

State of the Environment

Environmental Science Report

HAWKES BAY
REGIONAL COUNCIL
TE KAUNIHERA Ā-ROHE O TE MATAU-A-MĀUI

SEPTEMBER 2024

September was dry, with the region recording only 56% of the month's average rainfall. Majority of the region sat close to the halfway mark, except for the Ruahine Range, which capped a good 96% of its month's average.

Our rivers felt the impact with flows dipping below normal across the region. Soil moisture was near normal levels for September, while groundwater levels were normal.

September was typical Spring- longer, warm sunny days and then a cold snap thrown right in the middle to keep us on our toes. Daytime highs were 1.3°C warmer than usual, while nighttime temperatures were as average as it gets. Hope you're all getting a chance to appreciate the extra evening sunlight now that daylight saving has started- my evening walks have certainly become more enjoyable!

Dr. Nariefa Abraham-Bennet

Senior Climate Scientist

Short summary

Below average rain and warm.

October to December Forecast

Temperature Above average

Rain Near normal

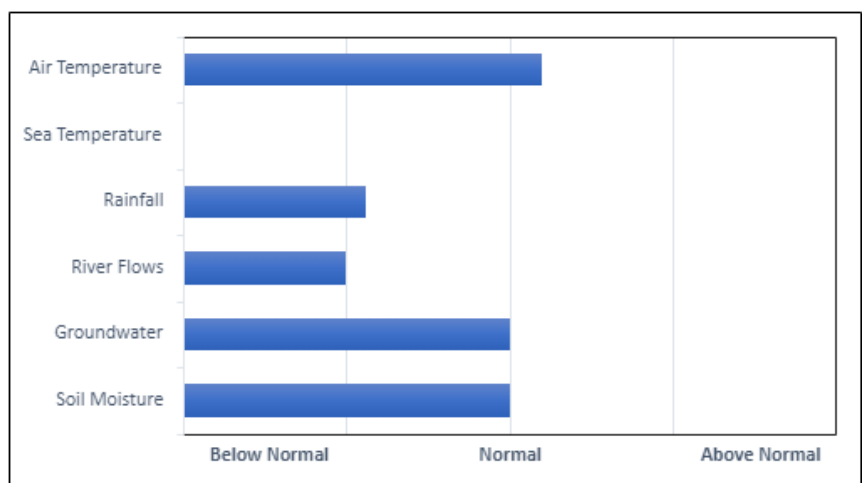
River flows Near or below normal

Soil moisture Near or below normal

source : NIWA

Sea Surface Temperature

The average sea surface temperature (SST) for Hawke's Bay in September 2024 is unavailable due to the HBRC coastal water quality monitoring buoy HAWQi being removed for servicing.



For more information

www.hbrc.govt.nz | Ph: 06 835 9200

RAINFALL

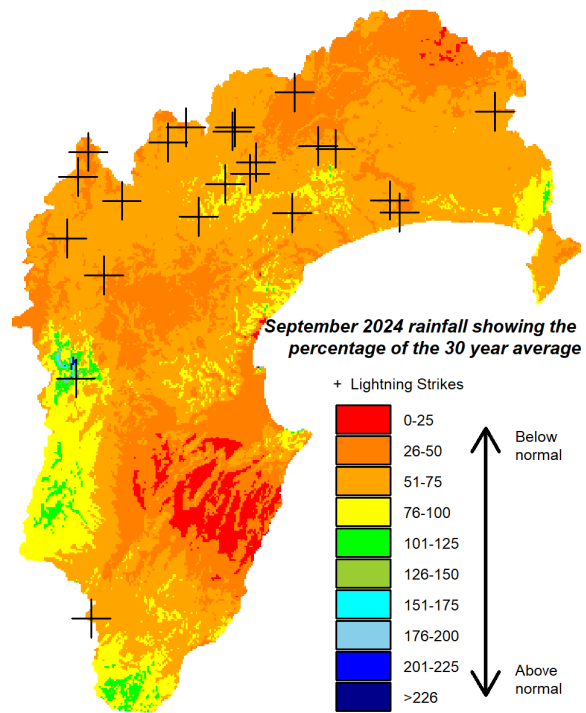
Below normal. Twenty-two cloud to ground lightning strikes

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

Percentage of normal September rainfall (30 year average) for areas in the region:

Waikaremoana	47%
Northern HB	57%
Tangoio	47%
Kaweka	60%
Ruahine	96%
Heretaunga Plains	40%
Ruataniwha Plains	46%
<u>Southern HB</u>	<u>56%</u>
Hawke's Bay Region	56%

