



Hawke's Bay Trends

THE STATE OF OUR ENVIRONMENT

June 2021



HAWKES BAY
REGIONAL COUNCIL

TE KAUNIHERA Ā-ROHE O TE MATAU-A-MĀUI

June 2021

No gin but tonics and a splash of salt abound in June's report. First and foremost the month's rainfall was a tonic. The heavens delivered above average rainfall to the region, finally quashing an ugly six month run of below normal rainfall on the Plains and the south coast. River flows rebounded to mostly normal levels after flagging for much of the year. Soil moisture hit field capacity instead of persistently hugging wilting point. Groundwater levels weren't great but a bit more time should see a positive response to June's weather.

The other major tonic was the warmth. Overnight temperatures were almost 2.5 °C above average and days were 1.5 °C. Hopefully that spurred belated grass growth but at least made it easier exiting bed in the morning. Plus it kept inversions conditions at bay so that air quality in Napier and Hastings stayed free of PM₁₀ exceedances – only the second exceedance-free June in Hastings since monitoring began. Awatoto sadly made up for the two cities with two exceedances. Northeasterlies and big swells tossed salt over our monitor.

Kathleen Kozyniak
Principal Scientist - Climate and Air

SUMMARY June 2021

Fantastic rain and warmth.

This is a summary of the regions rainfall, river flows, ground water, air quality and soil moisture levels. Data and images provided by HBRC.

July to September Forecast

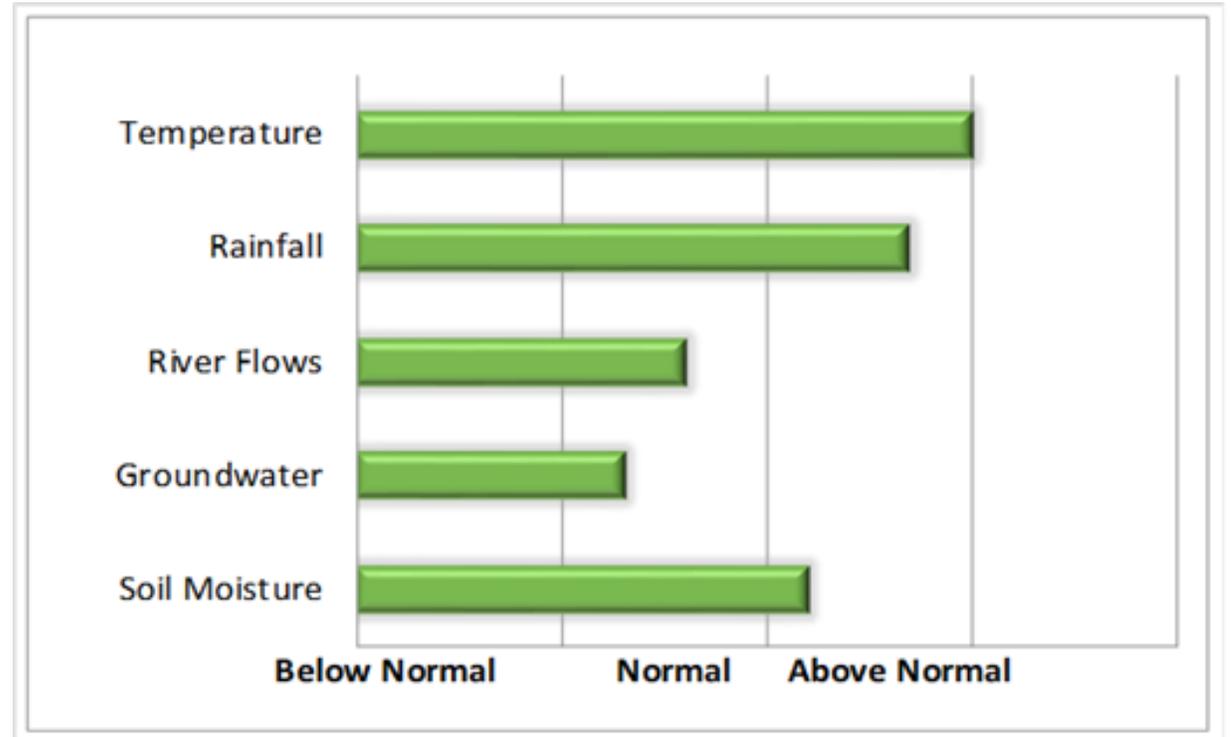
Temperature Near or above average
Rain Near or above normal
River flows Near normal
Soil moisture Near normal

