

# Monthly Environmental Report

Environmental Science Report



## December 2025

December was largely characterized by warm and dry conditions, before a shift in the final week with some much needed rain. By the end of the month, the region clocked in above average rainfall totals (130% of normal), with Southern Hawke’s Bay recording 202% and the Heretaunga Plains 145% of average December rainfall. While the late rains offered relief, regional hydrology still reflected the warm and dry conditions in the month. River flows across much of the region remained below their long term averages, with the exception of northern catchments where flows were near or above normal. By the end of the month, the soil moisture levels at most of the stations showed signs of uptick. Groundwater levels also showed some signs of improvement compared to last month, especially across the Heretaunga Plains.

Continuing the trend from last month, daytime temperatures were supercharged across the region, sitting around 2.2°C above the long-term average. Night-time temperatures were more subdued but still warmer than average, with most of the region experiencing minimums around 0.7°C above normal.

December also turned out to be a great month for swimming during the holiday break with only a small number of sites showing elevated non-compliance. Air quality also remained pristine, with no PM<sub>10</sub> exceedances recorded in any of the airsheds.

**Nithin Bala Murali**  
Climate Scientist

## Short summary

Warm and dry for most of the month with much needed rain in the last week.

### January to March Forecast

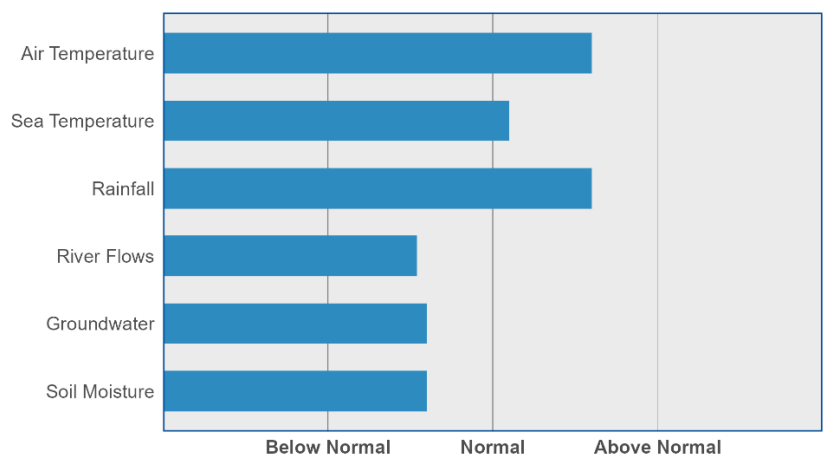
**Temperature** Near or above average  
**Rain** Above average  
**River flows** Near or below average  
**Soil moisture** Near or below average

Source: NIWA

### For more information

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

Ph: 06 835 9200



Summary – Dec 2025

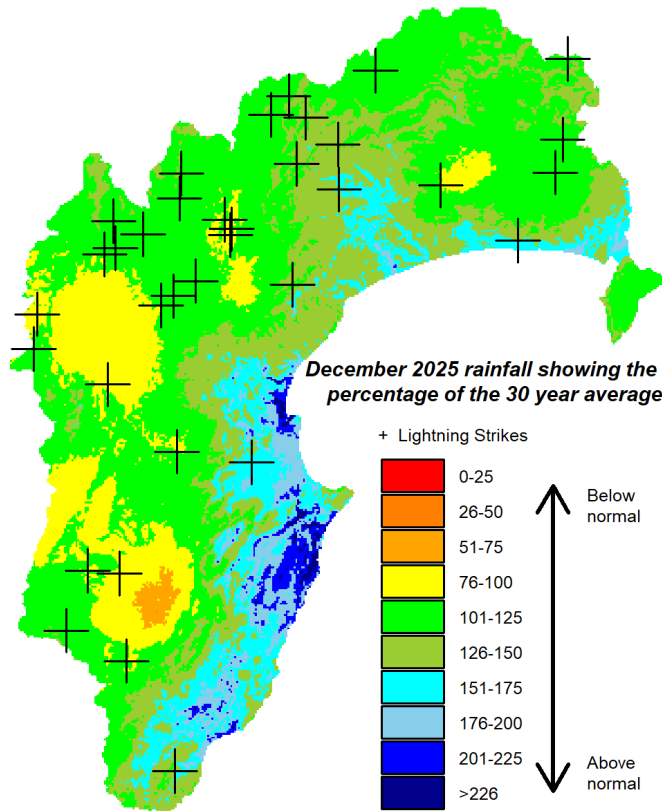
# RAINFALL

Above average for most of the region. 35 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	126%
Northern HB	139%
Tangoio	128%
Kaweka	100%
Ruahine	101%
Heretaunga Plains	145%
Ruataniwha Plains	96%
Southern HB	201%
Hawke's Bay Region	130%



For a more detailed rainfall report click [here](#).  
and for a five-year monthly summary click [here](#).

