NOVEMBER 2024

It's been a dry Spring. I feel like I've been saying this a lot lately, but November was dry. We did get a few pockets of rain here and there, and they were a much-needed relief. Across the region, only 52% of November's rainfall was recorded. The Heretaunga Plains have really taken a hit from the dry weather, with rainfall remaining below normal for the past five months.

River flows, groundwater levels and soil moisture were all below normal for November. Soil moisture in some areas eagerly grabbed some of the rainfall, with small peaks seen throughout the month.

Recreational water quality reporting has commenced, and our HAWQi buoy is back! Average sea surface temperatures recorded were 0.19°C above its November average. Air temperatures were 0.9°C above normal, both during the day and night. Those warm days in the final week surely felt like a sneak peek of summer. Here's to December and the start of Summer!

Dr. Nariefa Abrahim-Bennet

Senior Climate Scientist

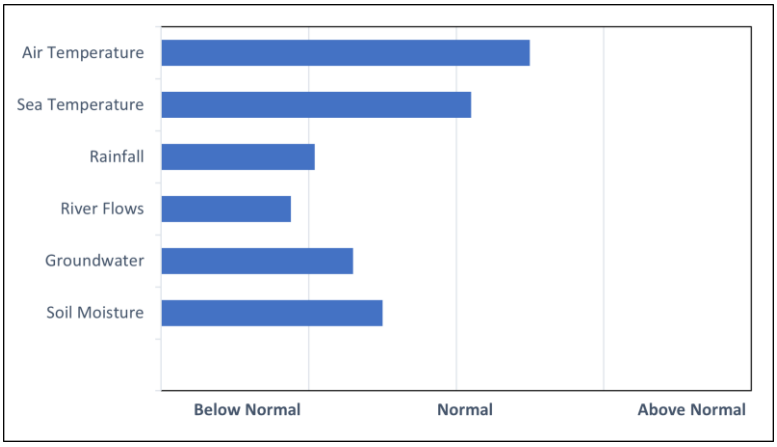
Short summary

Below average rain, again, and warm.

December to February Forecast

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

source : NIWA



For more information

www.hbrc.govt.nz

Ph: 06 835 9200

RAINFALL

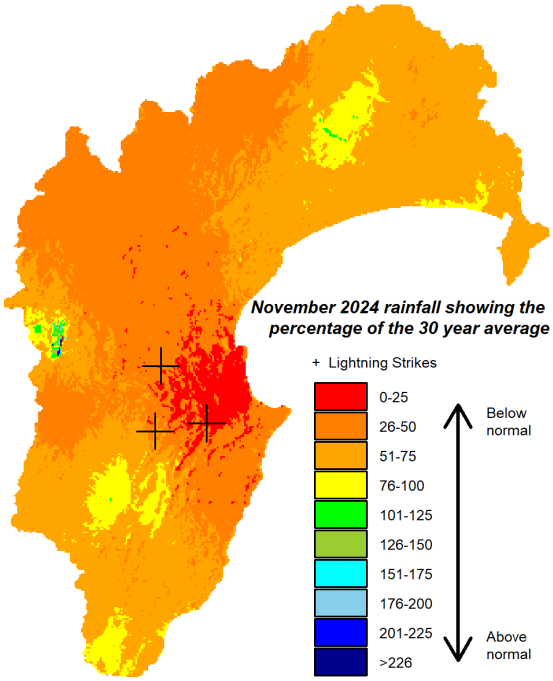
Below normal. Three cloud to ground lightning strikes.

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

Percentage of normal November rainfall *(30 year average) f*or areas in the region:

Waikaremoana	63%
Northern HB	63%
Tangoio	43%
Kaweka	45%
Ruahine	54%
Heretaunga Plains	23%
Ruataniwha Plains	70%
Southern HB	53%
Hawke's Bay Region	52%

For a more detailed rainfall report click here and for a five-year monthly summary click here.



