



Hawke's Bay Trends

THE STATE OF OUR ENVIRONMENT

April 2020

Photo credit: Fiona Clark - MPI



HAWKES BAY
REGIONAL COUNCIL

TE KAUNIHERA Ā-ROHE O TE MATAU-A-MĀUI

April 2020

If there wasn't a serious and ongoing drought we'd be revelling in the weather. Our lurch en-masse into neighbourhood walks was aided by warm April temperatures and dry pavements. But it's now six months of below normal rainfall in many parts of the region and figures like 13% of the month's average reared their heads again in February-style. Our thoughts are with rural community affected by drought.

Our river flows are well down once again and have looked bleak for months. Groundwater levels have certainly joined the party now if they hadn't before. Soil moisture refuses to even hiccup, unless you are located in the far north of the region where it has bounced around median levels.

On the upside for me is that my solar ovens have gone gangbusters since I bought them prior lockdown. Too gangbusters. In spite of my successful efforts to make ash from chickpeas and carrots we kicked off our air quality season in great fashion.

Kathleen Kozyniak
Principal Scientist - Climate and Air

SUMMARY April 2020

Compounding. Warm and dry.

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

Data and images provided by HBRC.

May to July Forecast.

Temperature Near or above average

Rain Near or below normal

River flows Near or below normal

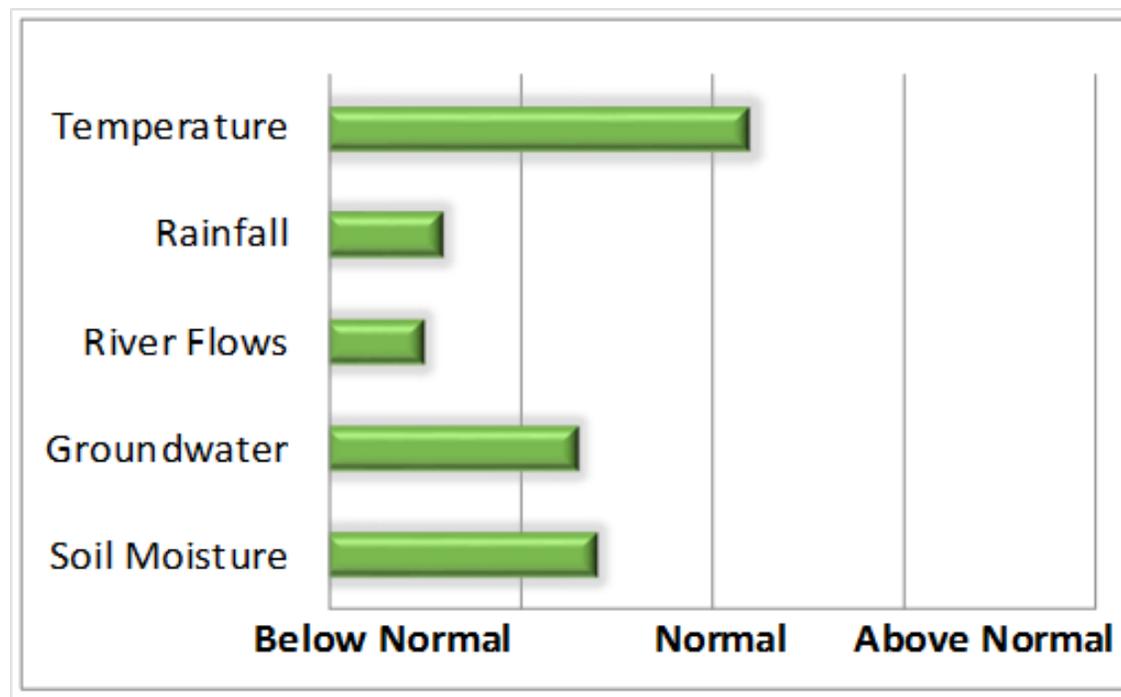
Soil moisture Near or below normal

source : NIWA

For more information

www.hbrc.govt.nz

P: 06 835 9200



RAINFALL

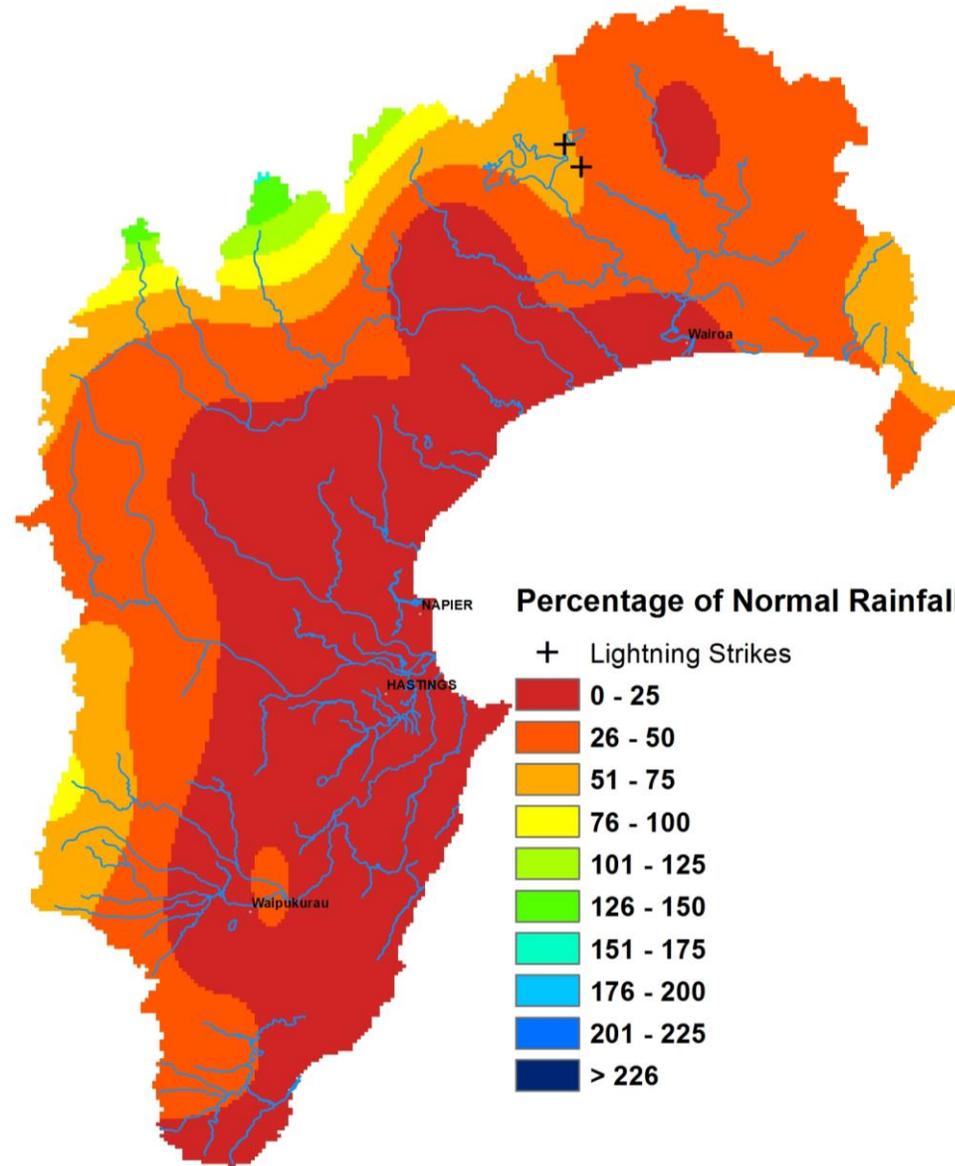
It goes on. Below normal across the region. Two cloud to ground lightning strikes.

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

Percentage of normal April rainfall
(30 year average)

For areas in the region:

Waikaremoana	41%
Northern HB	31%
Tangoio	14%
Kaweka	37%
Ruahine	66%
Heretaunga Plains	13%
Ruataniwha Plains	23%
Southern HB	15%
Hawke's Bay Region	30%



TEMPERATURES

Average nights, warm days.

