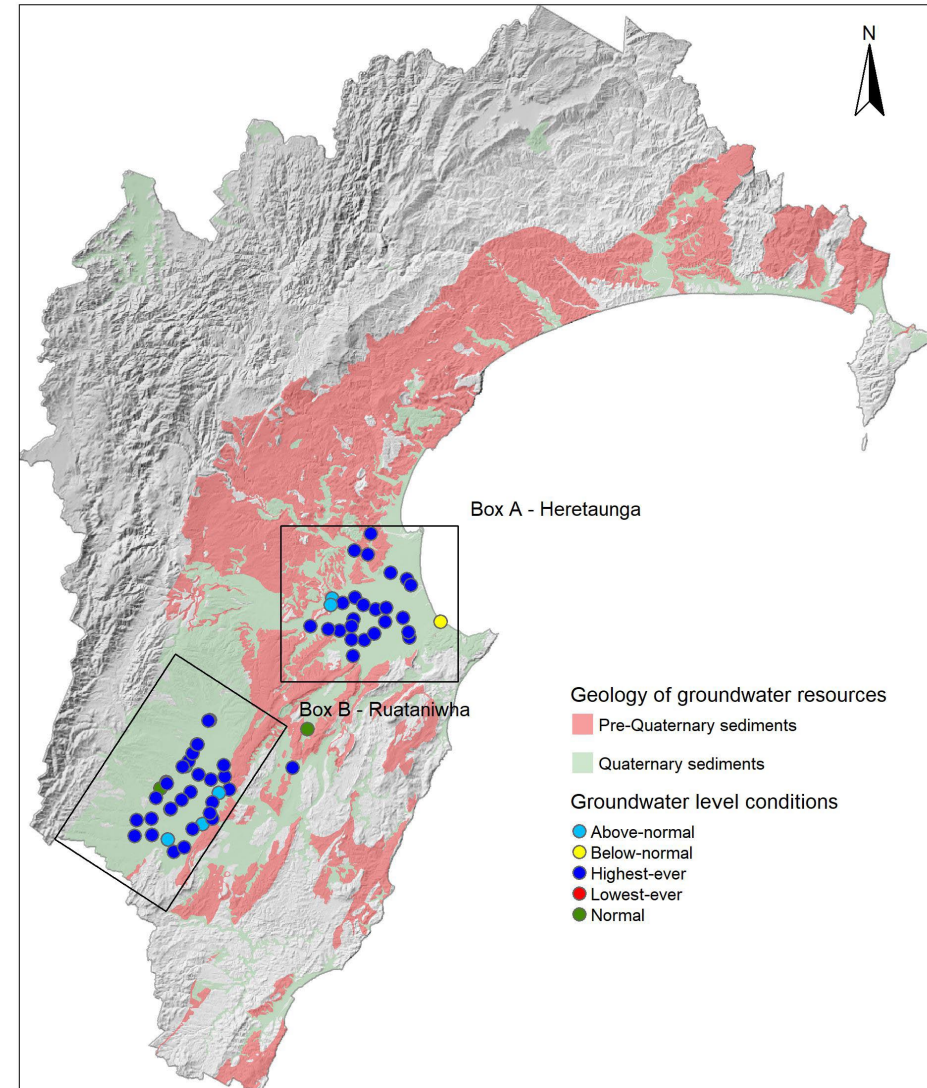
Current state of Groundwater levels:

This report compares groundwater levels in March 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

The recreational water quality programme was put on hold in February when Cyclone Gabrielle hit Hawke's Bay and remained on hold due to swim sites no longer being accessible in some cases, rāhui in place, continued discharge of raw sewerage via the Awatoto outfall and concern over other contaminants and hazards in the waterways and adjacent areas.

The programme recommenced at southern swim sites only (Waimārama to Pōrangahau) on the 27th March so a map cannot be produced for this month's results.

One more round of samples were collected 3rd April and this now brings us to the end of the 2022/23 recreational bathing season. Long-term grades (based on the previous 5 years of data) will now replace weekly sampling results on www.lawa.org.nz. Central swim sites are still considered high risk to water users due to the ongoing sewerage discharge. Please note the treatment plant will not be fully reinstated for many months to come.

**Note no map this month*

LONGER FORECAST

If you hadn't already heard, the La Niña is over. It's tempting to say the wicked witch is dead. But it's a case of be careful what you wish for because we may have an El Niño by the end of winter, along with a positive Indian Ocean Dipole. They raise the risk of below normal rainfall in the latter part of the year.

Sea-level pressure patterns are already showing signs of changing. Seasonal forecasts suggest higher than normal pressure will settle west of the country, over Australia, and possibly lower than normal to the northeast. This may give a southerly bend to our winds as we progress into winter. That could put the brakes on our temperatures, though for the next three months the expectation is they will be near or above average because the winds will cross warmer than average seas. Rainfall is expected to be near normal but the risk of drier weather will rise with a move to El Niño conditions.

Dr Kathleen Kozyniak
Team Leader Marine Air and Land Science