AIR TEMPERATURES

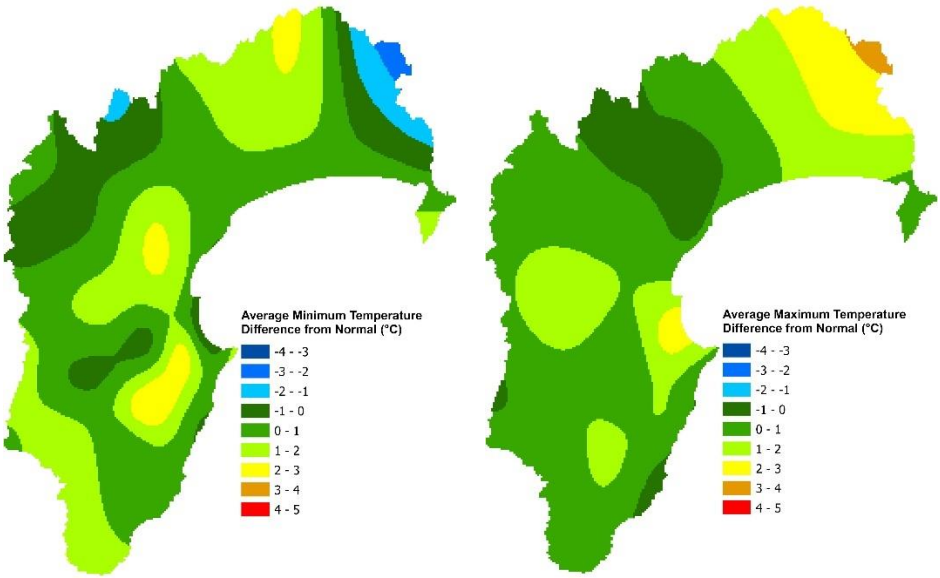
Warm days and nights.

Mean Difference from Normal
Maximum Temperature: **0.9°C**
Minimum Temperature: **0.9°C**

Mean Daily Maximum: **19.6°C**
Mean Daily Minimum: **9.7°C**

Highest Daily: **31.7 °C**
Location: Hastings AWS (MetService)

Lowest Daily: **3.0 °C**
Location: Gwavas HQ Climate

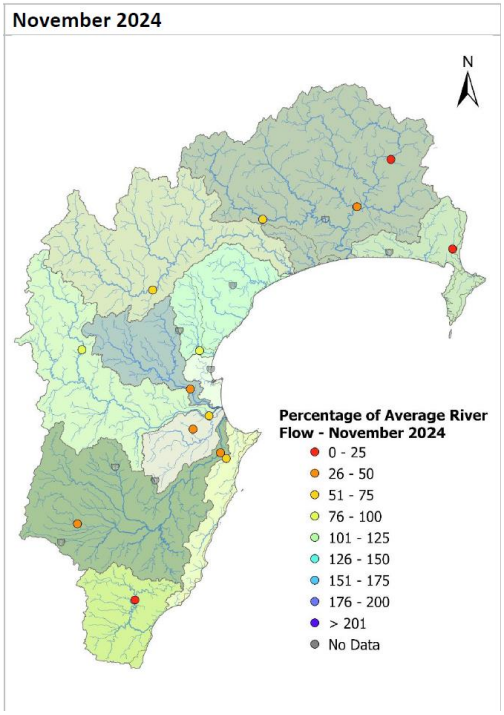


RIVER FLOW

Percentage of average November flows for areas in the region:

Northern Coast – Mahia	24%
Northern HB – Hangaroa River	22%
Northern HB – Wairoa River	32%
Northern HB – Waiau River	58%
Mohaka	67%
Esk-Central Coast	76%
Tūtaekuri	41%
Karamu	26%
Ngaruroro – Chesterhope	60%
Southern Coast	64%
Tukituki – Tukipo River	26%
Tukituki – Red Bridge	41%
Porangahau	3%
Hawke's Bay Region	**44%**

For a more detailed river flow report click here.