Mean Difference from Normal

Maximum Temperature: 1 °C

Minimum Temperature: 0.3 °C

Mean Daily Maximum: 19 °C

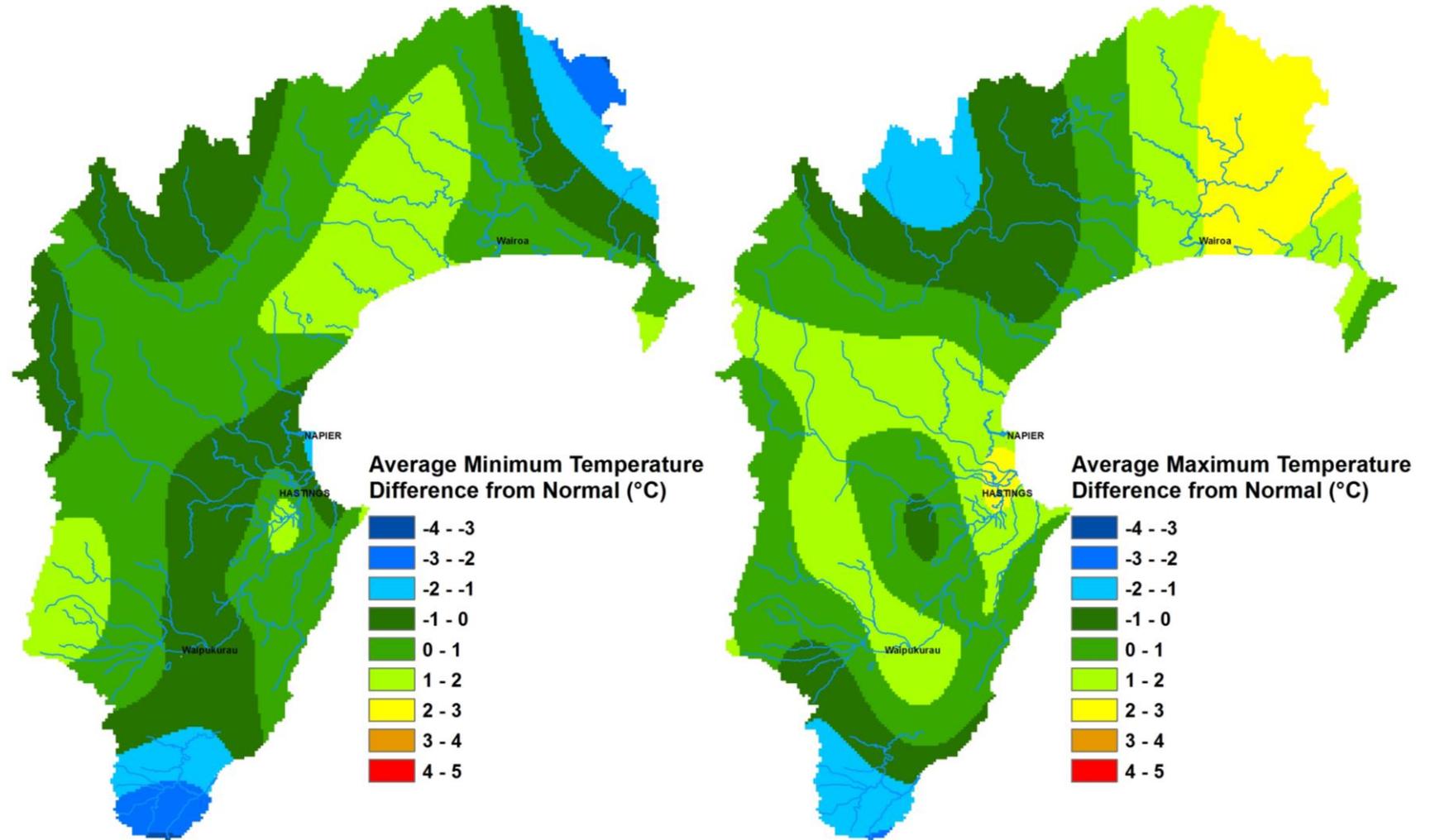
Mean Daily Minimum: 8 °C

Highest Daily: 26.7°C

Location: Napier EWS

Lowest Daily: -1.1 °C

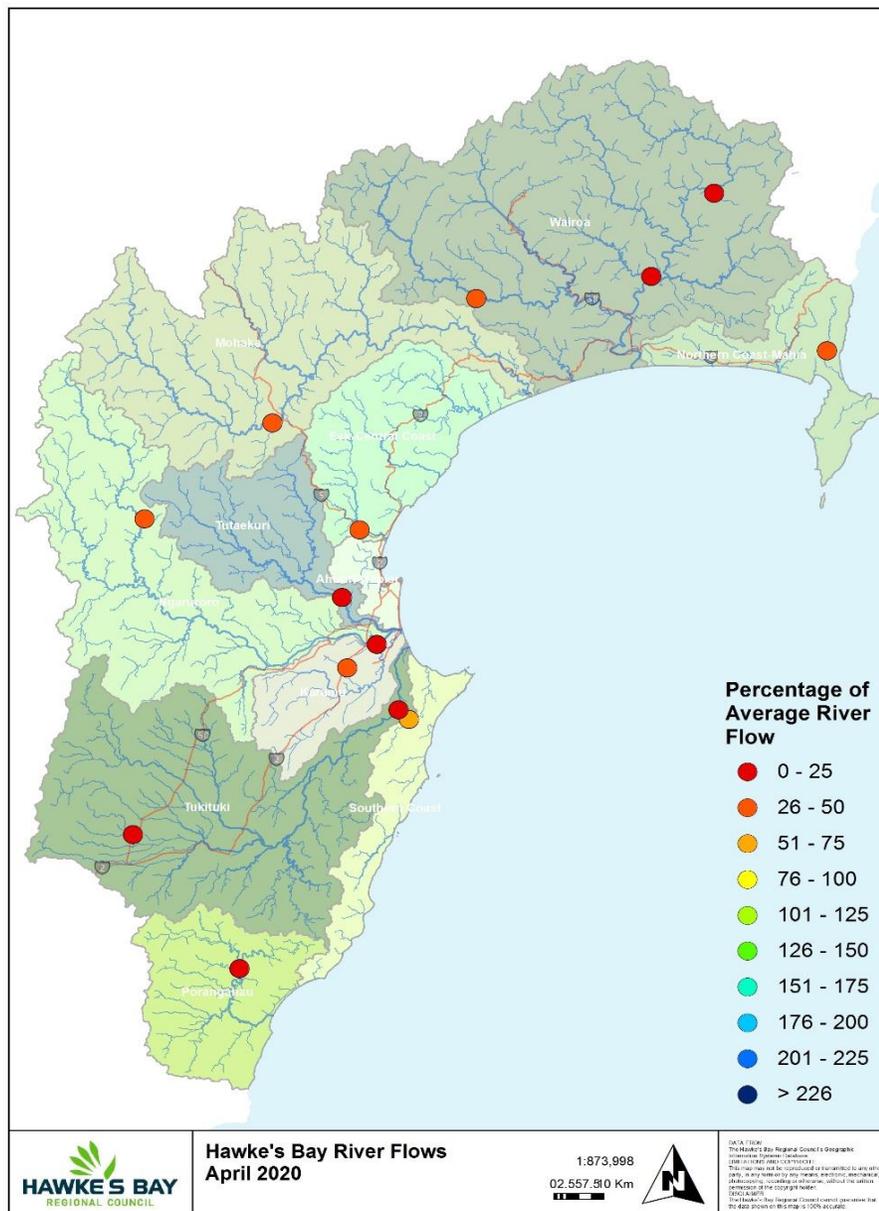
Location: Taharua



RIVER FLOW

Percentage of average April flows
for areas in the region:

Northern Coast – Mahia	32%
Northern HB – Hangaroa River	12%
