



Hawke's Bay Trends

THE STATE OF OUR ENVIRONMENT

August 2023



TE KAUNIHERA Ā-ROHE O TE MATAU-A-MĀUI

August 2023

August was a very dry month and possibly a harbinger of things to come. We had only 40% of average August rainfall. The Tangoio area received a meagre 19% and even the ranges and the headwaters of our rivers got less than 50%.

River flows fell below normal for the month as a result. Soil moisture ended winter close to median levels for the time of year, having eased back from unusually high levels since Cyclone Gabrielle. Groundwater levels looked very good for August, but hadn't yet felt the impact of the month's lack of rain.

Temperatures were subdued compared to the run of balmy weather we've had for most of autumn and winter. Daytime temperatures were in the normal range for August but the nights were colder than usual, with a good smattering of frosts. Frosty, still conditions can be a nightmare for air quality – the smoke from any warming fires loitering around. Thankfully, we avoided a nightmare and air quality during the month came up trumps.

Dr Kathleen Kozyniak
Team Leader Air and Land Science

SUMMARY August 2023

Short summary

Very dry and not overly warm.

September to November Forecast

Temperature Near or above average

Rain Below normal

River flows Below or near normal

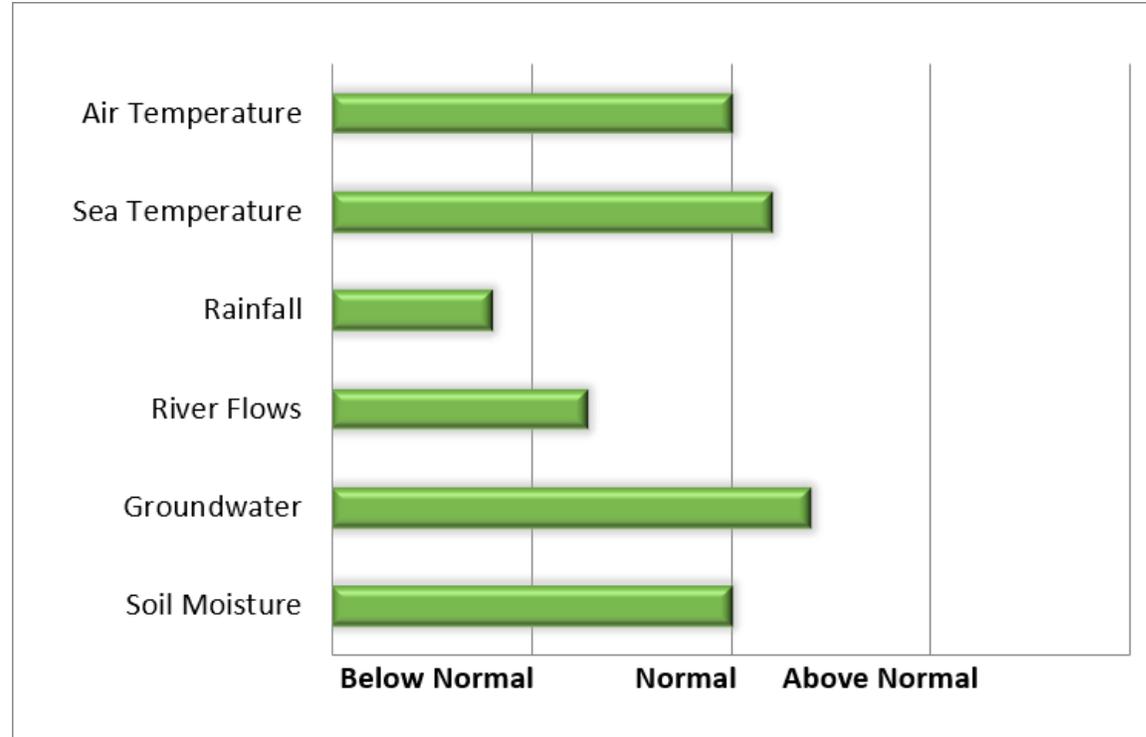
Soil moisture Below normal

source : NIWA

For more information

www.hbrc.govt.nz

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RAINFALL

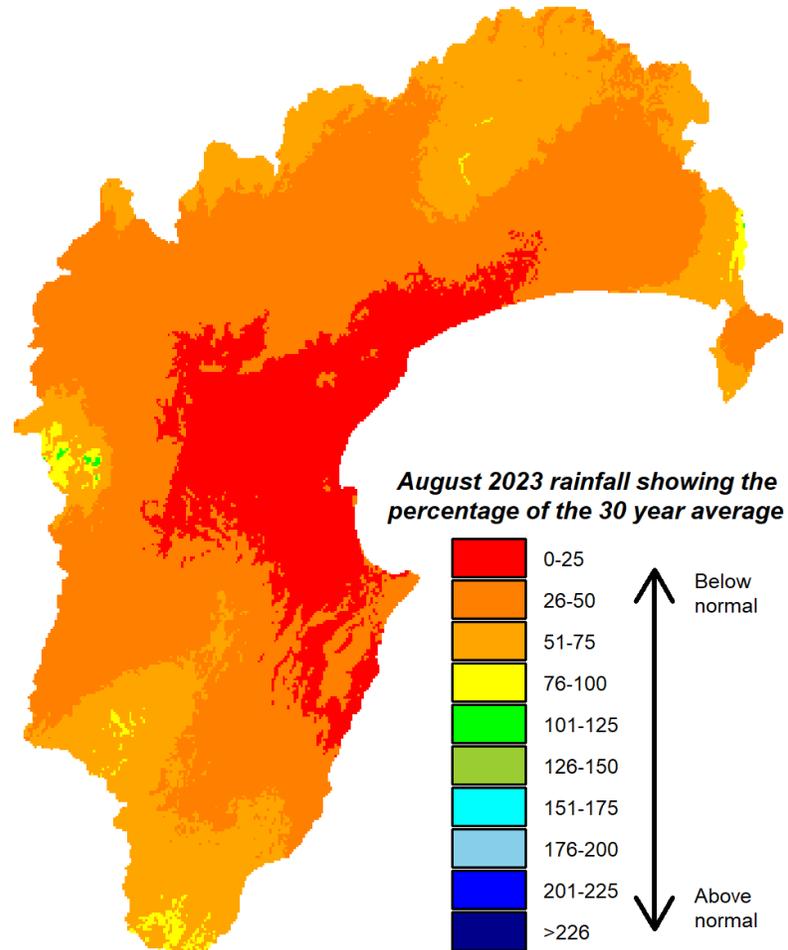
Well below normal. No cloud to ground lightning strikes.

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

Percentage of normal August rainfall
(30 year average)

For areas in the region:

Waikaremoana	49%
Northern HB	37%
Tangoio	19%
Kaweka	47%
Ruahine	45%
Heretaunga Plains	31%
Ruataniwha Plains	43%
Southern HB	49%
Hawke's Bay Region	40%



AIR TEMPERATURES

Temperatures – near normal during the day, below normal at night.

Mean Difference from Normal

Maximum Temperature: -0.1°C

Minimum Temperature: -1.2°C

Mean Daily Maximum: 13 °C

Mean Daily Minimum: 3°C

Highest Daily: 21.1 °C

Location: Hastings AWS (Metservice)

