

August 2019

Hawke's Bay Trends

THE STATE OF OUR ENVIRONMENT

RAINFALL
TEMPERATURES
RIVER FLOW
GROUNDWATER & SOIL
AIR QUALITY
LONGER FORECAST

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In many ways August followed the copybook. Soil moisture across the region was disturbingly close to median levels for the end of August. Groundwater levels were typical for the time of year. Temperatures were average. Rainfall on the main ranges played out within the long term norms. The rub was rainfall in eastern areas. It was dry, apart from an annoying knack of raining Friday nights when I hang washing out. The upshot was that flows in our rivers, the Ngaruroro excepted, were below their long term mean. In that context “below normal” isn’t so good but when it’s teamed with PM10 exceedances it’s raucously applauded. There were no exceedances in August (standing ovation) and Hastings had two for the winter, which was down on last year and below the long term average. A good long hand clap for the latter. But folks, according to the National Environmental Standards, we’ve got just one winter now to get down to one or less.

Kathleen Kozyniak
Principal Scientist - Climate and Air



SUMMARY

August 2019

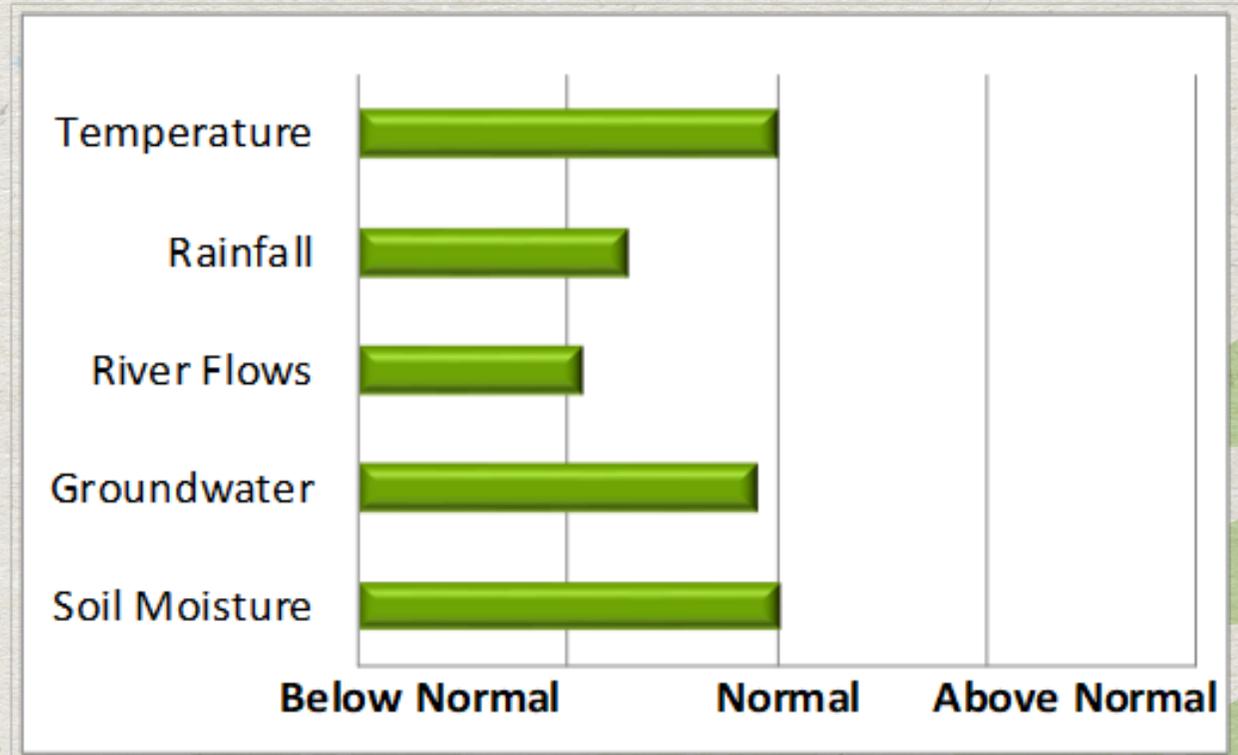
Short on rain and ho-hum temperatures

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

September to November Forecast.

