



# Hawke's Bay Trends

THE STATE OF OUR ENVIRONMENT

December 2021



TE KAUNIHERA Ā-ROHE O TE MATAU-A-MĀUI

## December 2021

Rain helpfully keeps coming and the temperatures keep firing. December's rainfall was again, like November, well above average though admittedly more scant around parts of Wairoa. Much of the region, including the Plains, has had near or above normal rainfall for four months in a row – a welcome change from my usual whinge about consecutive dry months.

The knock-on effect of all the rain was above average December river flows, soil moisture that sat above median levels for the time of year and groundwater levels that, month upon month, have looked rosier. Air temperatures, again like last month, were well above average, though a touch more ballistic and a reflection of sea temperatures that have gone nuts. The heat and rain combo made recreational water quality a tease – it's been standoffish when conditions otherwise gave us the glad eye and we've hankered to dive in.

**Kathleen Kozyniak**  
Principal Scientist - Climate and Air

## SUMMARY December 2021

No change from last month – hot and wet.

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

### January to March Forecast

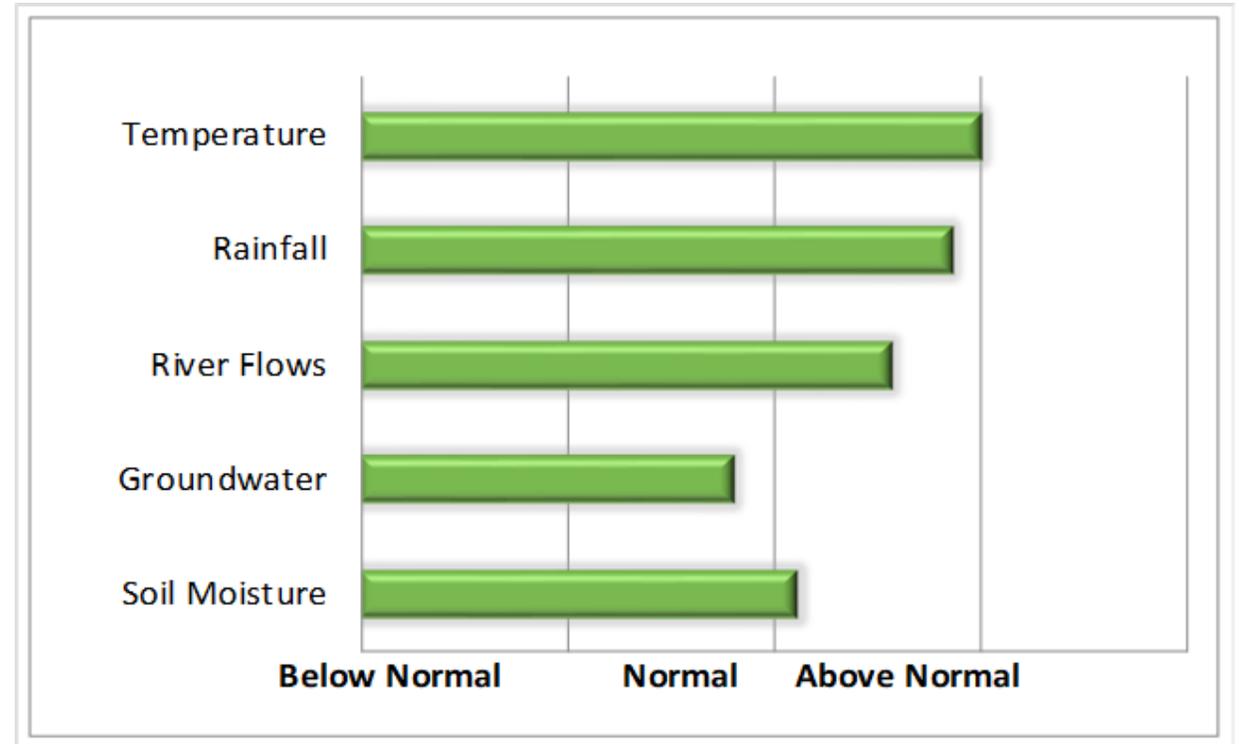
Temperature	Above average
Rain	Near normal
River flows	Near normal
Soil moisture	Near normal

*source : NIWA*

For more information

[www.hbrc.govt.nz](http://www.hbrc.govt.nz)