Lowest Daily: -6.1 °C

Location: Taharua Climate

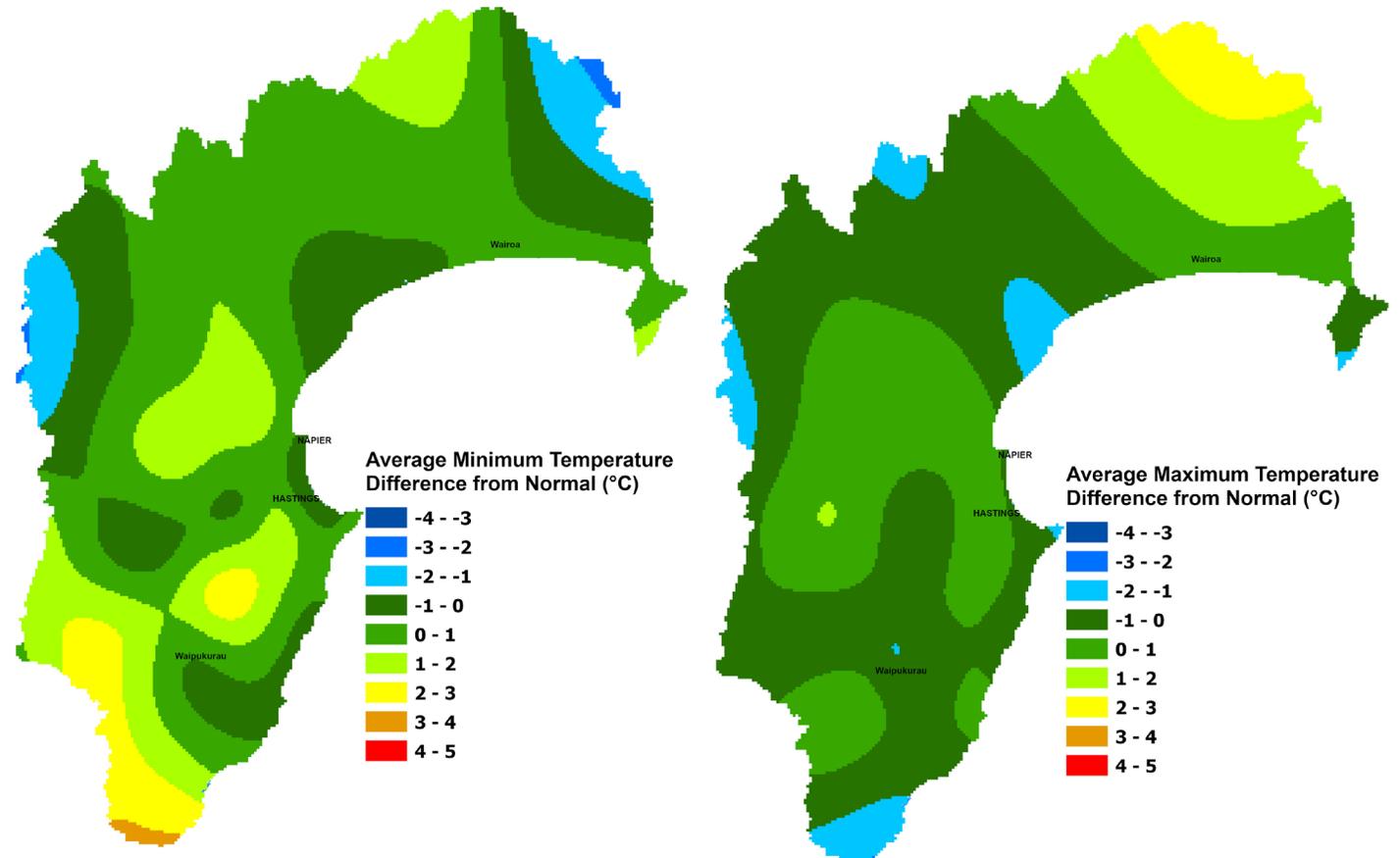
Sea Surface Temperature

The average sea surface temperature (SST) for Hawke's Bay in August 2023 was 12.4 °C. This was 0.14 °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](#).