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



AIR TEMPERATURES

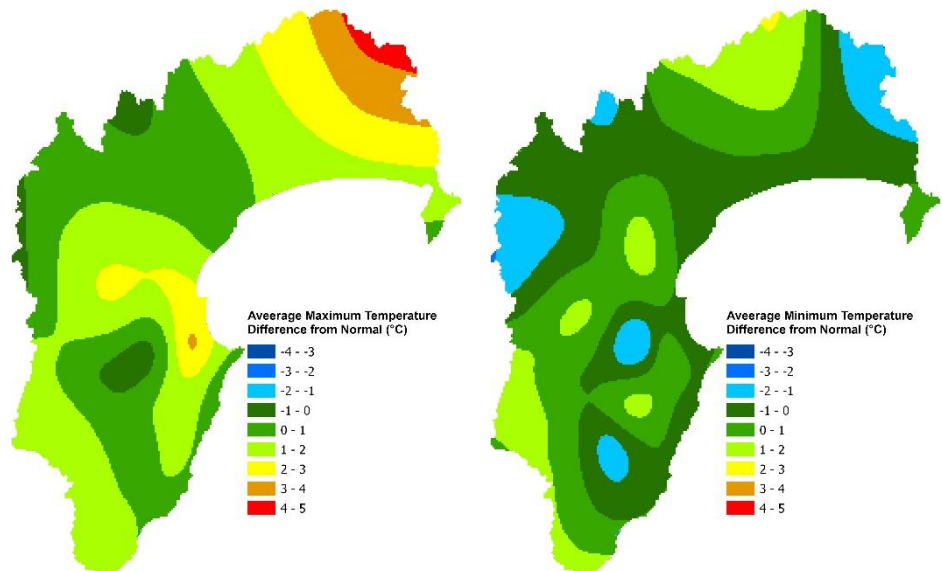
Temperatures – Warm days and average nights.

Mean Difference from Normal

Maximum Temperature: 1.3°C
Minimum Temperature: 0.0°C
Mean Daily Maximum: 16.1°C
Mean Daily Minimum: 5.8°C

Highest Daily: 24.7 °C
Location: Whakatu EWS
(NIWA)

Lowest Daily: -3.8 °C
Location: Taharua Climate



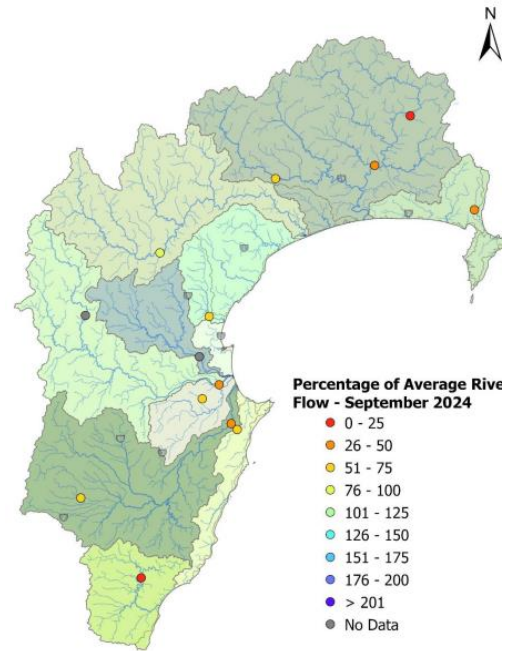
RIVER FLOW

Percentage of average September flows for areas in the region:

Northern Coast – Mahia	35%
Northern HB – Hangaroa River	25%
Northern HB – Wairoa River	33%
Northern HB – Waiau River	65%
Mohaka	96%
Esk-Central Coast	59%
Tūtaekuri	n/a
Karamu	69%
Ngaruroro – Chesterhope	47%
Southern Coast	65%
Tukituki – Tukipo River	61%
Tukituki – Red Bridge	28%
Porangahau	14%
Hawke's Bay Region	50%