source : NIWA

For more information

www.hbrc.govt.nz

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RAINFALL

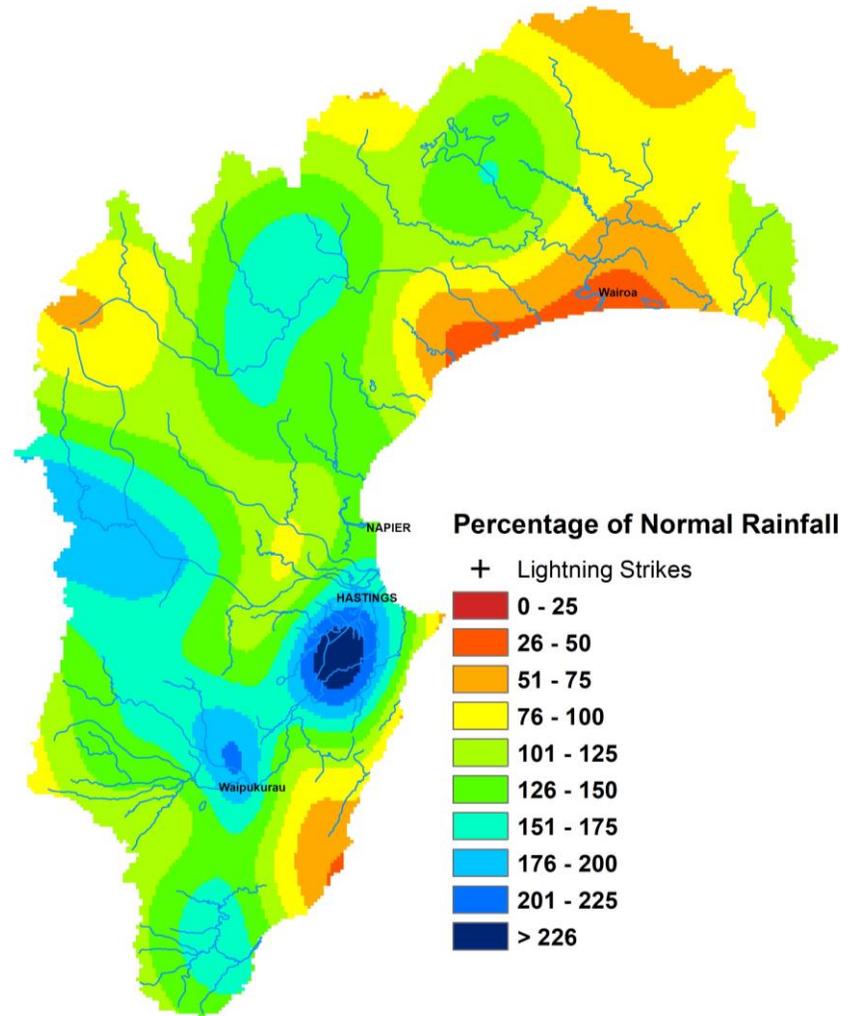
Wonderfully above normal. No cloud to ground lightning strikes.

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

Percentage of normal June rainfall
(30 year average)

For areas in the region:

| | |
|---------------------------|-------------|
| Waikaremoana | 113% |
| Northern HB | 83% |
| Tangoio | 132% |
| Kaweka | 151% |
| Ruahine | 135% |
| Heretaunga Plains | 152% |
| Ruataniwha Plains | 155% |
| Southern HB | 147% |
| Hawke's Bay Region | 134% |



TEMPERATURES

Toasty.