# AIR TEMPERATURES

Above average, impressively so during the day.

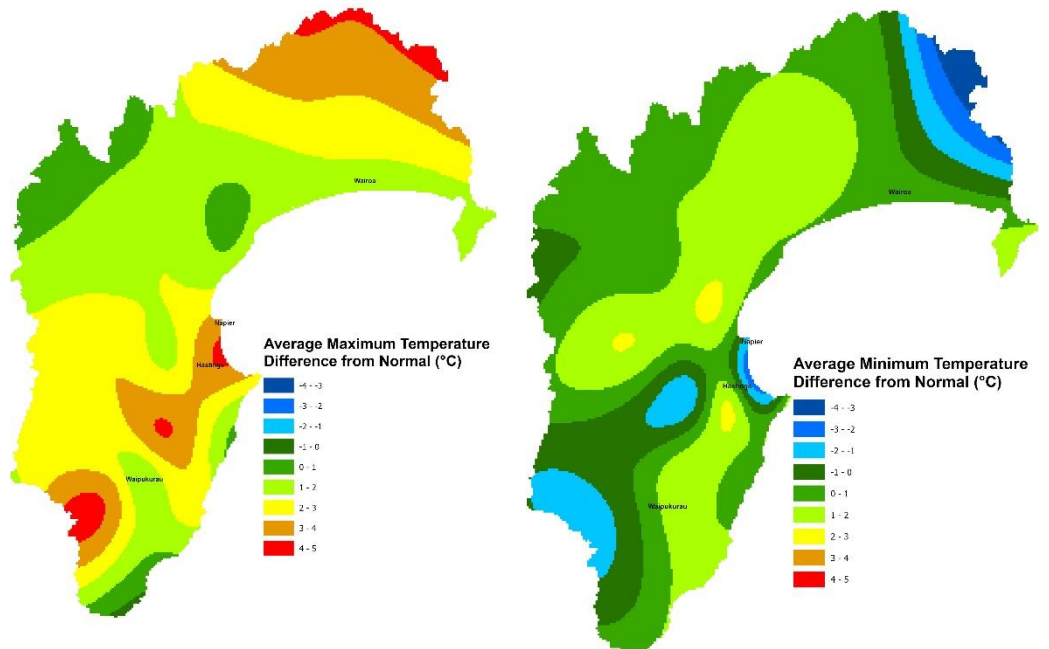
Mean Difference from Normal

Maximum Temperature: **2.2°C**  
Minimum Temperature: **0.7°C**

Mean Daily Maximum: **22.9°C**  
Mean Daily Minimum: **11.6°C**

Highest Daily: **33.8°C**  
Location: **Napier Aero AWS**

Lowest Daily: **1.5°C**  
Location: **Taharua Climate**



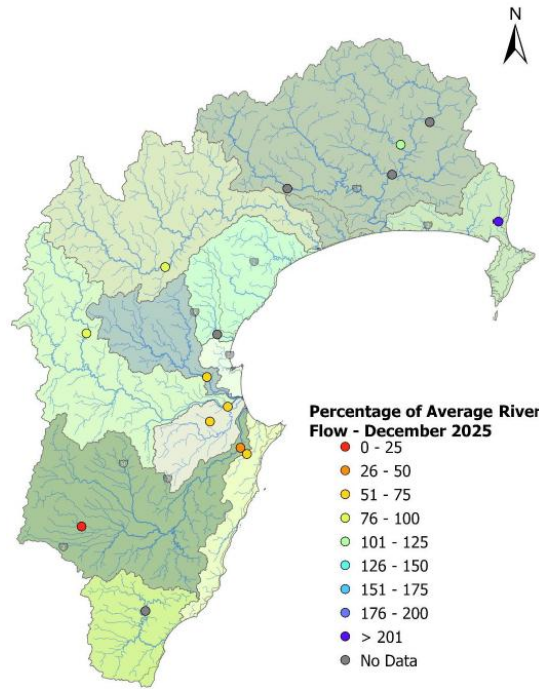
# RIVER FLOW

## Percentage of average December flows for areas in the region:

Northern Coast – Mahia	201%
Northern HB – Hangaroa River	No data
Northern HB – Wairoa River	106%
Northern HB – Waiiau River	No data
Mohaka	97%
Esk-Central Coast	No data
Tūtaekuri	56%
Karamu	51%
Ngaruroro – Chesterhope	55%
Ngaruroro - Kuripapango	84%
Southern Coast	59%
Tukituki – Tukipo River	18%
Tukituki – Red Bridge	31%
Porangahau	No data

**Hawke’s Bay Region** **77%**

For a more detailed river flow report click [here](#).