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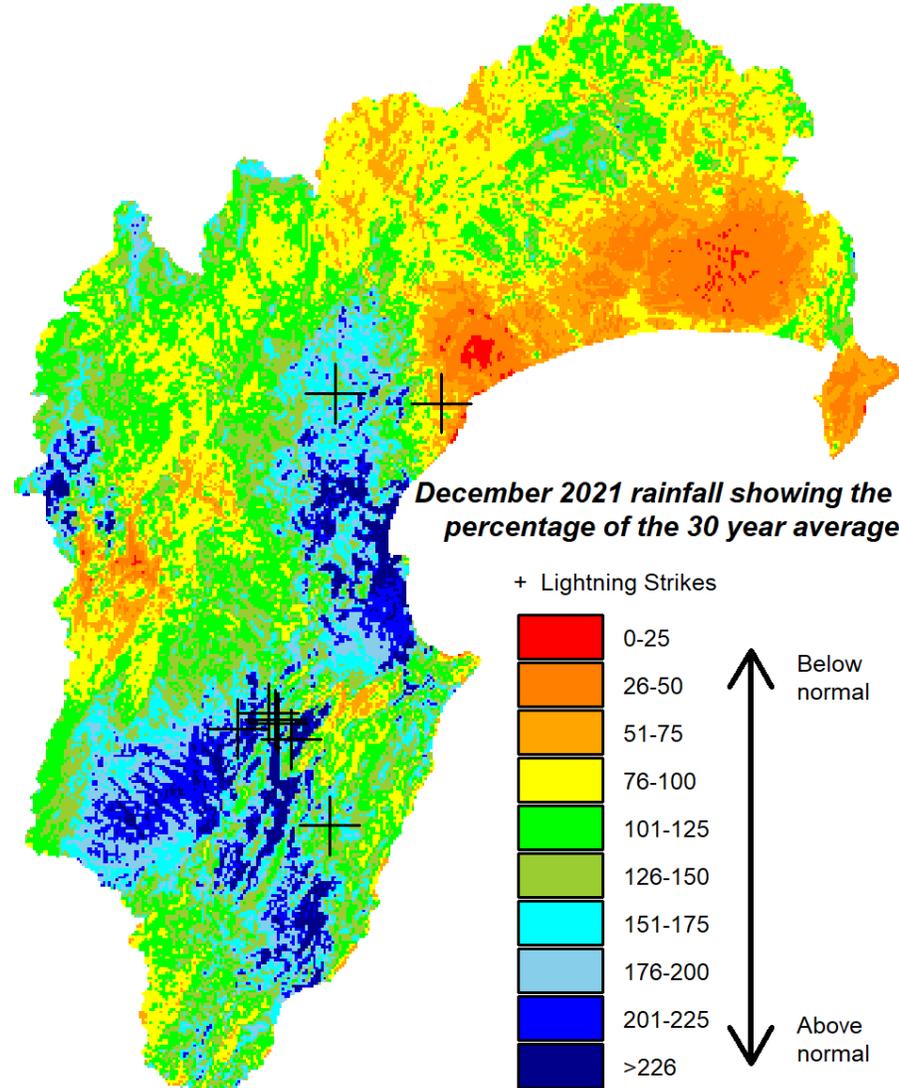
## RAINFALL

Well above normal for most, though near normal in the north. Eight cloud to ground lightning strikes. *Lightning counts come from the Blitzortung.org lightning network to which HBRC contributes.*

Percentage of normal December rainfall  
(30 year average)

### For areas in the region:

Waikaremoana	96%
Northern HB	82%
Tangoio	171%
Kaweka	129%
Ruahine	132%
Heretaunga Plains	162%
Ruataniwha Plains	198%
Southern HB	173%
<b>Hawke's Bay Region</b>	<b>143%</b>



## TEMPERATURES

Handsomely above average.