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

source : NIWA



For more information
www.hbrc.govt.nz
P: 06 835 9200

RAINFALL

Below normal, but the main ranges did well.

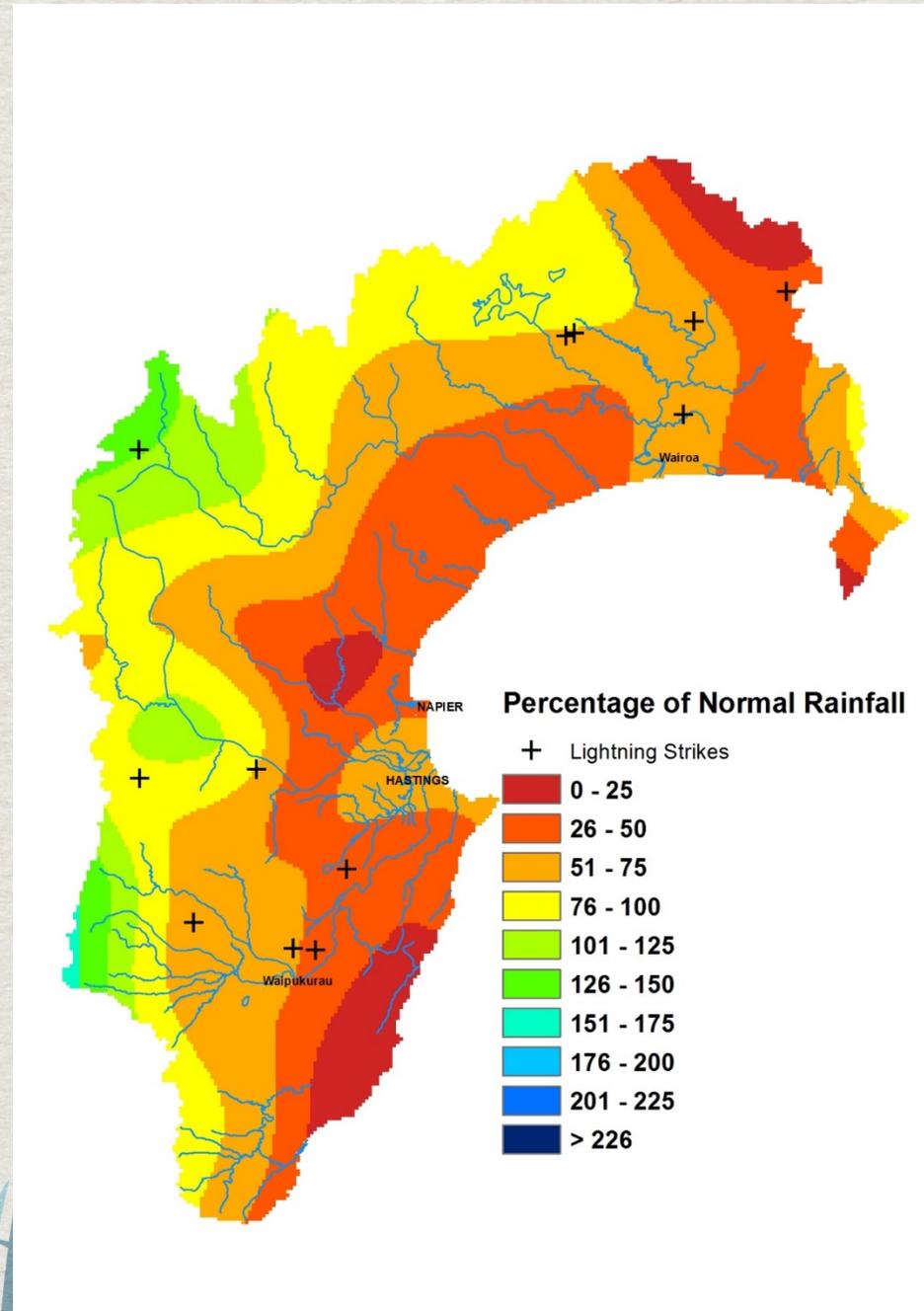
Percentage of normal August rainfall
(30 year average)

