



Hawke's Bay Trends

THE STATE OF OUR ENVIRONMENT

August 2020

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Ouch. August delivered a swift punch to remind us that one wet month doesn't make for a sopping year. The Heretaunga and Ruataniwha Plains, southern coastal area and Tangoio all got less than half of August's average rainfall and if it wasn't for a wet June, the Plains would be contemplating ten consecutive months of below normal rainfall.

River flows, which have looked okay over the past couple of months, did a synchronised dive below normal in August. Soil moisture has mostly held to usual levels for the time of year. The main exception being in Central Hawke's Bay where it's struggled to stay out of the lowest 10th percentile of readings. It's also where groundwater levels never made a great shake of getting back to winter averages.

Warm August temperatures underscored the month's hero which was air quality and no exceedances. We've survived another winter without exceeding the PM10 standard in Napier and, by the skin of our teeth, had just the one exceedance in Hastings. Brilliant.

Kathleen Kozyniak
Principal Scientist - Climate and Air

SUMMARY August 2020

It's back - warm, dry weather

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.

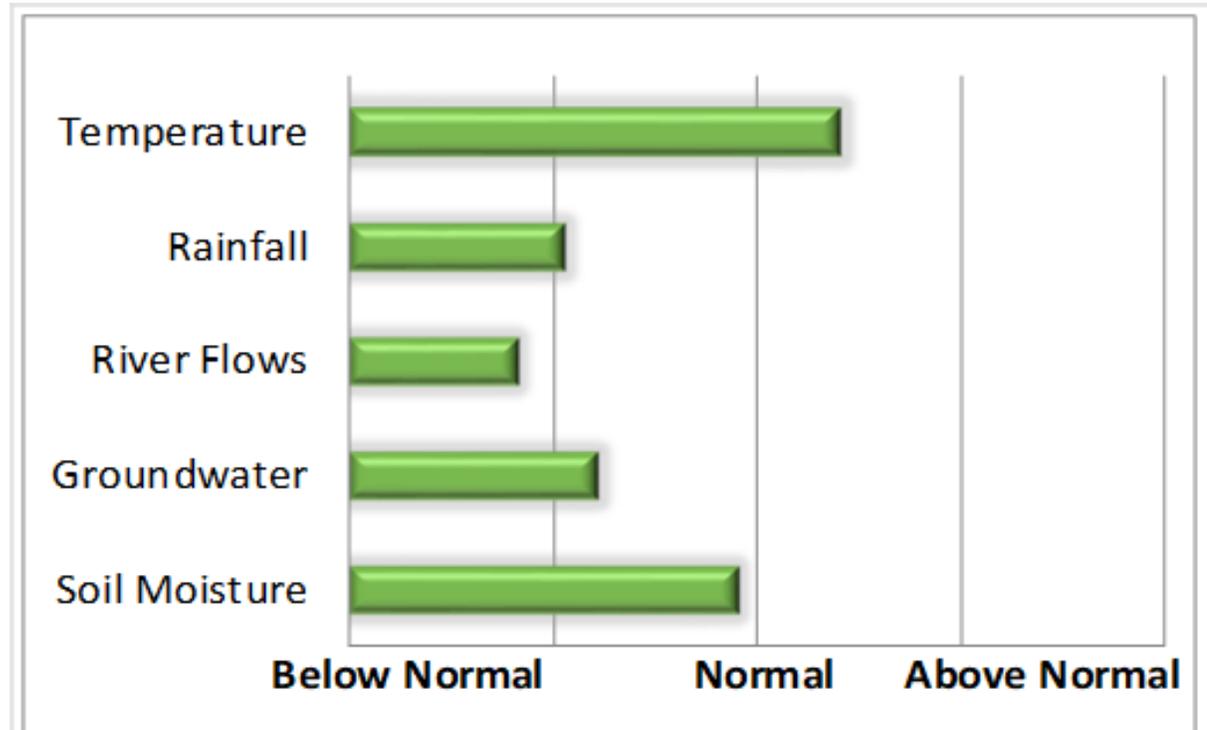
Temperature Above average
Rain Near normal
River flows Near normal
Soil moisture Near normal