Mean Difference from Normal

Maximum Temperature: 2.5°C

Minimum Temperature: 3.1°C

Mean Daily Maximum: 23 °C

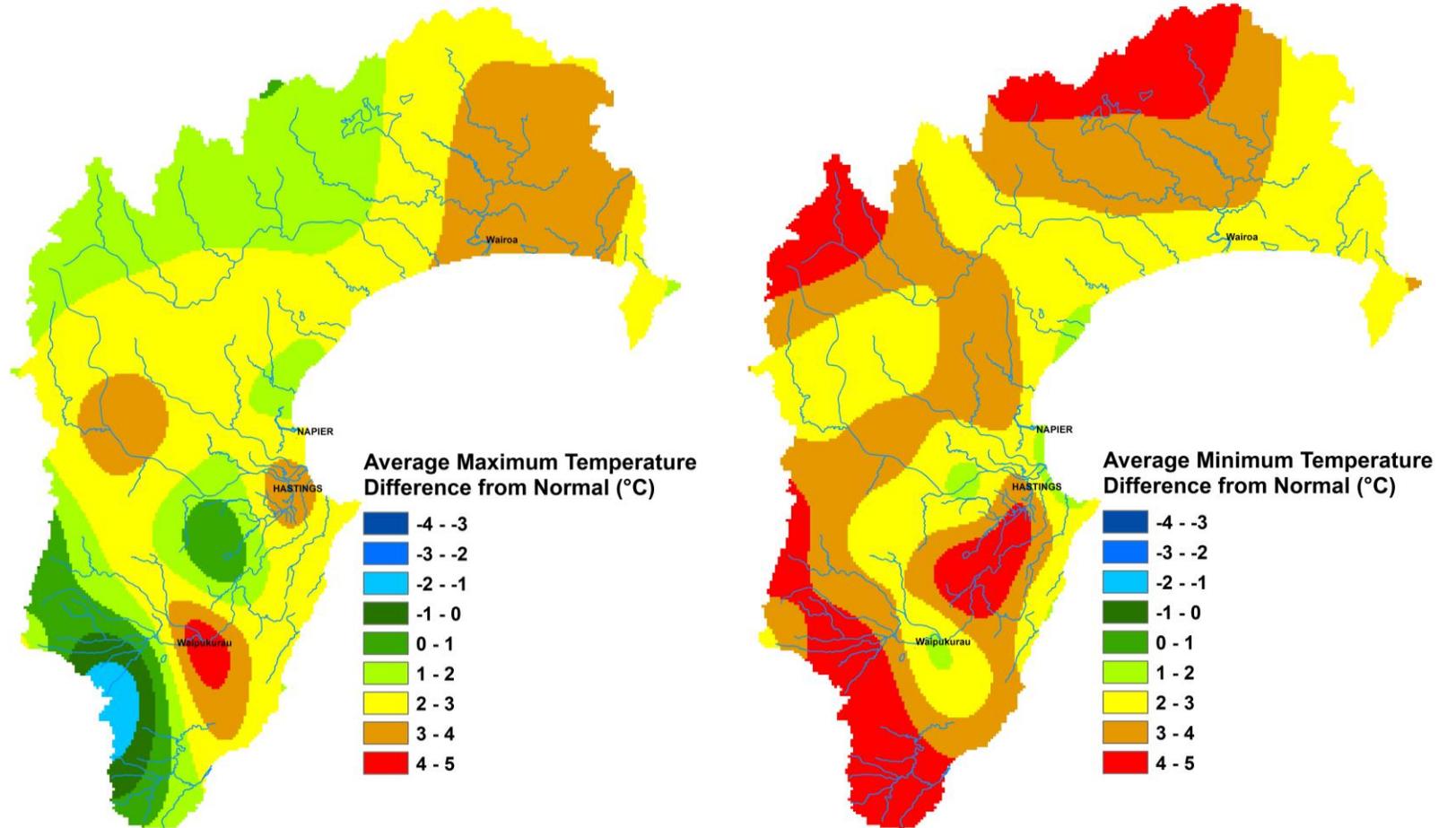
Mean Daily Minimum: 14°C

Highest Daily: 32.2 °C

Location: Hastings AWS (Metservice)

