



Hawke's Bay Trends

THE STATE OF OUR ENVIRONMENT

October 2023



TE KAUNIHERA Ā-ROHE O TE MATAU-A-MĀUI

October 2023

October's rainfall mimicked September, with modest falls through the month but a wet finale shifting us from below normal totals into the normal range. The region had 119% of average October rainfall but southern areas, namely the Ruahine Range, Ruataniwha Plains and the south coast, received 130-150%, placing them in the above normal category.

Like last month, soil moisture grabbed the lion's share of the rain and finished the month higher than usual for the time of year. River flows dipped out, as they did in September, and remained below average. October's groundwater levels were solidly near normal for mid-spring.

Daytime temperatures were warmer than usual and we finally returned to the hot, fine A&P show days that I remember in my youth... a long, long, very long time ago. We even tried nudging up to 30°C the following week but settled on 28.4 °C. Good news for air quality, at least at our monitoring sites, where no exceedances of the PM₁₀ standard were recorded.

Dr Kathleen Kozyniak
Team Leader Air and Land Science

SUMMARY October 2023

Short summary

Average rain and warm days.

November to January Forecast

Temperature Above average

Rain Below normal

River flows Below or near normal

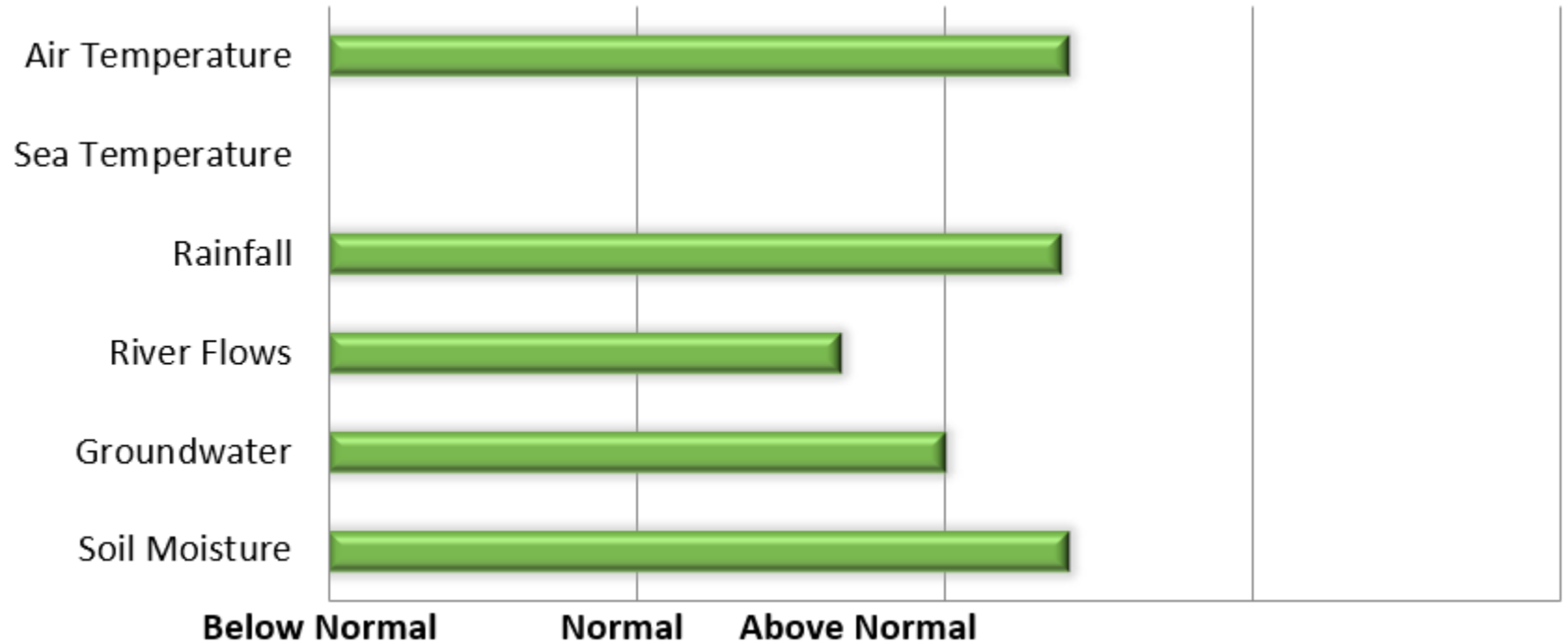
Soil moisture Below or near normal

source : NIWA

For more information

www.hbrc.govt.nz

P: 06 835 9200



RAINFALL

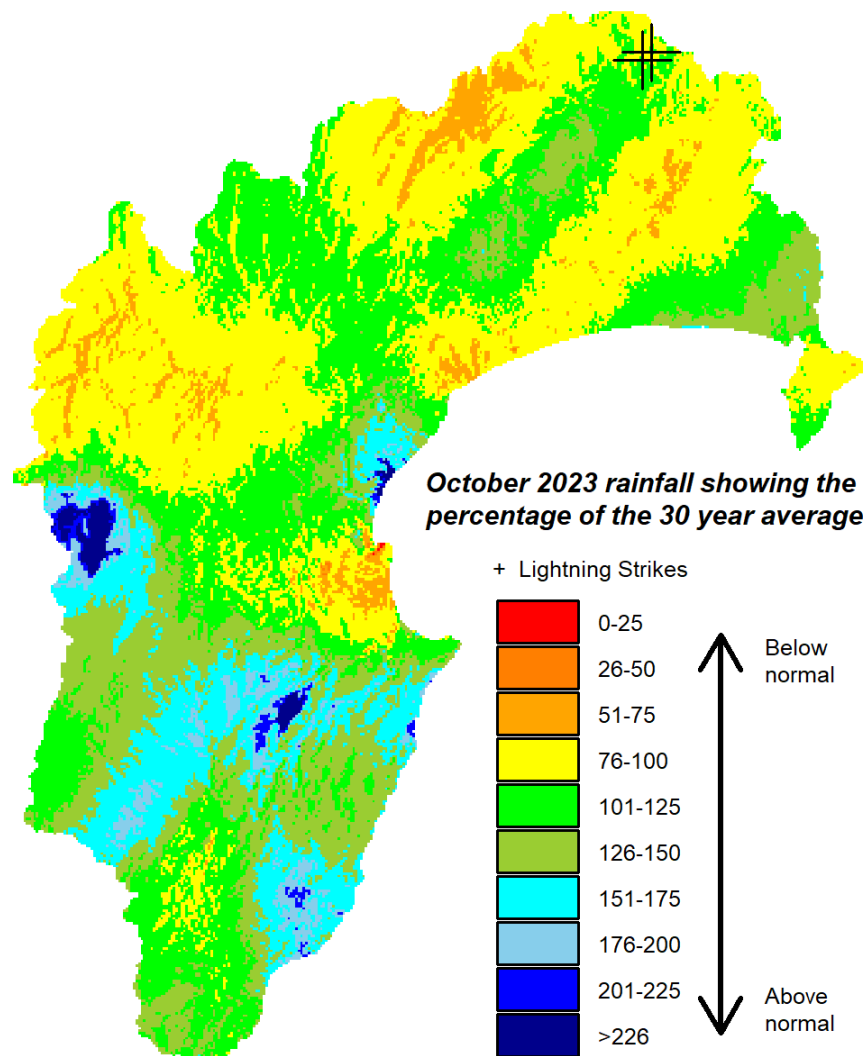
Near normal, though wetter than usual in the south.
Two cloud to ground lightning strikes.

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

Percentage of normal October rainfall
(30 year average)

For areas in the region:

Waikaremoana	105%
Northern HB	91%
Tangoio	115%
Kaweka	120%
Ruahine	134%
Heretaunga Plains	113%
Ruataniwha Plains	129%
Southern HB	148%
Hawke's Bay Region	119%



AIR TEMPERATURES

Temperatures – warm days and average nights.

