

December 2018

# Hawke's Bay Trends

RAINFALL  
TEMPERATURES  
RIVER FLOW  
GROUNDWATER & SOIL  
RECREATIONAL WATER QUALITY  
LONGER FORECAST

THE STATE OF OUR ENVIRONMENT

## December 2018

December was riddled with thunderstorms and I got caught in a doozy. I aquaplaned rather than biked down Napier Hill and near-drowned at “peak torrential” as the air I tried to breathe had no oxygen that wasn’t already attached to hydrogen.

A succession of downpours contributed to almost double normal December totals. River flows, soil moisture and groundwater levels all swelled in response. We sweltered at night while daytime temperatures were standard issue for December.

If you headed out for a midnight dip, judicious selection of bathing spots was needed to avoid those hit by a storm’s flush.

**Kathleen Kozyniak**  
Principal Scientist Climate and Air



# SUMMARY

## December 2018

Thundery downpours and warm nights.

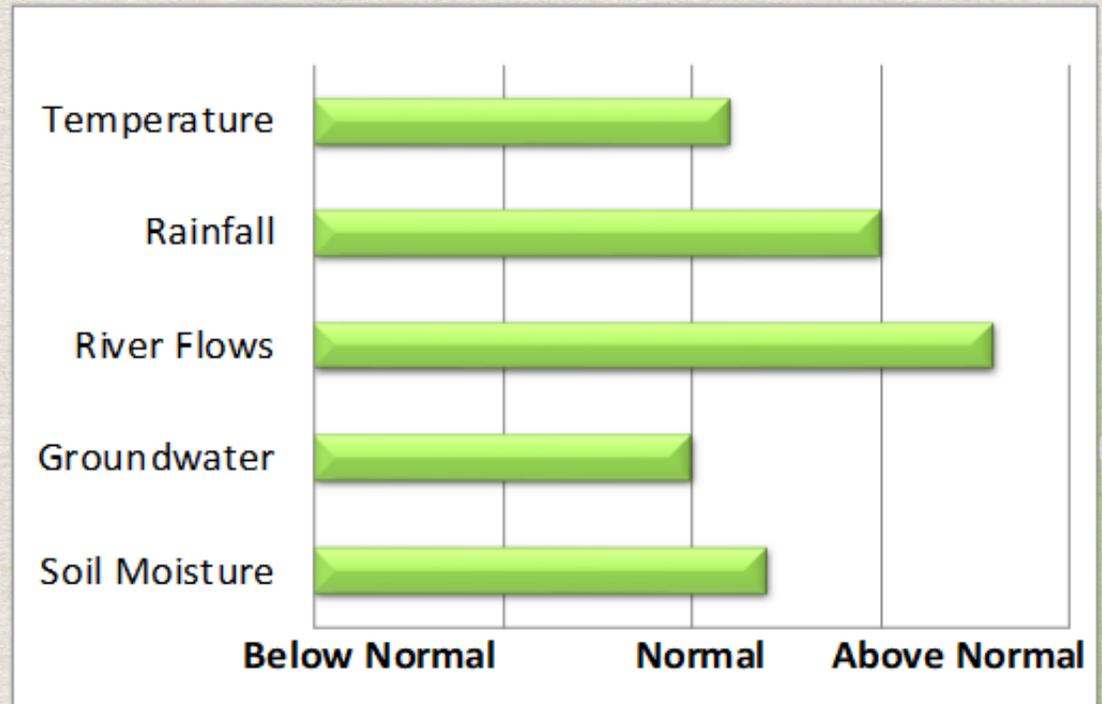
*This is a summary of the regions rainfall, river flows, ground water, air quality and soil moisture levels. Data and images provided by HBRC.*

**NIWA forecast**  
January to March

Temperature	Near or 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)  
P: 06 835 9200



# RAINFALL

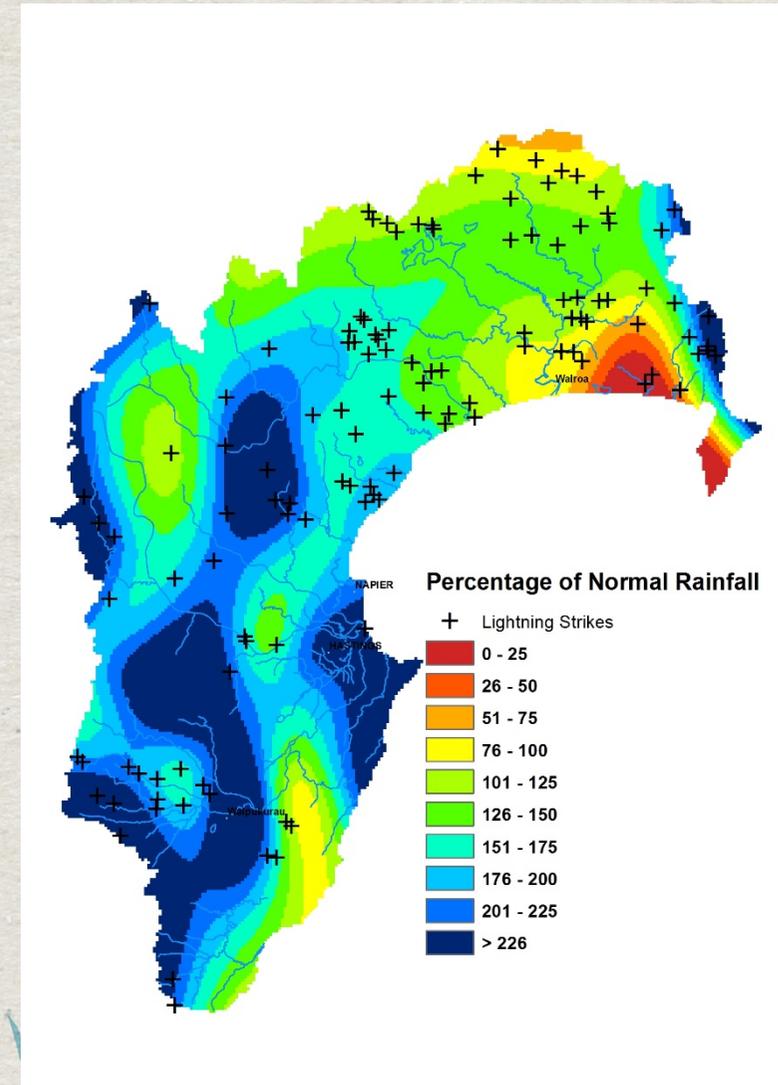
Above normal across the region thanks to thunderstorms. 119 lightning strikes (cloud to ground).