Lowest Daily: 5.8 °C

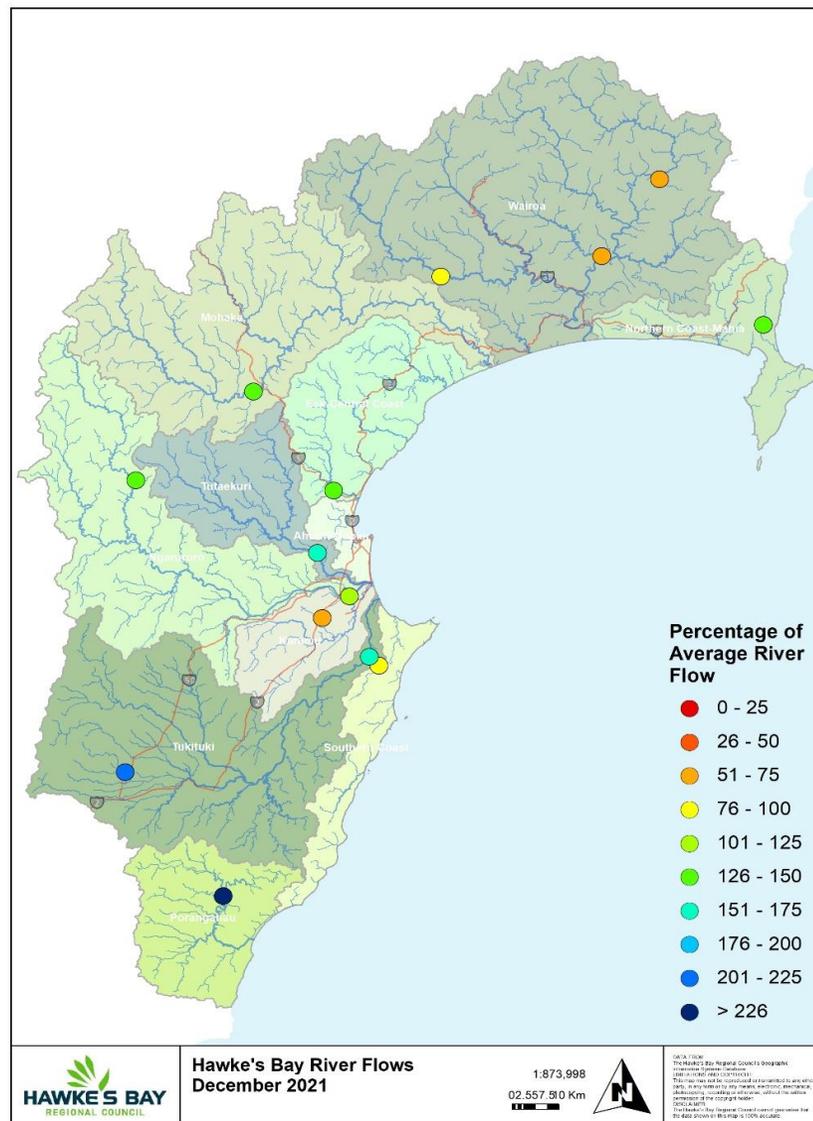
Location: Gwavas HQ Climate



## RIVER FLOW

Percentage of average December flows  
for areas in the region:

Northern Coast – Mahia	132%
Northern HB – Hangaroa River	62%
Northern HB – Wairoa River	58%
Northern HB – Waiau River	90%
Mohaka	132%
Esk-Central Coast	146%
Tūtaekuri	166%
Karamu	69%
Ngaruroro – Kuripapango	137%
Ngaruroro – Chesterhope	109%
Southern Coast	83%
Tukituki – Tukipo River	222%
Tukituki – Tukituki River	157%
Porangahau	231%
<b>Hawke's Bay Region</b>	<b>128%</b>