Mean Difference from Normal

Maximum Temperature: 1.5 °C

Minimum Temperature: 2.4 °C

Mean Daily Maximum: 14 °C

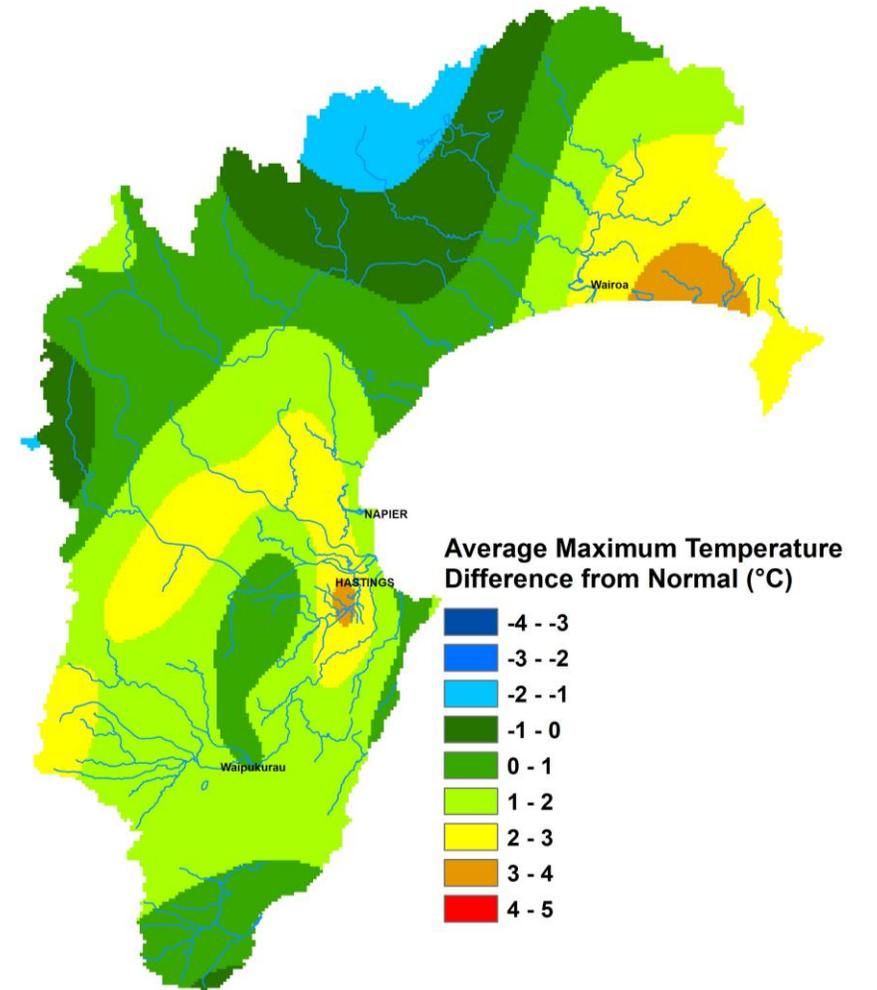
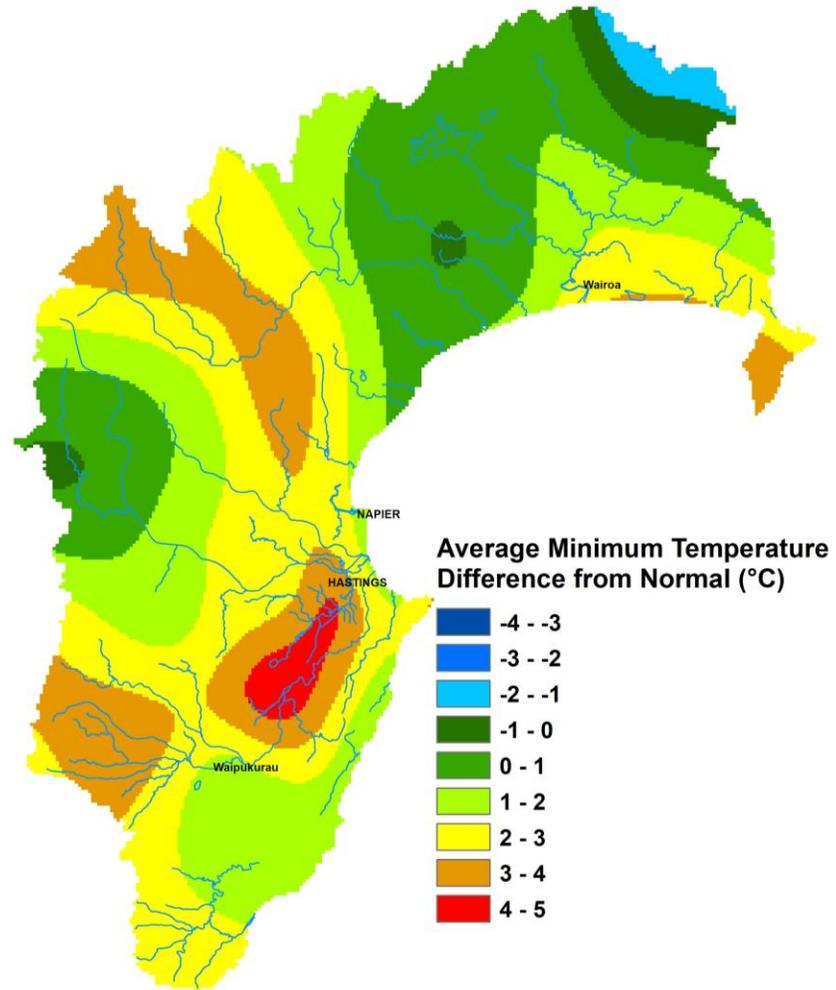
Mean Daily Minimum: 7°C