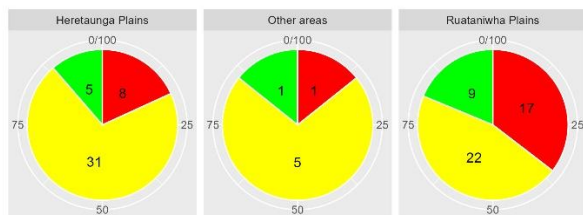
# GROUNDWATER & SOIL MOISTURE

**Soil Moisture:** Below average.

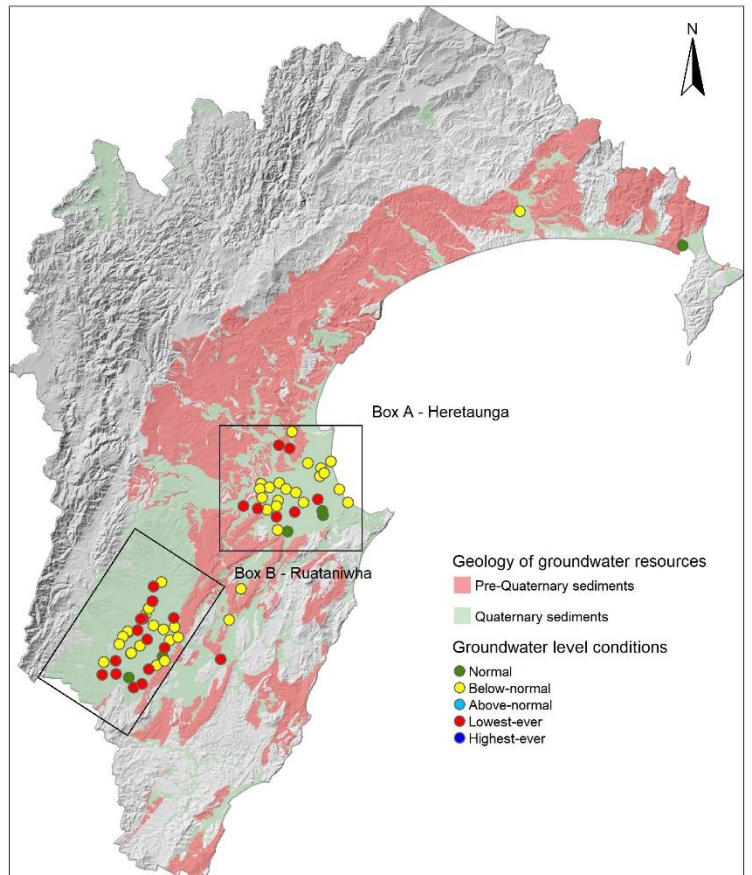
For a more detailed soil moisture report click [here](#).

## Current state of Groundwater levels:

This report compares groundwater levels measured in December with historic readings to evaluate current monthly 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.



■ Normal 
 ■ Below-normal 
 ■ Lowest-ever



**Geology of groundwater resources**

- Pre-Quaternary sediments
- Quaternary sediments

**Groundwater level conditions**

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

## RECREATIONAL WATER QUALITY

December was a warm one, and many of our beaches were high performing, perfect for the Christmas and New Years break. Some elevated non-compliance at a handful of our river and estuary sites but otherwise a great month for swimming.



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## SEA SURFACE TEMPERATURES

This was 0.32°C higher than the long-term average for this month\*.

This data was collected from the HBRC coastal water quality monitoring buoy HAWQ<sub>i</sub> which has been located 4km off the coast of Whirinaki since December 2012. HAWQ<sub>i</sub> collects data on water temperature, salinity and clarity at a range of depths as well as weather information. Check out real time data from HAWQ<sub>i</sub> [here](#).

*\*Note that long term data has experienced some patchiness due to the challenges of electronic devices interacting with salt water and servicing requirements so the long term average in this instance only includes 7 prior December's*

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## LONGER FORECAST

A weak La Niña event is here but is likely to be short-lived and not last beyond summer. Sea surface temperatures are cool west of the country but still above average around eastern areas, including our region. The warmer seas extend north to the Pacific Islands, where tropical storm activity could be focused as the Madden Julian Oscillation becomes active there during the second half of January.

The pressure pattern over the season is expected to be lower than average over northern New Zealand and north Tasman Sea, and near normal over the rest of the country. That should bring more easterlies than normal to Hawke's Bay and raise our chances of getting rain. The tropical activity I mentioned could influence our weather and help boost the region's rainfall above average by bringing occasional dumps of rain between settled spells of weather. The accompanying temperatures are likely to remain enticing for a swim, lying near or above summer averages.

**Dr Kathleen Kozyniak**

**Team Leader Air and Land Science**