Mean Difference from Normal

Maximum Temperature: 0.8°C

Minimum Temperature: 0.2°C

Mean Daily Maximum: 17 °C

Mean Daily Minimum: 7°C

Highest Daily: 28.4 °C

Location: Hastings AWS (Metservice)

Lowest Daily: -4.7 °C

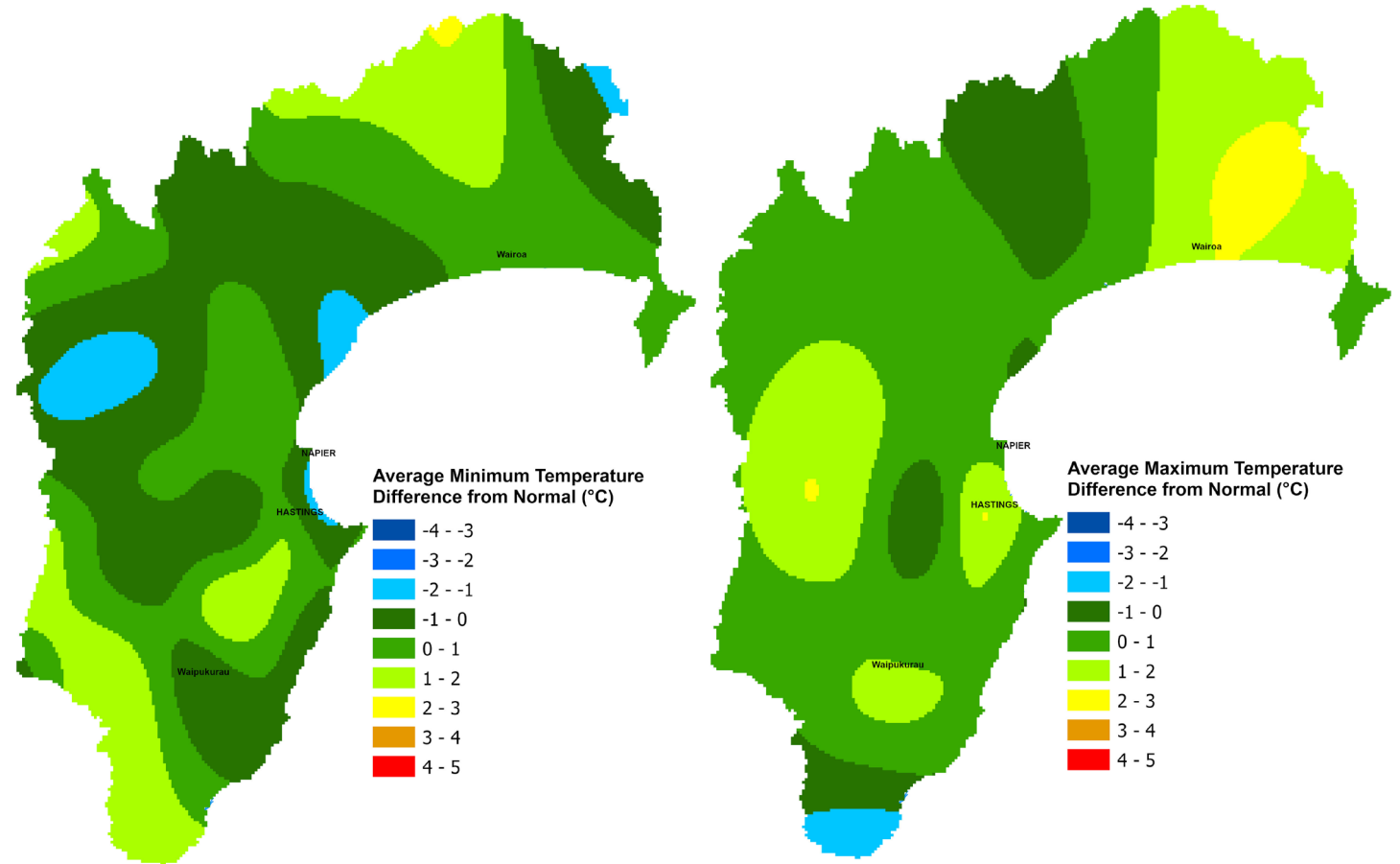
Location: Taharua Climate

Sea Surface Temperature

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

Data is collected from the HBRC coastal water quality monitoring buoy HAWQi which has been located 4km off the coast of Whirinaki since December 2012.