Highest Daily: 22 °C

Location: Hastings AWS

Lowest Daily: -3.3 °C

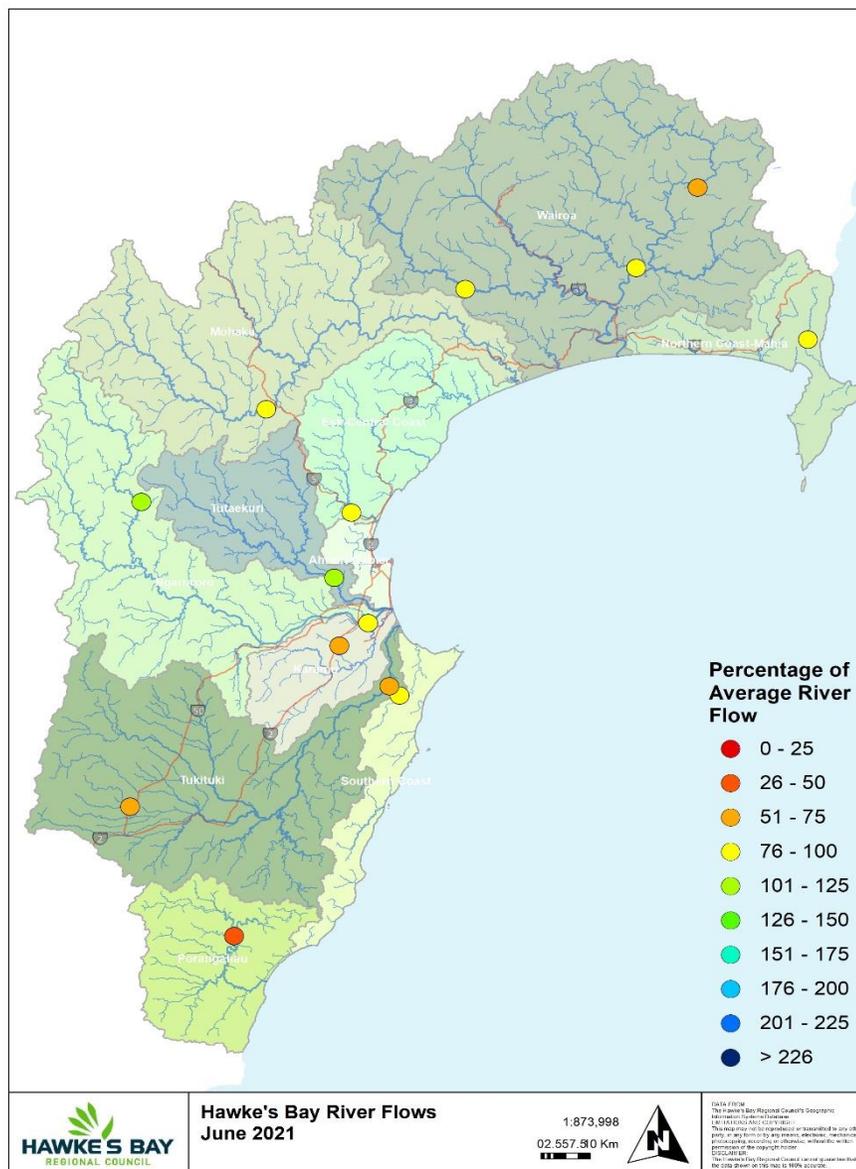
Location: Taharua



RIVER FLOW

Percentage of average June flows
for areas in the region:

| | |
|------------------------------|------------|
| Northern Coast – Mahia | 90% |
| Northern HB – Hangaroa River | 74% |
| Northern HB – Wairoa River | 99% |
| Northern HB – Waiau River | 88% |
| Mohaka | 93% |
| Esk-Central Coast | 80% |
| Tūtaekuri | 103% |
| Karamu | 53% |
| Ngaruroro – Kuripapango | 102% |
| Ngaruroro – Chesterhope | 87% |
| Southern Coast | 82% |
| Tukituki – Tukipo River | 62% |
| Tukituki – Tukituki River | 67% |
| Porangahau | 41% |
| Hawke's Bay Region | 80% |