Northern HB – Wairoa River	24%
Northern HB – Waiau River	33%
Mohaka	33%
Esk-Central Coast	35%
Tūtaekuri	23%
Karamu	34%
Ngaruroro – Kuripapango	30%
Ngaruroro – Chesterhope	12%
Southern Coast	53%
Tukituki – Tukipo River	10%
Tukituki – Tukituki River	14%
Porangahau	0%
Hawke's Bay Region	25%



GROUNDWATER & SOIL MOISTURE

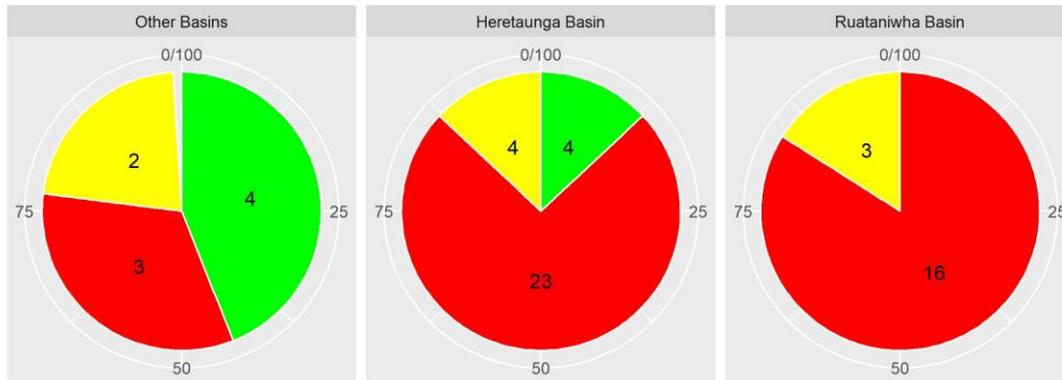
Soil Moisture: Below normal except in northern areas.