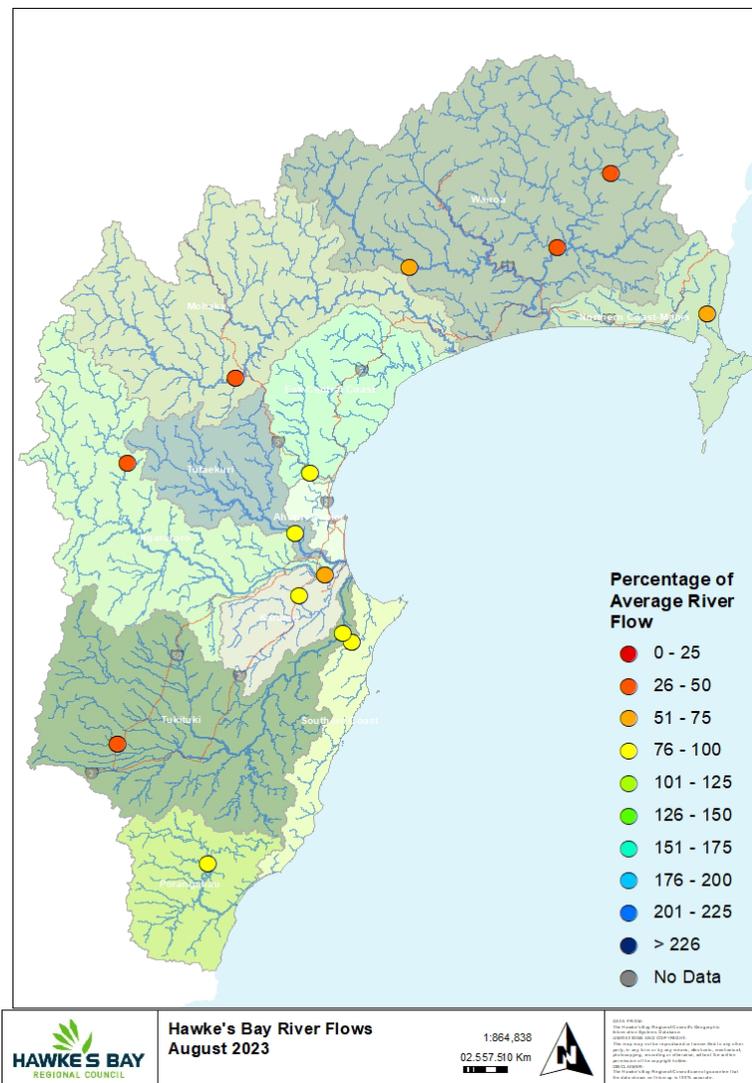
**Note that long term data has experienced some patchiness due to the challenges of electronic devices interacting with salt water and servicing requirements so the long term average in this instance only includes 7 prior August's.*



RIVER FLOW

Percentage of average August flows
for areas in the region:

Northern Coast – Mahia	70%
Northern HB – Hangaroa River	49%
Northern HB – Wairoa River	39%
Northern HB – Waiau River	52%
Mohaka	37%
Esk-Central Coast	81%
Tūtaekuri	78%
Karamu	79%
Ngaruroro – Kuripapango	48%
Ngaruroro – Chesterhope	70%
Southern Coast	90%
Tukituki – Tukipo River	40%
Tukituki – Tukituki River	78%
Porangahau	86%
Hawke's Bay Region	64%