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

September 2024



GROUNDWATER & SOIL MOISTURE

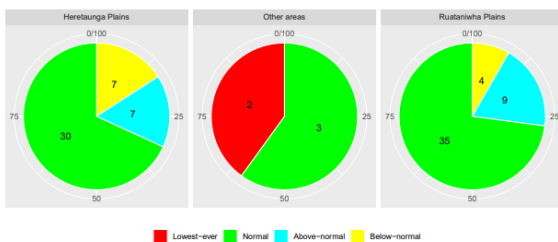
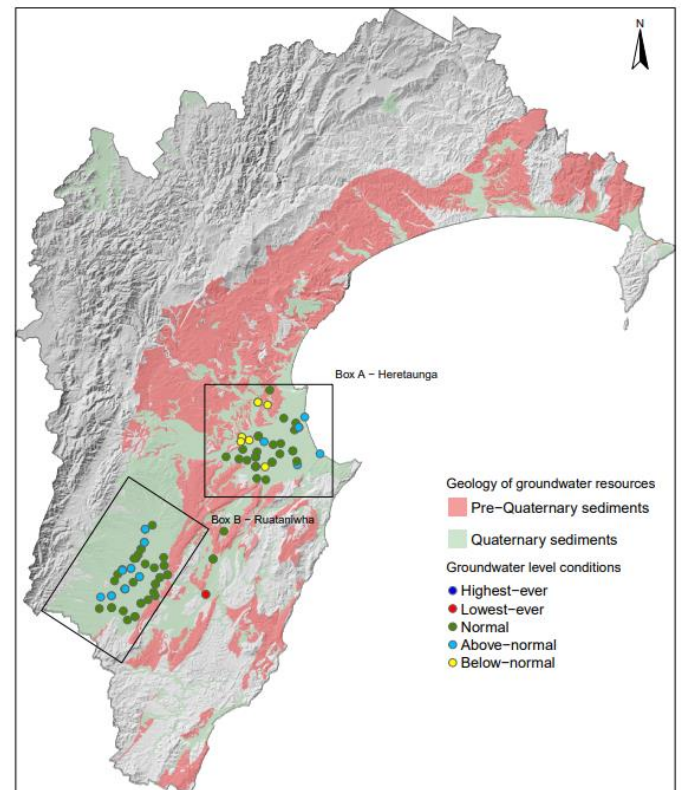
Soil Moisture: Near normal.

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

Current state of Groundwater levels:

This report compares groundwater levels measured in September 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.



AIR QUALITY

Air Quality: No exceedances.

Figure 1: PM₁₀ levels in the Napier, Hastings and Awatoto airsheds during September 2024.

PM₁₀ exceedances:

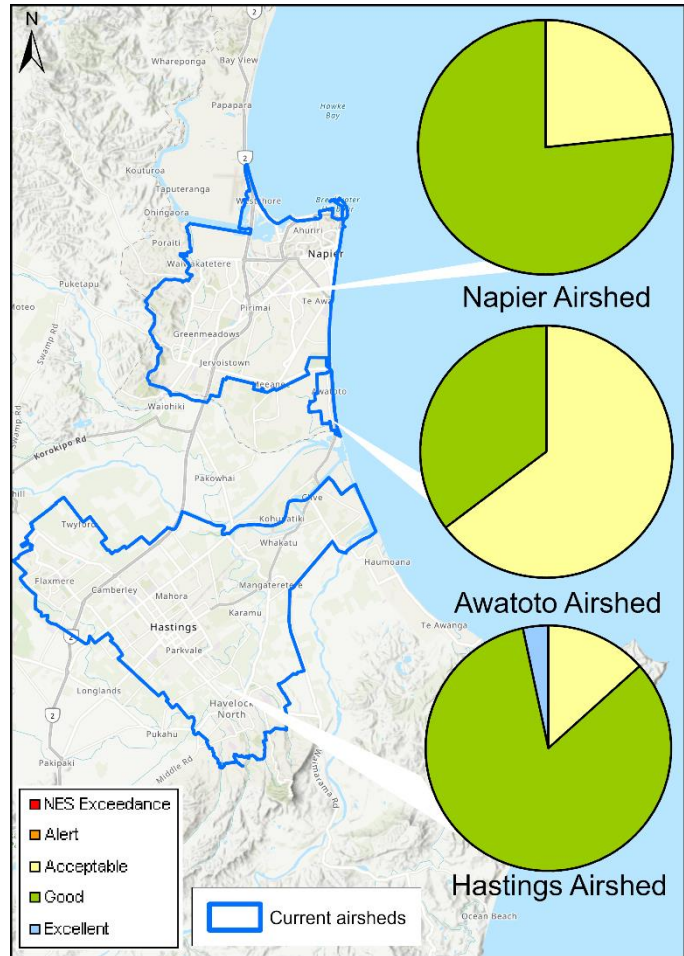
The National Environmental Standard (NES) for particulate matter (PM₁₀) of 50 micrograms per cubic metre (24-hour average) was not exceeded in the Awatoto, Napier or Hastings airsheds during September 2024.

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

For a more detailed air quality report click [here](#).



LONGER FORECAST

It's not certain that a La Niña event will soon evolve to the point of being called such, however we may see a change in weather pattern that is more akin to La Niña conditions. Or at least respite from the barrage of westerlies New Zealand has been experiencing. The sudden stratospheric warming observed over Antarctica played a part in firing up the westerly flow but its influence will fade.

During the next three months east to northeast winds are expected to become more prevalent due to sea level pressure being higher than normal over southern parts of the country and eastern areas too. The onshore winds combined with the above average sea temperatures surrounding the country have potential to bring more moisture to Hawke's Bay than we've had of late.

How things pan out will depend on how dominant the areas of high pressure become and where they are positioned but it's possible that rain will come as dumps between reasonable spells of settled weather. From now until early summer the forecast amounts to near normal rainfall and above average temperatures.

Dr Kathleen Kozyniak

Team Leader Air and Land Science