Current state of Groundwater levels:

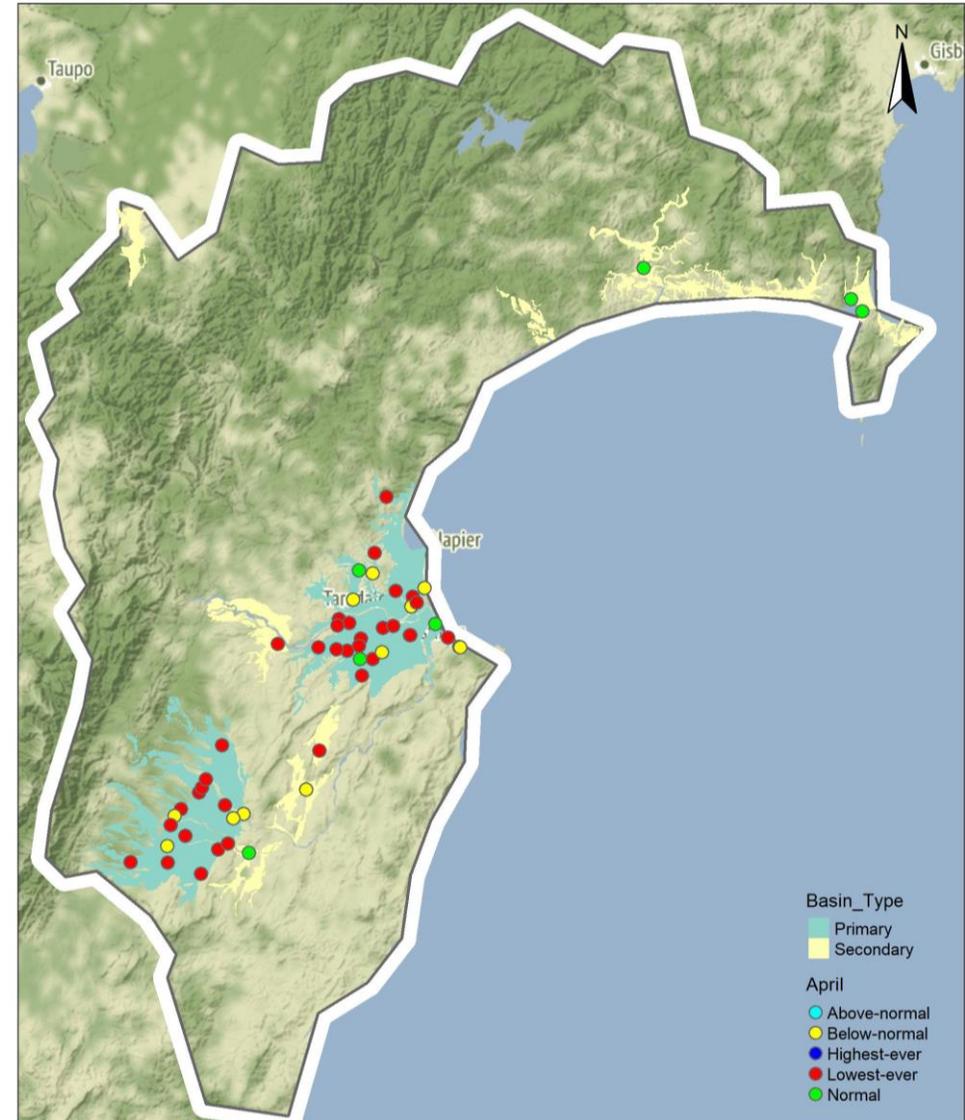
This report compares groundwater levels in April with historic readings to evaluate current conditions.