For areas in the region:

Waikaremoana	72%
Northern HB	52%
Tangoio	36%
Kaweka	82%
Ruahine	116%
Heretaunga Plains	52%
Ruataniwha Plains	57%
Southern HB	45%
Hawke's Bay Region	64%

12 cloud to ground lightning strikes in August

Blitzorgtung.org network



TEMPERATURES

Plain average

Mean Difference from Normal

Maximum Temperature: 0.4°C

Minimum Temperature: -0.1 °C

Mean Daily Maximum: 13°C

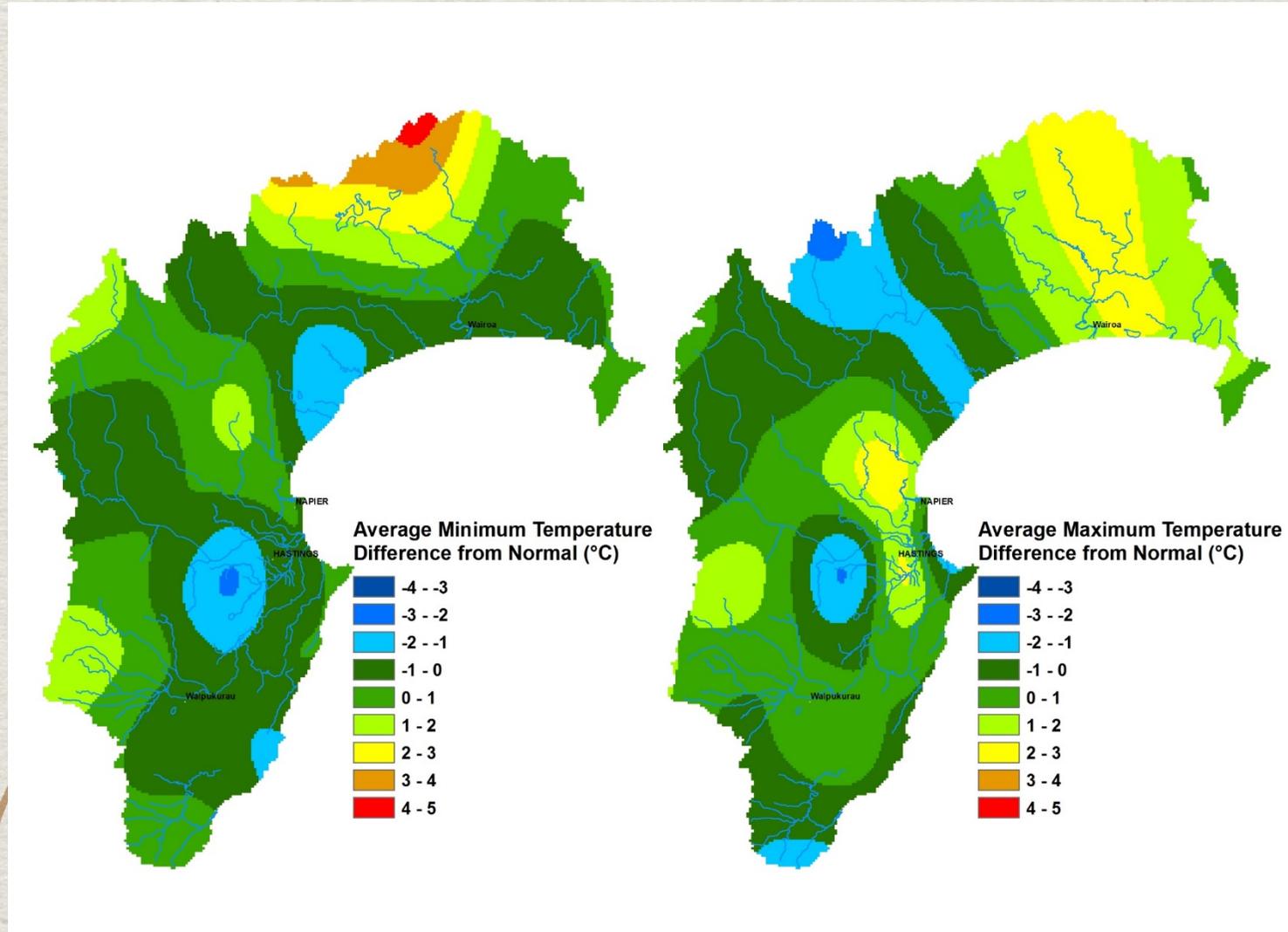
Mean Daily Minimum: 4°C

Highest Daily: 20°C

Location: Wairoa North Clyde EWS