source : NIWA

For more information

www.hbrc.govt.nz

P: 06 835 9200



RAINFALL

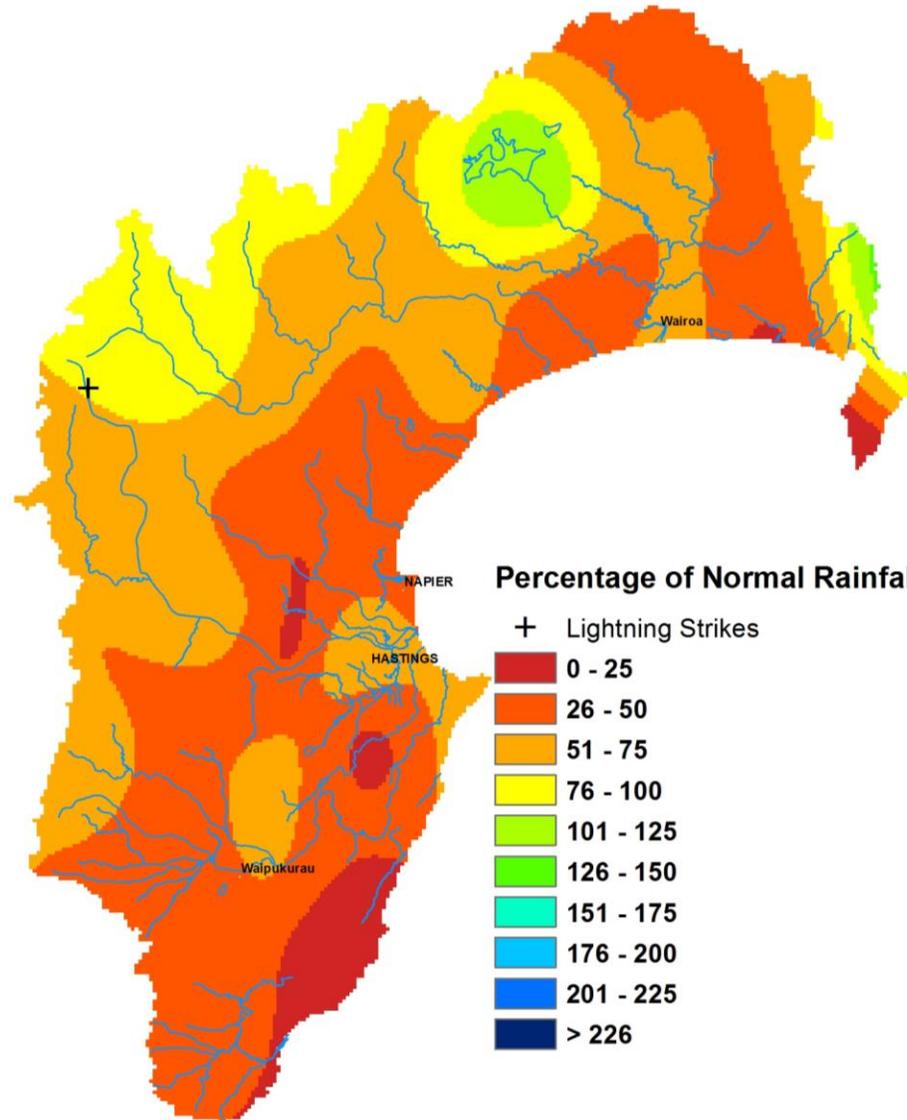
Well below normal. One cloud to ground lightning strike.

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	80%
Northern HB	55%
Tangoio	42%
Kaweka	60%
Ruahine	57%
Heretaunga Plains	45%
Ruataniwha Plains	43%
Southern HB	36%
Hawke's Bay Region	52%



TEMPERATURES

Above average – particularly the daytime highs.