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.



Below-normal Lowest-ever Normal



AIR QUALITY

All good. No exceedances!

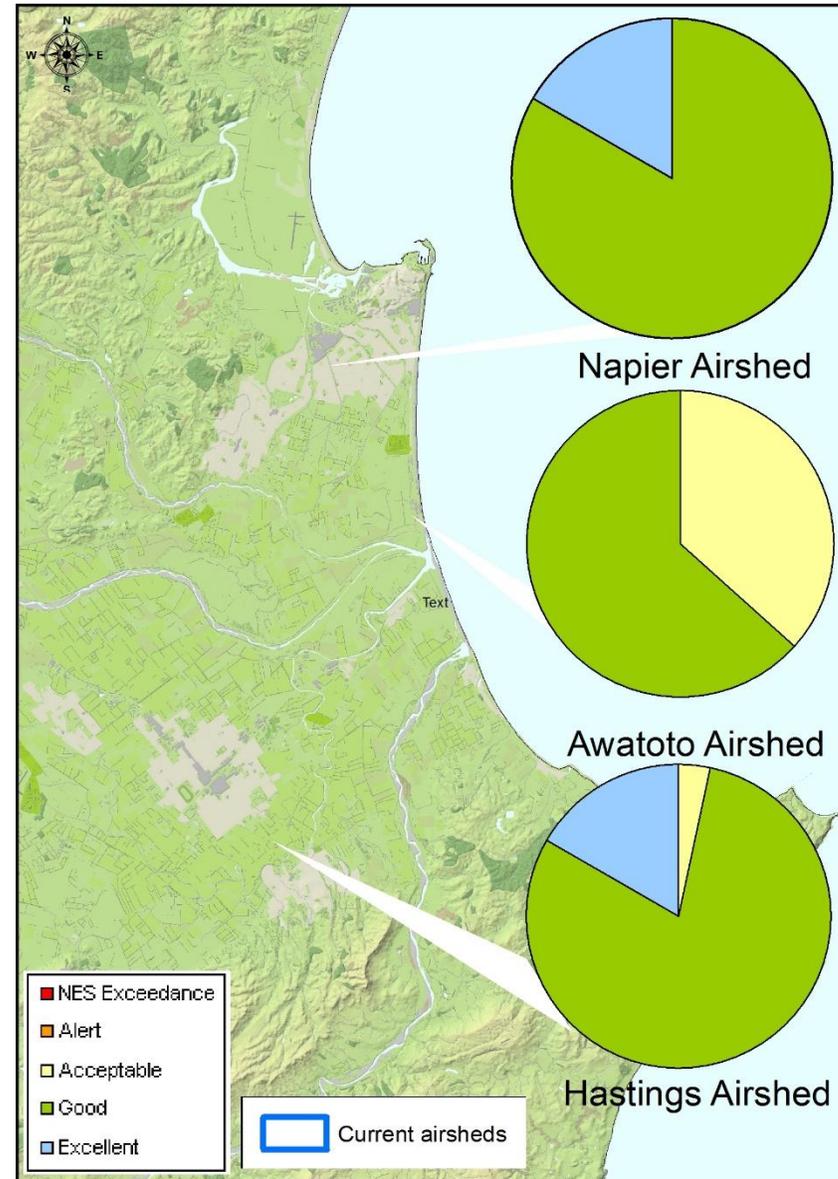
Figure 1: PM₁₀ levels in the Napier, Hastings and Awatoto airsheds during April 2020.

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 in April 2020.

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

The El-Niño Southern Oscillation remains in neutral mode and is expected to continue through winter in the same vein. Also in a holding pattern is this bias to a westerly flow which has dogged us for months. It results from lower than normal pressures to the south of us and higher to the north.

That pattern prompts a seasonal forecast of near or below normal rainfall and near or above average temperatures for our region. It's all a bit groundhog day.

The Aussie Bureau of Meteorology is offering a glimmer of hope at the end of a long tunnel, cautiously mooting the possibility of closer to La Niña conditions later in the year, along with a negative Indian Ocean Dipole. Both would hold better prospects of rain. However there's a more than equal chance neutral conditions will be sustained so we can only hope the more optimistic scenario isn't a mirage.

Both would hold better prospects of rain so fingers crossed they aren't a mirage.

Kathleen Kozyniak
Principal Scientist - Climate and Air