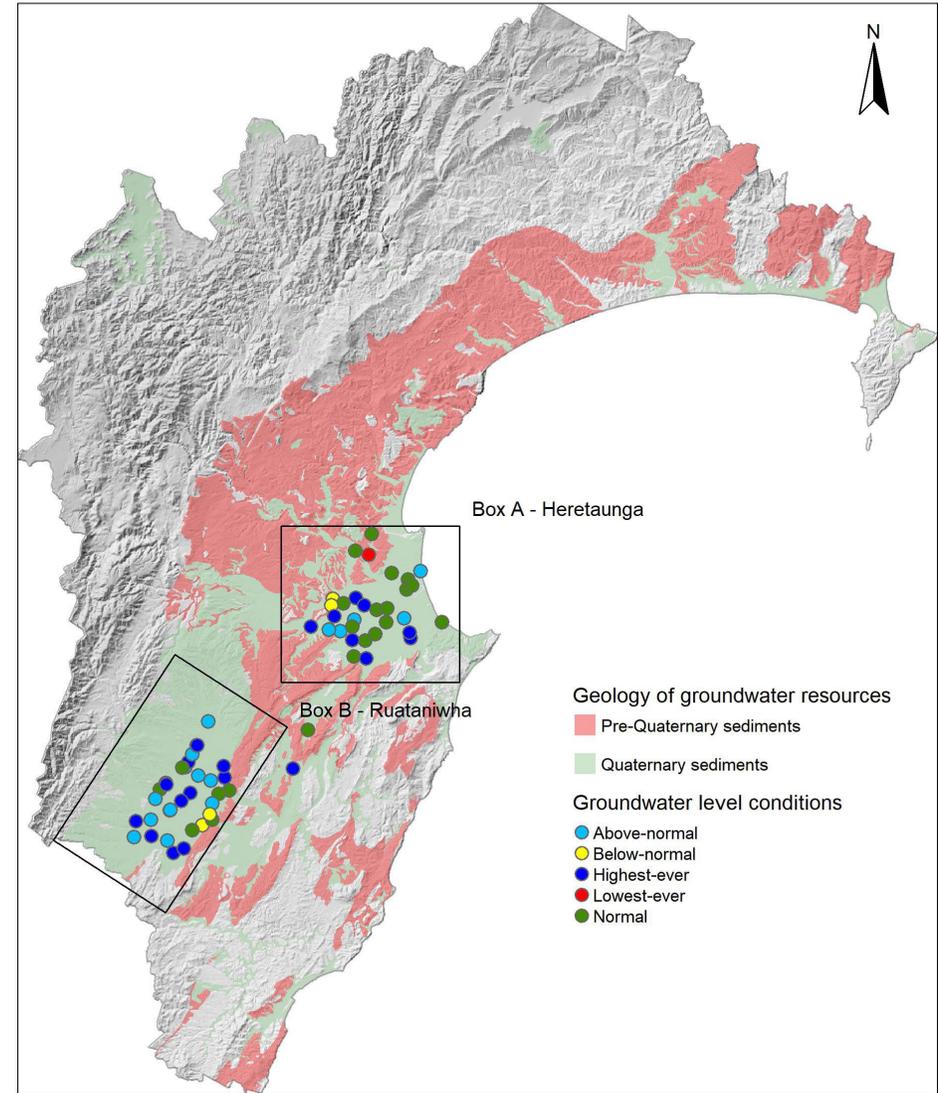
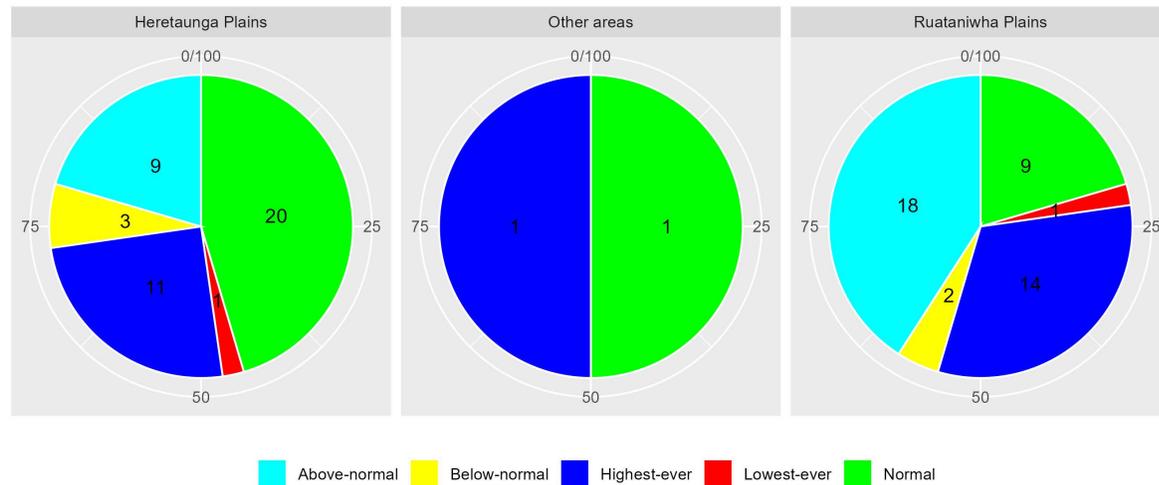
GROUNDWATER & SOIL MOISTURE