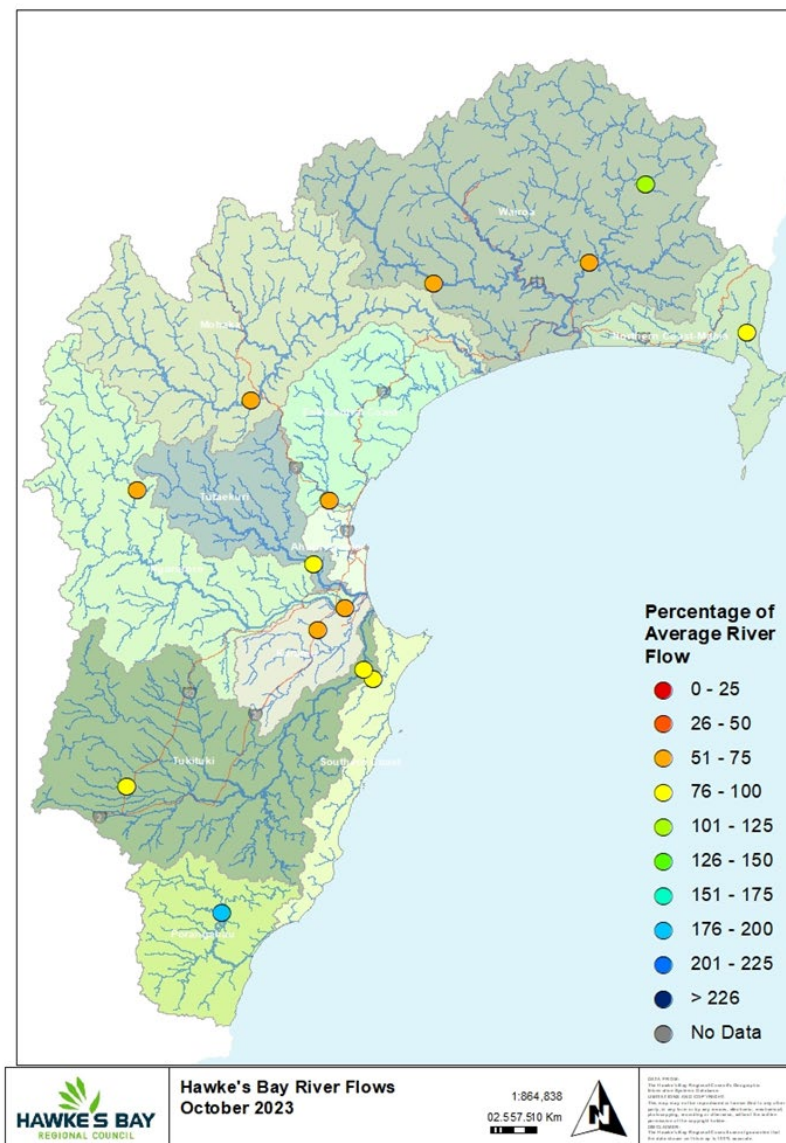
HAWQi collects data on water temperature, salinity and clarity at a range of depths as well as weather information. Check out real time data from HAWQi [here](#).



RIVER FLOW

Percentage of average October flows
for areas in the region:

Northern Coast – Mahia	77%
Northern HB – Hangaroa River	106%
Northern HB – Wairoa River	58%
Northern HB – Waiau River	68%
Mohaka	67%
Esk-Central Coast	72%
Tūtaekuri	84%
Karamu	64%
Ngaruroro – Kuripapango	62%
Ngaruroro – Chesterhope	69%
Southern Coast	82%
Tukituki – Tukipo River	97%
Tukituki – Tukituki River	77%
<u>Porangahau</u>	<u>182%</u>
Hawke's Bay Region	83%