Lowest Daily: --4.6°C

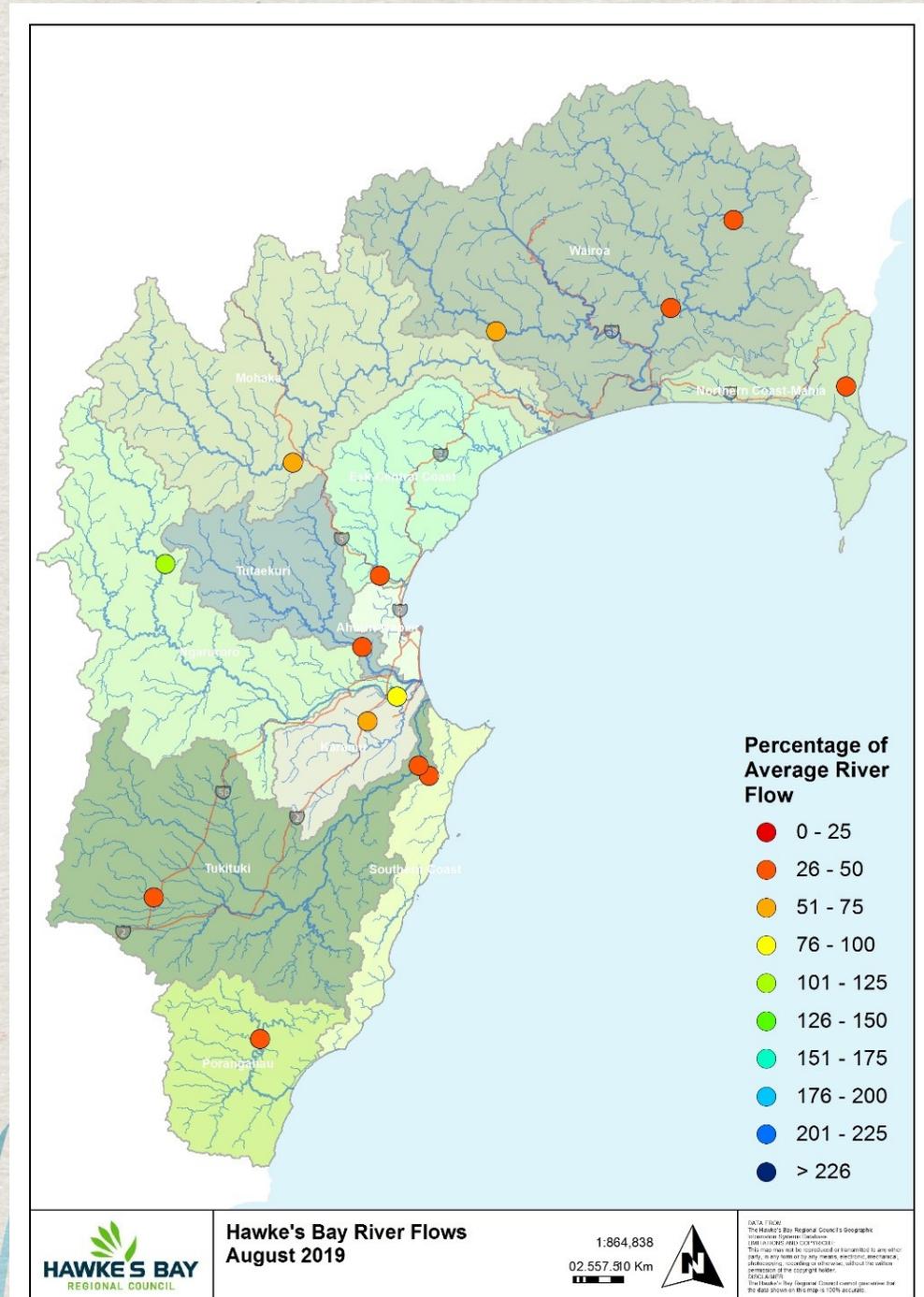
Location: Ongaonga



RIVER FLOW

Percentage of average August flows for areas in the region:

Northern Coast – Mahia	33%
Northern HB – Hangaroa River	28%
Northern HB – Wairoa River	33%
Northern HB – Waiau River	62%
Mohaka	74%
Esk-Central Coast	46%
Tūtaekuri	43%
Karamu	55%
Ngaruroro - Kuripapango	119%
Ngaruroro - Chesterhope	76%
Southern Coast	44%
Tukituki – Tukipo River	49%
Tukituki – Tukituki River	50%
Porangahau	30%
Hawke's Bay Region	53%