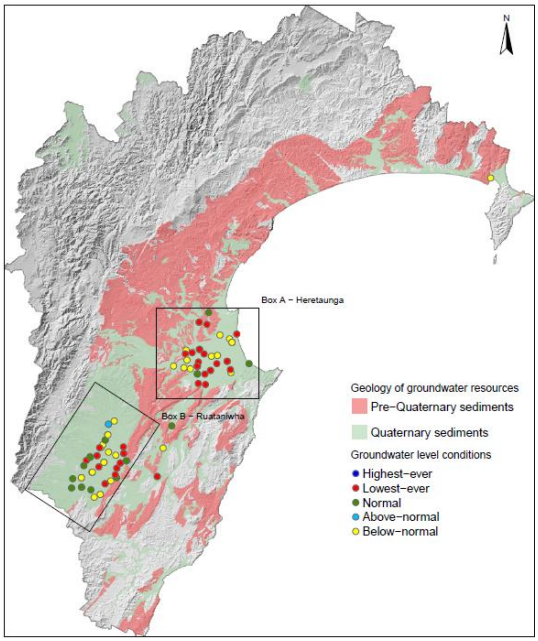


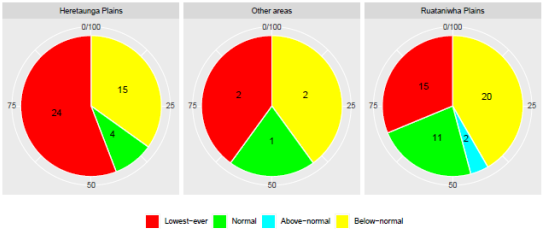
GROUNDWATER & SOIL MOISTURE

Soil Moisture: Below normal.
For a more detailed soil moisture report click here.

Current state of Groundwater levels:
This report compares groundwater levels in November 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.

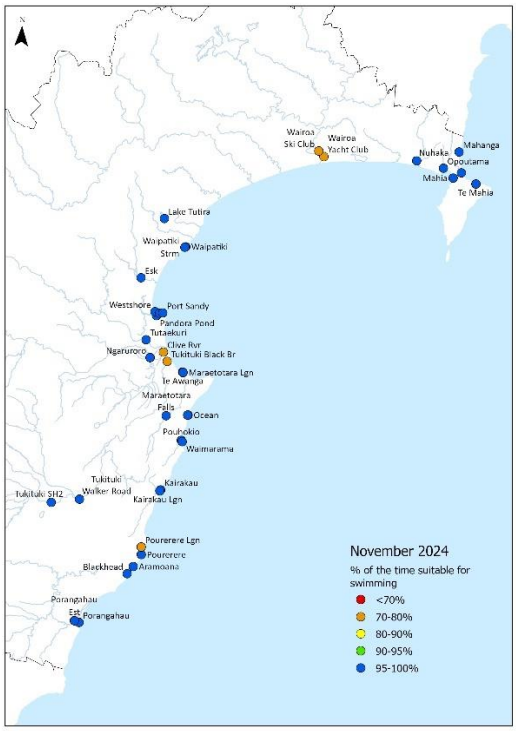




RECREATIONAL WATER QUALITY

November saw the start of the 2024/25 recreational water quality season, and what a wonderful start.

With the exception of a handful of sites seeing a touch of rain, the vast majority of our swimming spots maintained 100% compliance to start out our bathing season.



SEA SURFACE TEMPERATURES

The average sea surface temperature (SST) for Hawke's Bay: **16.6°C**. (+0.19°C than the long term average for this month) *

This data was collected from the HBRC coastal water quality monitoring buoy HAWQi which has been located 4km off the coast of Whirinaki since December 2012.

HAWQi collects data on water temperature, salinity and clarity at a range of depths as well as weather information. Check out real time data from HAWQi 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 8 prior November's.

LONGER FORECAST

Pieces are building, which together, hold promise of rain. A circulation pattern resembling La Niña, if not a full blown La Niña, is expected to become more prominent. For Hawke's Bay, that means onshore northeasterly winds and the opportunity to deliver moisture directly over the ocean rather than stalling in mountain ranges in westerly winds. The current warmer than usual sea temperatures help increase the moisture air carries to the region.

The sea temperatures are nudged along by a negative Indian Ocean Dipole, which is in progress. It's a phenomenon like La Niña but applies over the Indian rather than Pacific Ocean. It's linked to warmer sea temperatures around NZ and the potential for enhanced rainfall. The Madden Julian Oscillation appears active as it moves eastward across the tropics, with enhanced storminess. It's perhaps evident in tropical cyclone activity that may develop over northwestern Australia next week. Boosted tropical activity can deliver us weather systems that provide significant rain, but as usual there are no guarantees. A normal to elevated risk is thought to exist of a tropical cyclone tracking northern New Zealand's way during the tropical cyclone season (November to April).

Summer's predicted pressure pattern, bringing northeast winds, is higher than normal pressure over southern and eastern areas of New Zealand while lower than average pressure lies to the northwest. Initially anyway. High pressure systems aren't great for rainfall but forecasts indicate the high pressure influence weakens and shifts south as summer progresses and the lower than normal pressure extends further towards northern New Zealand. The mix of factors suggest the region's dry weather may continue into December, but gradually we could start to see more rain leading to normal or above normal rainfall for the season. Maybe it'll be New Year, new weather! One thing unlikely to change is temperature. It should stay above average throughout the season.

Dr Kathleen Kozyniak

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