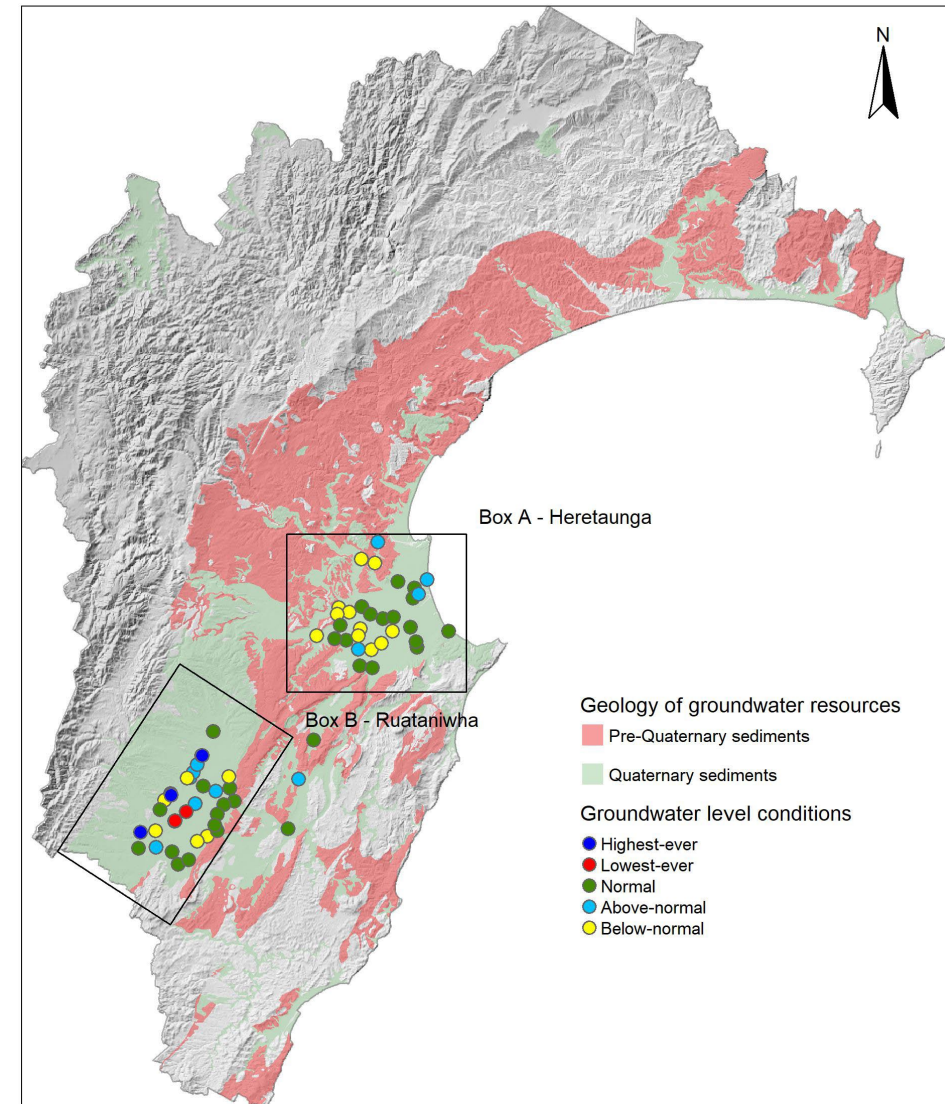
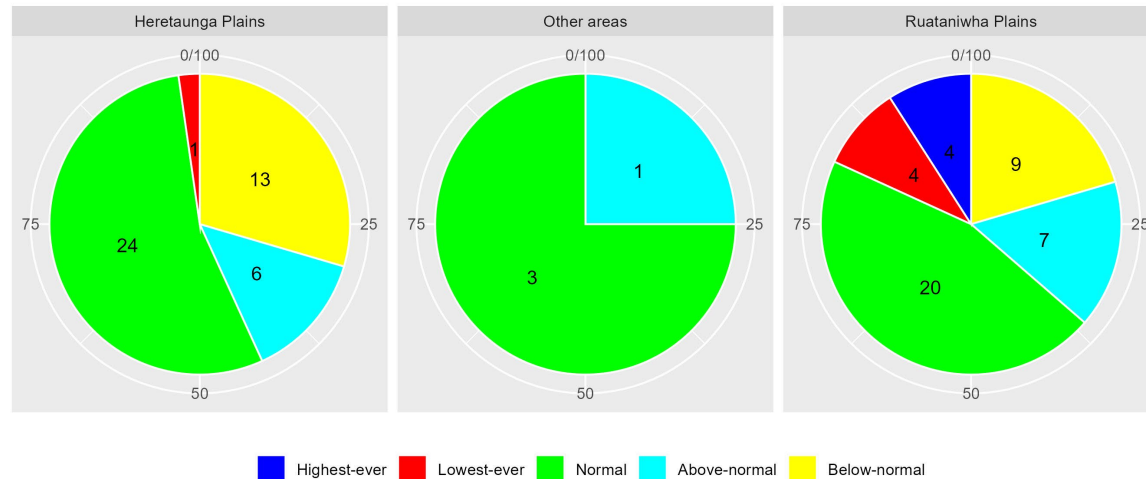
GROUNDWATER & SOIL MOISTURE