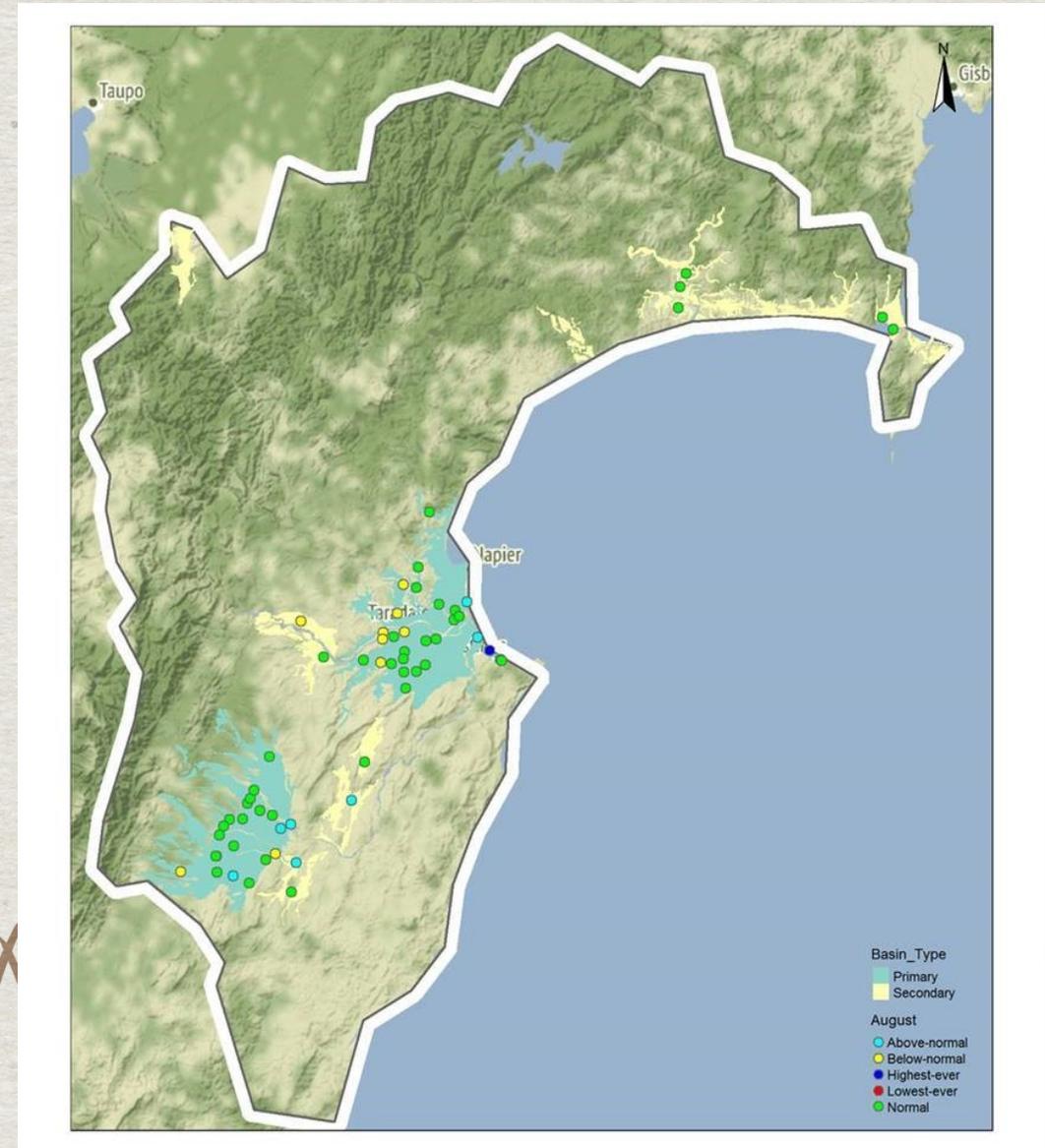
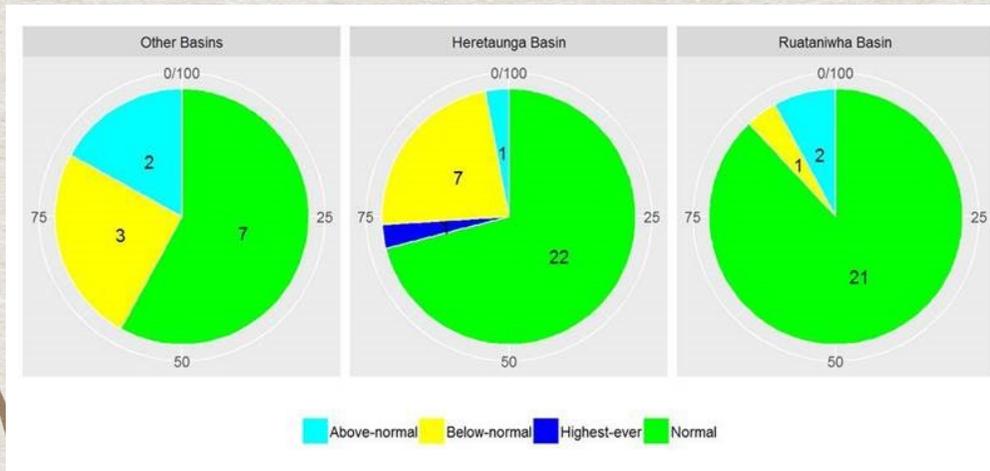


GROUNDWATER & SOIL MOISTURE

Soil Moisture: Near normal

Current state of Groundwater levels:

This report compares groundwater levels in August 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.



Magic. No exceedances.