Mean Difference from Normal

Maximum Temperature: 1.0 °C

Minimum Temperature: 0.3 °C

Mean Daily Maximum: 14 °C

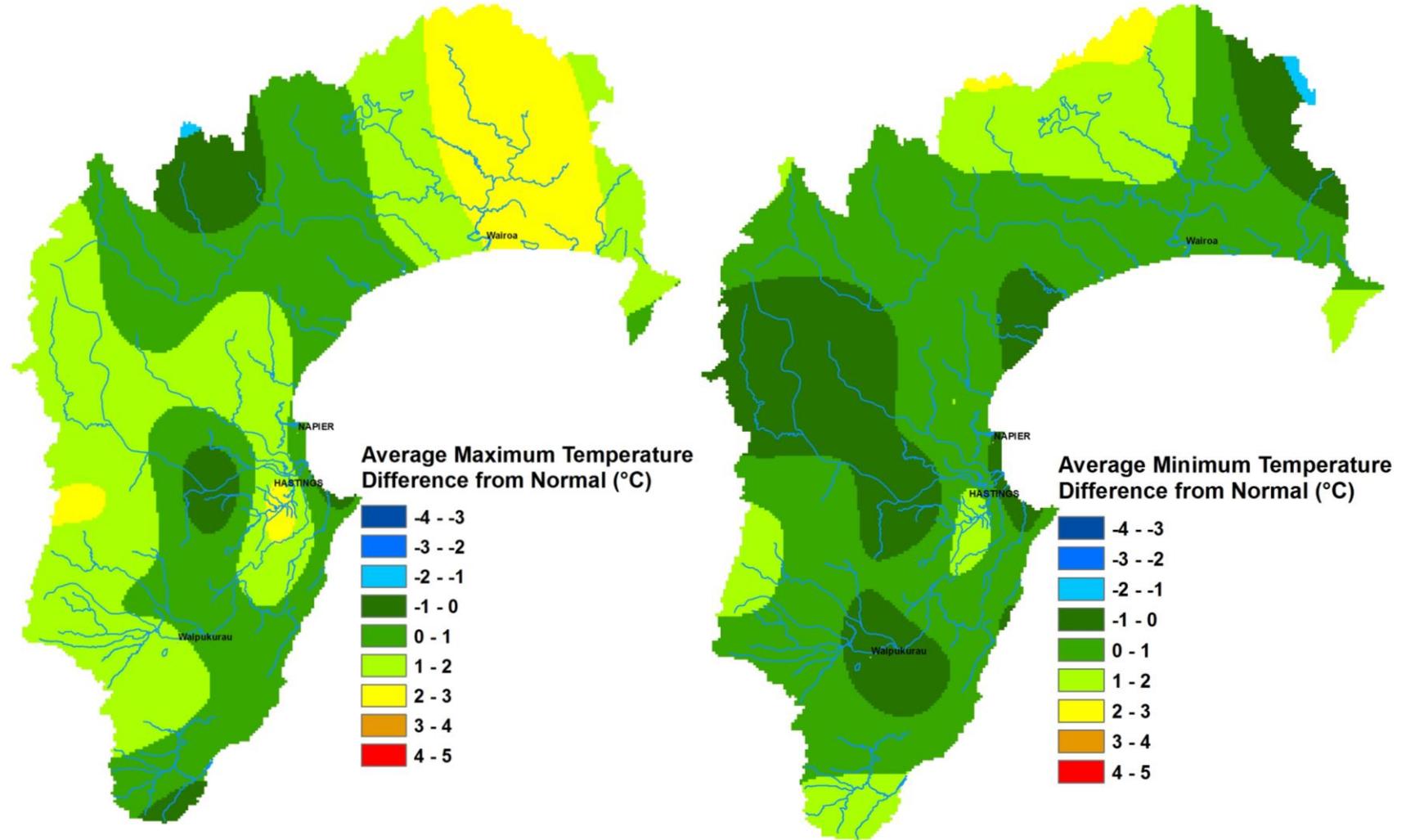
Mean Daily Minimum: 5 °C

Highest Daily: 23.7°C

Location: Wairoa North Clyde EWS

Lowest Daily: -4.9 °C

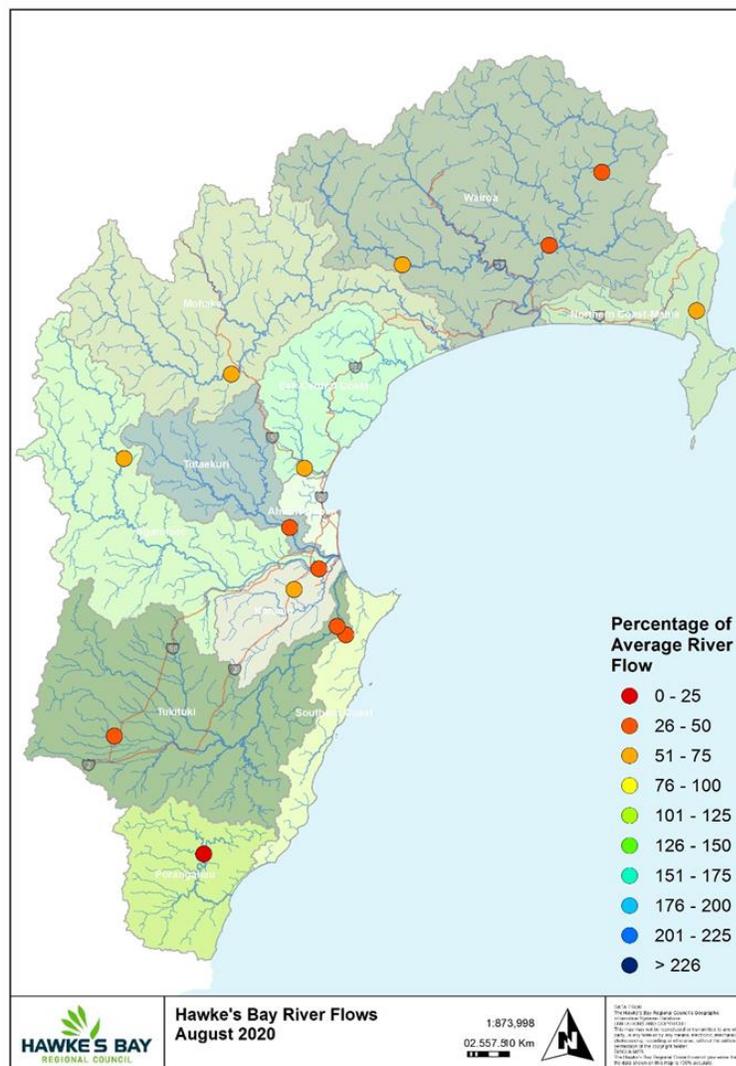
Location: Taharua Climate



RIVER FLOW

Percentage of average August flows
for areas in the region:

Northern Coast – Mahia	63%
Northern HB – Hangaroa River	34%
Northern HB – Wairoa River	37%
Northern HB – Waiau River	57%
Mohaka	52%
Esk-Central Coast	56%
Tūtaekuri	48%
Karamu	64%
Ngaruroro – Kuripapango	61%
Ngaruroro – Chesterhope	34%
Southern Coast	44%
Tukituki – Tukipo River	30%
Tukituki – Tukituki River	30%
Porangahau	13%
Hawke's Bay Region	45%