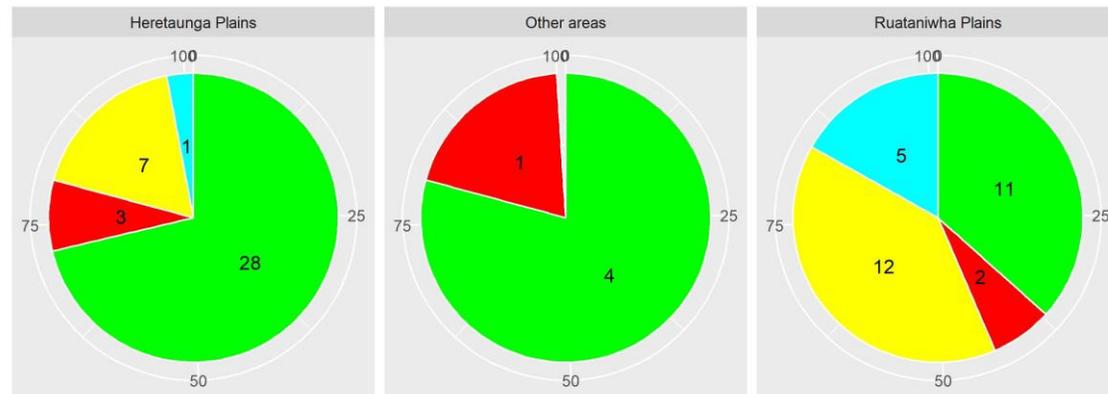
## GROUNDWATER & SOIL MOISTURE

**Soil Moisture:** Mostly above normal.

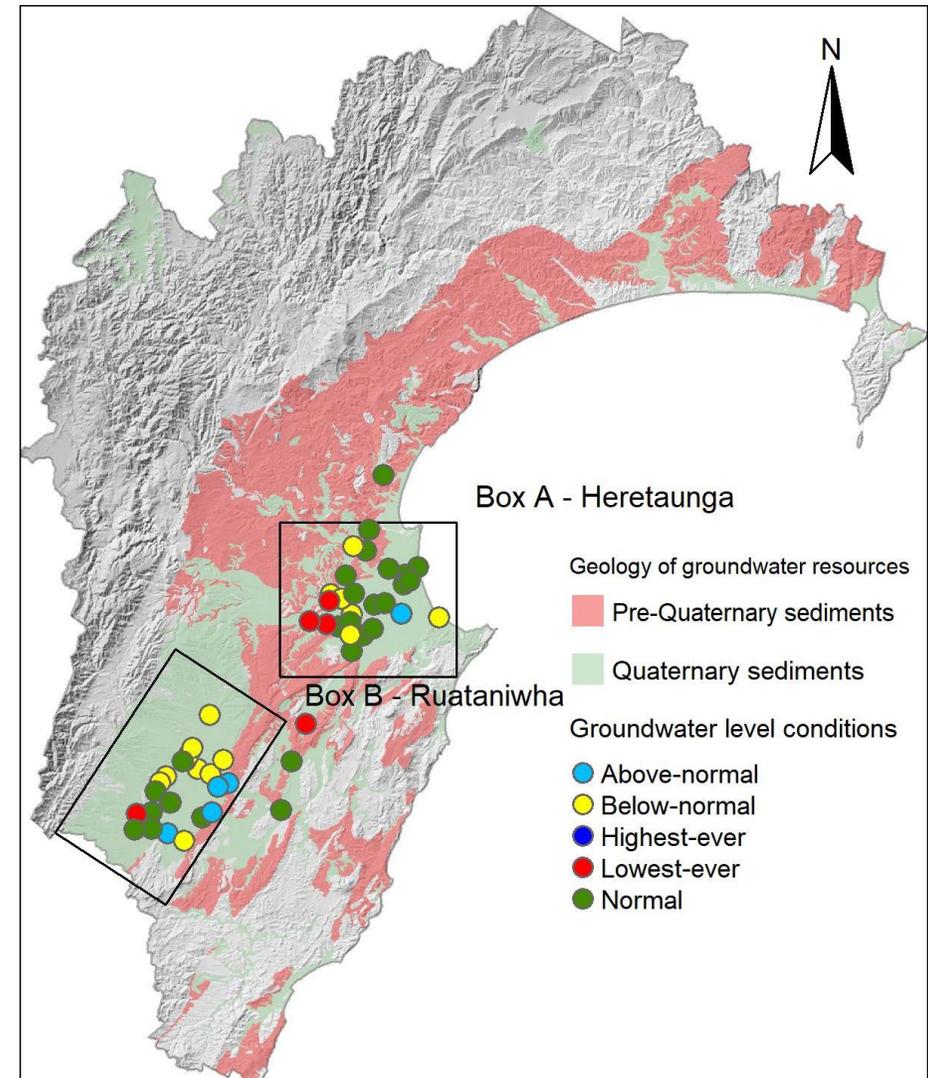
### Current state of Groundwater levels:

This report compares groundwater levels in December 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 
 ■ Lowest-ever 
 ■ Normal



## RECREATIONAL WATER QUALITY

It was a great December for ducks, but less so for swimming around Hawke's Bay.

Water quality around the region closely followed rainfall throughout the month, with most exceedances being related to significant rainfall across the region. On the odd occasion where Monday sampling was non-rainfall related, our efforts to re-sample were often hindered by further rainfall. For swimming, Hawke's Bay's best performing beaches during December were the central and southern coastal; from Westshore to Porangahau. Our Coastal Lagoons and Estuaries such as Puhokio, Waipatiki and Pourerere Lagoons have all exceeded numerous times, making them unsuitable for swimming over December due to the significant rainfall in their catchments.



## LONGER FORECAST

La Niña has been delivering on its promise and may not stop now we've hit 2022. The predicted pattern for the next three months is a predominantly easterly flow, spawned from higher than normal sea level pressures over southern New Zealand and lower pressures to the north of us.

Warmer than usual sea temperatures are likely to continue, bolstering our air temperatures and doing no harm to our prospects of rainfall either. In fact, seasonal forecast models are quite bullish about those prospects, depicting either above normal or near normal rainfall for the region. The La Niña is expected to wane in autumn but we'll gladly grab its offerings in the meantime.

**Kathleen Kozyniak**  
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