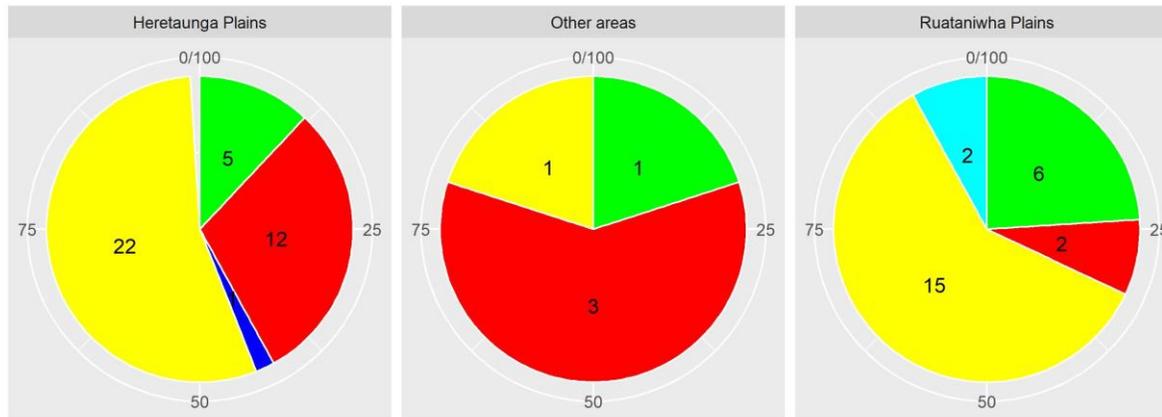
GROUNDWATER & SOIL MOISTURE

Soil Moisture: Near or above normal.

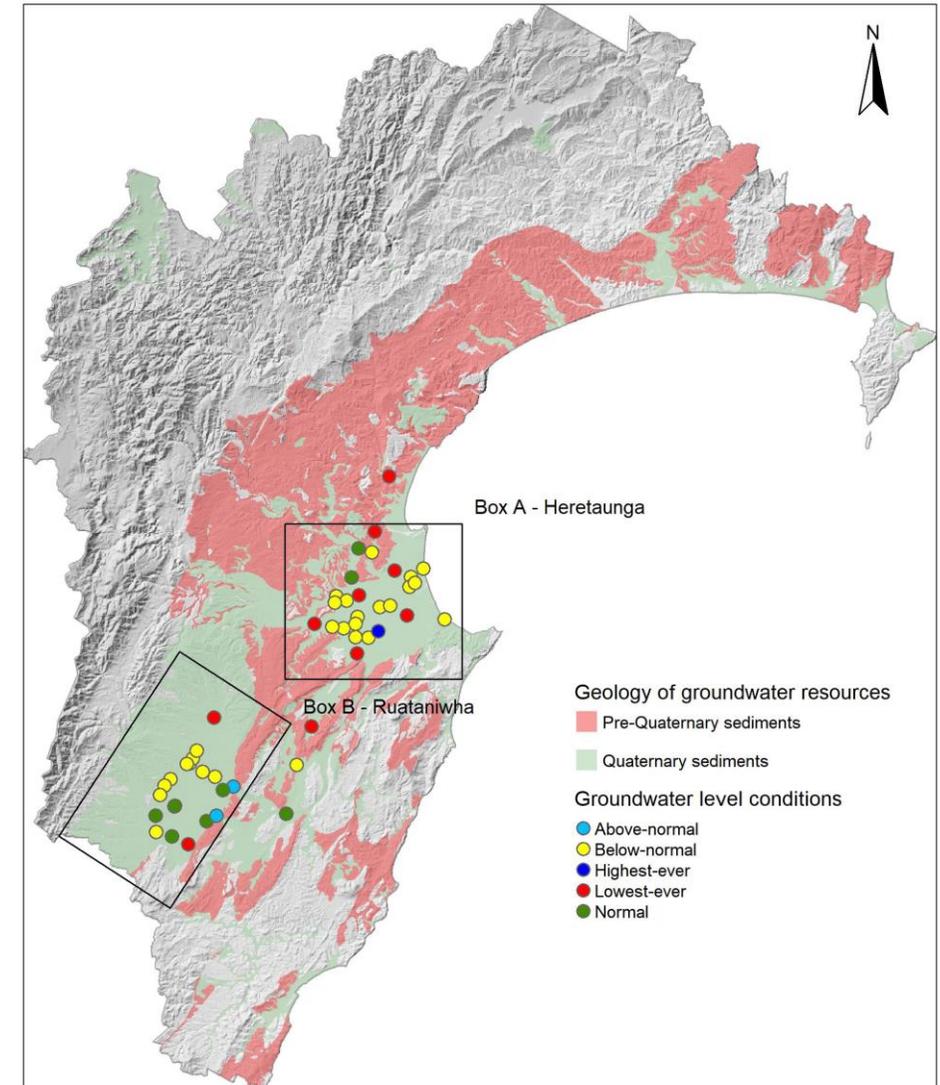
Current state of Groundwater levels:

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.



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



AIR QUALITY

Great in Napier and Hastings. Two exceedances in Awatoto.

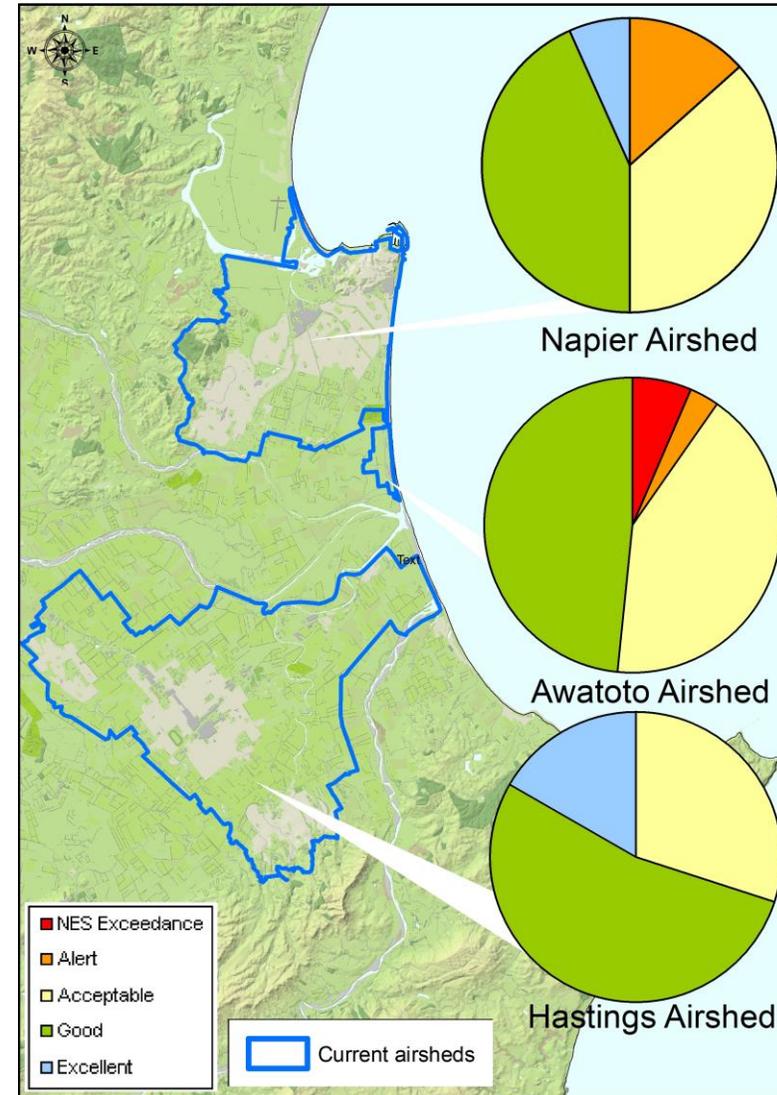
Figure 1: Environmental performance categories for PM₁₀ levels in the Napier, Hastings and Awatoto airshed during June 2021

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 June 2021.

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-Southern Oscillation conditions are neutral. Another climate circulation pattern, called the Indian Ocean Dipole, could be in its negative mode for late winter and spring. It raises the chance of above average rainfall for parts of southern Australia and to a certain extent ourselves as well.

Mean sea level pressures are expected to be higher than average in the east, less so in the west, and that brings a mainly northeast flow over the country mixed with chillier winds from the southwest. Temperatures should remain near or above normal over the next three months, particularly given that sea surface temperatures around New Zealand are currently warmer than usual. Warm seas, a good component of northeasterlies and what will hopefully be a favourable mode of the Indian Ocean Dipole bode reasonably well for near or above average rainfall over the period.

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