GROUNDWATER & SOIL MOISTURE

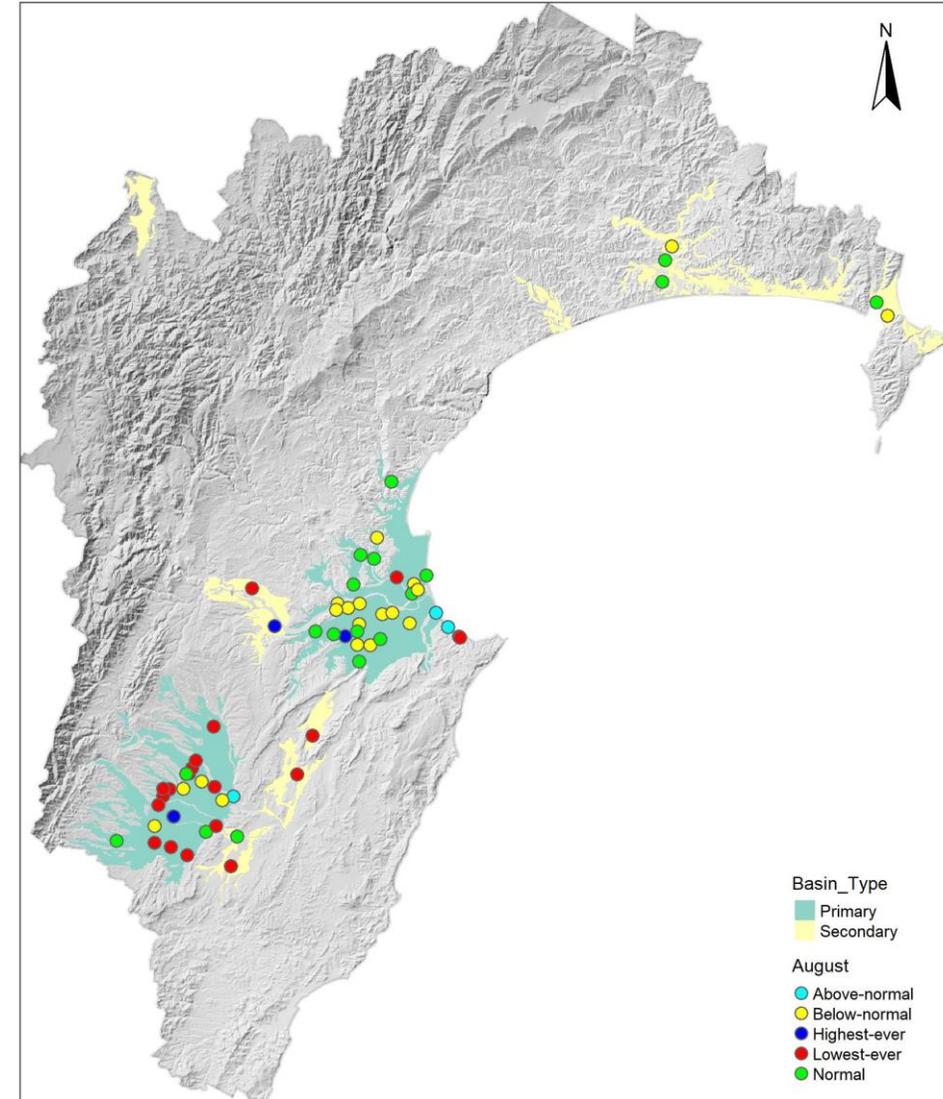
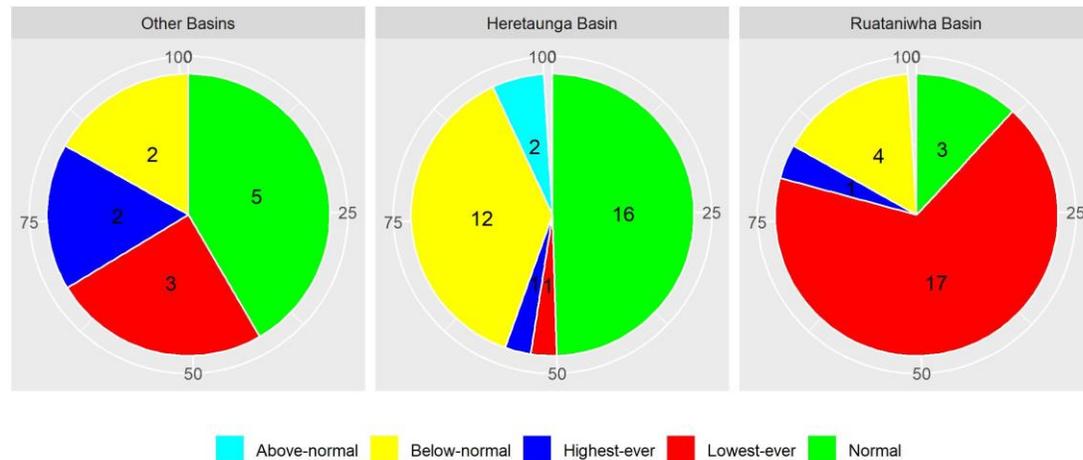
Soil Moisture: Near normal across most of the region but below normal in Central Hawke’s Bay.