Soil Moisture: Above average

Current state of Groundwater levels:

This report compares groundwater levels in October 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: No exceedances

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

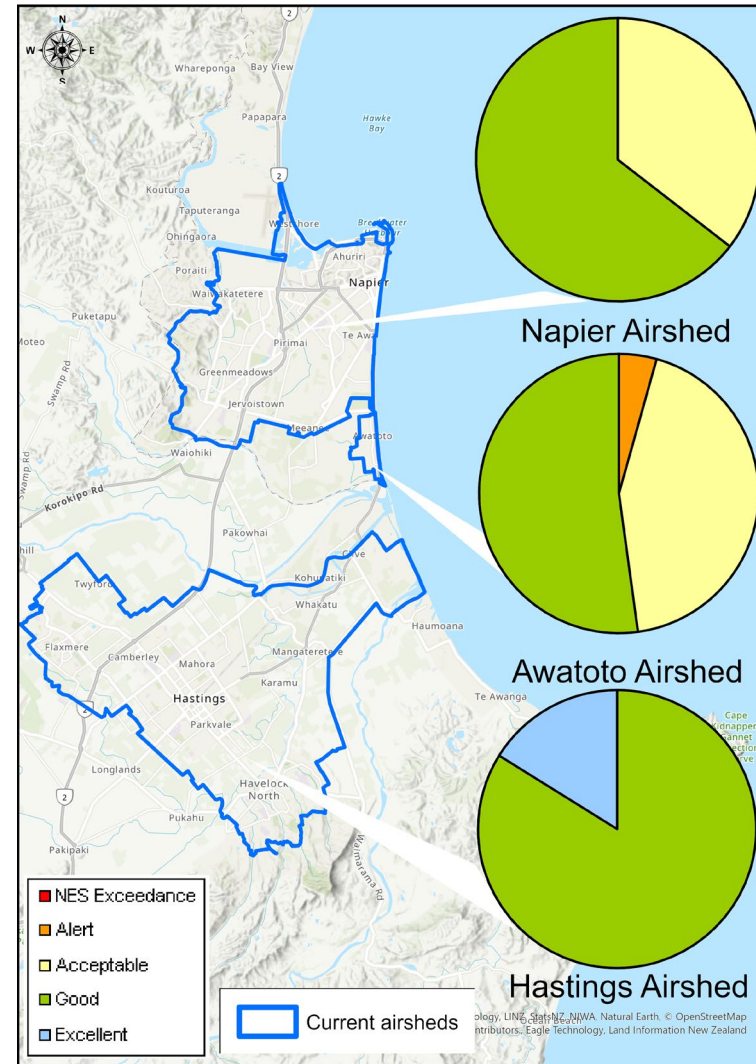
PM₁₀ exceedances:

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 October 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 (IOD) continue, with the second highest weekly value of the IOD being recorded this century, behind 2019. The El Niño looks likely to continue through summer and into autumn. The westerly dominated wind flow should also continue during the next three months, due to the expectation of higher-than-normal sea level pressure across northern New Zealand and lower pressure south of the country.

Temperatures are expected to be warmer than usual, helped along by sea temperatures that are themselves warmer than usual around our region currently. The warmer sea temperatures may be helping to keep our rainfall boosted in the spurts of rain we've had late in the month.

Continued near normal rainfall isn't out of the question then but forecasts favour below normal levels.

Dr Kathleen Kozyniak
Team Leader Air and Land Science