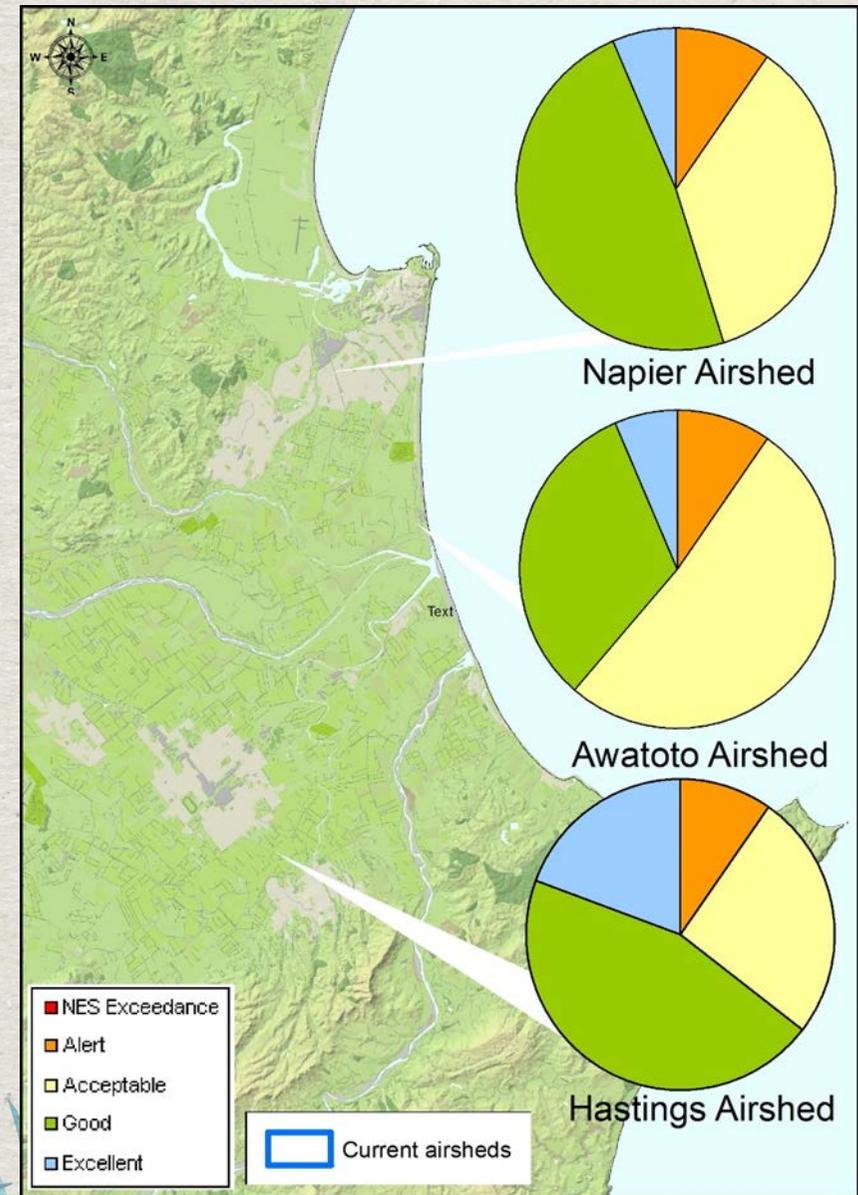
Figure 1: PM₁₀ levels in the Napier, Hastings and Awatoto airsheds during August 2019.

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 July 2019.

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 is no more and we have neutral conditions. We have another climate mode hanging around which can influence our spring weather. It's called the Indian Ocean Dipole. Its positive mode, which is predicted for this spring, is associated with drier conditions rather than above normal rainfall.

The pressure pattern, indicated by a number of seasonal forecast models, goes along with this scenario. Low pressures cover New Zealand but especially the south, giving Hawke's Bay a westerly flow. It suggests our main ranges would likely do okay, as they did in August, but eastern parts would continue on a dry run.

There is a "but". Not all models sing the same tune and two particularly respected models appear split between focussing low pressures in the south and focussing them in the northeast, the latter giving us a soggy east coast. If you hedge your bets you'd go for normal rainfall as well as average temperatures.

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