Soil Moisture: Near normal

Current state of Groundwater levels:

This report compares groundwater levels in June 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: Great end to winter. No exceedances.

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

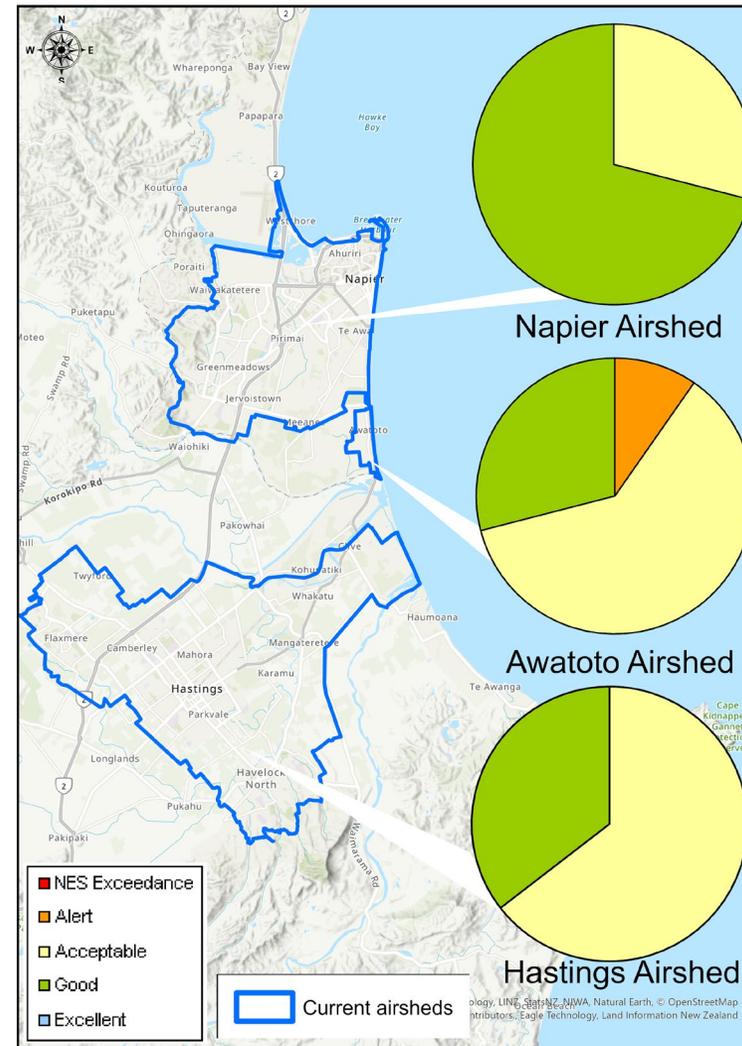
PM₁₀ exceedances:

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 August 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



LONGER FORECAST

El Niño conditions and a positive Indian Ocean Dipole are likely to be with us for spring. We can expect winds from the westerly sector to be prominent and driven by a pattern of higher than normal sea level pressure to the northwest of the country and lower to the south.

Sea temperatures are becoming more variable in comparison to long-term averages after being persistently warmer than usual. That, combined with a decent dose of southwesterlies, could peg our spring temperatures close to the seasonal average while rainfall is predicted to fall short of the average. The combo of an El Niño and Indian Ocean Dipole could be making its mark.

Dr Kathleen Kozyniak
Team Leader Air and Land Science