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

A stellar end to winter. No exceedances.

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

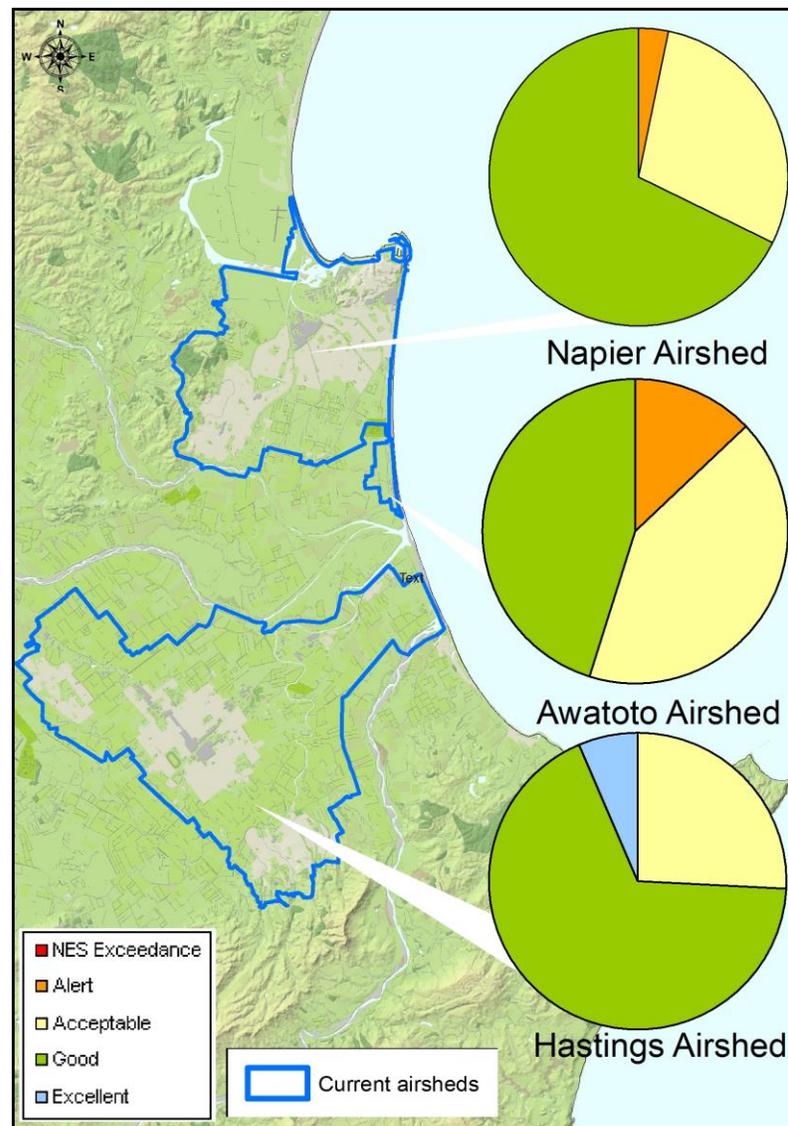
The monitoring sites are located at:

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

Seasonal forecast models are fairly evenly split into two camps, either predicting above normal spring rainfall or below normal spring rainfall. The stand-off isn't helpful but encouragingly the odds of a weak La Niña event developing during spring have been increasing. Plus we have warmer than usual seas around us and the prospect of a negative Indian Ocean Dipole, the latter being a measure of another circulation pattern, like El Niño-Southern Oscillation, that can influence our spring rainfall.

We are hopeful then that the “above normal” camp is on the money or at least “near normal” is on the cards plus warm spring temperatures. That outlook would see above average sea level pressure over south-eastern New Zealand and a northeast flow over our region. That northeast flow may not kick in until later in spring with westerlies still the main player in September. But it's worth remembering that above average rainfall, or even average rainfall, is not the consensus view and the opposite camp would see the whole country basking in highs and rain hard to come by.

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