*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	133%
Northern HB	124%
Tangoio	200%
Kaweka	181%
Ruahine	203%
Heretaunga Plains	195%
Ruataniwha Plains	229%
Southern HB	211%
<b>Hawke's Bay Region</b>	<b>184%</b>



# TEMPERATURES

Hot overnight and average during the day

## Mean Difference from Normal

Maximum Temperature: 0.3°C

Minimum Temperature: 1.7°C

Mean Daily Maximum: 21°C

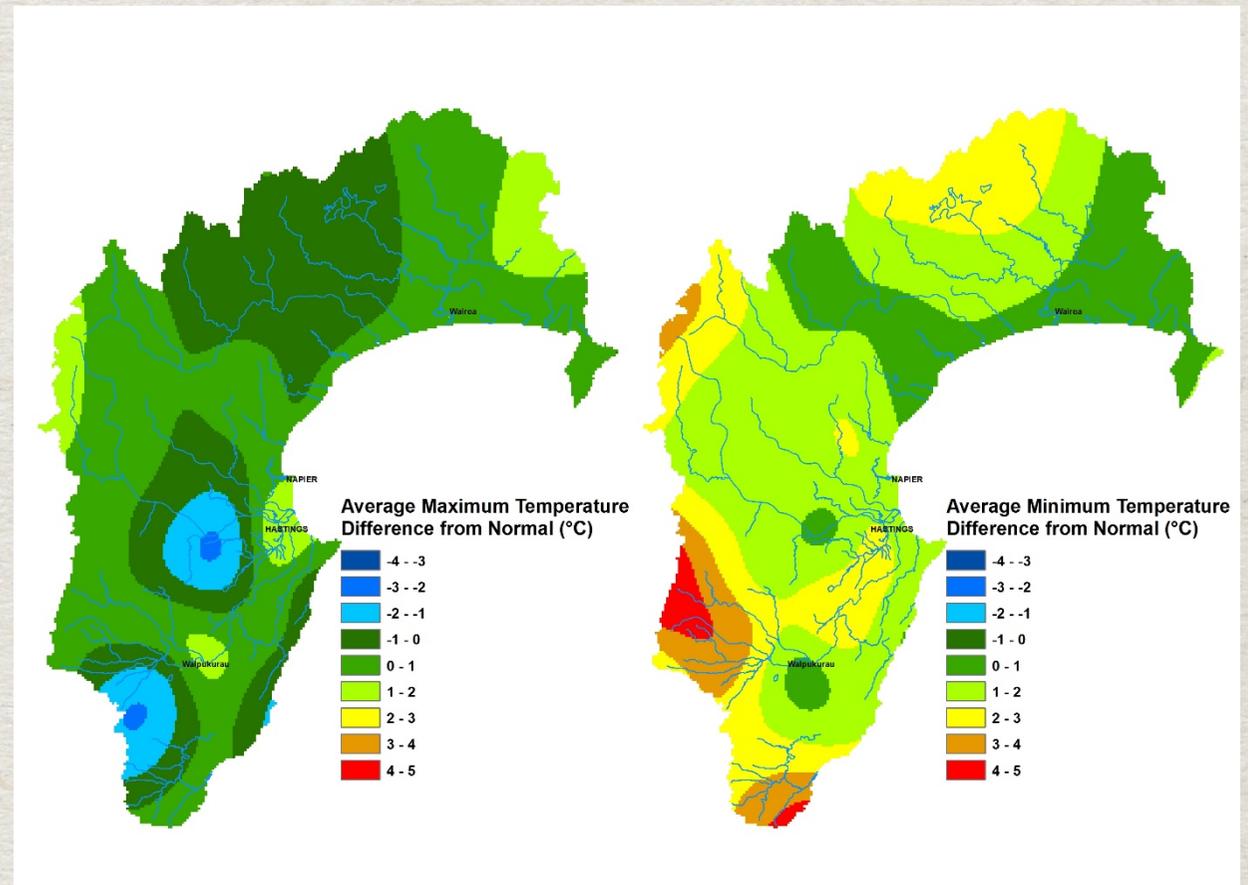
Mean Daily Minimum: 13°C

Highest Daily: 30.8°C

Location: Napier EWS

Lowest Daily: 3.3°C

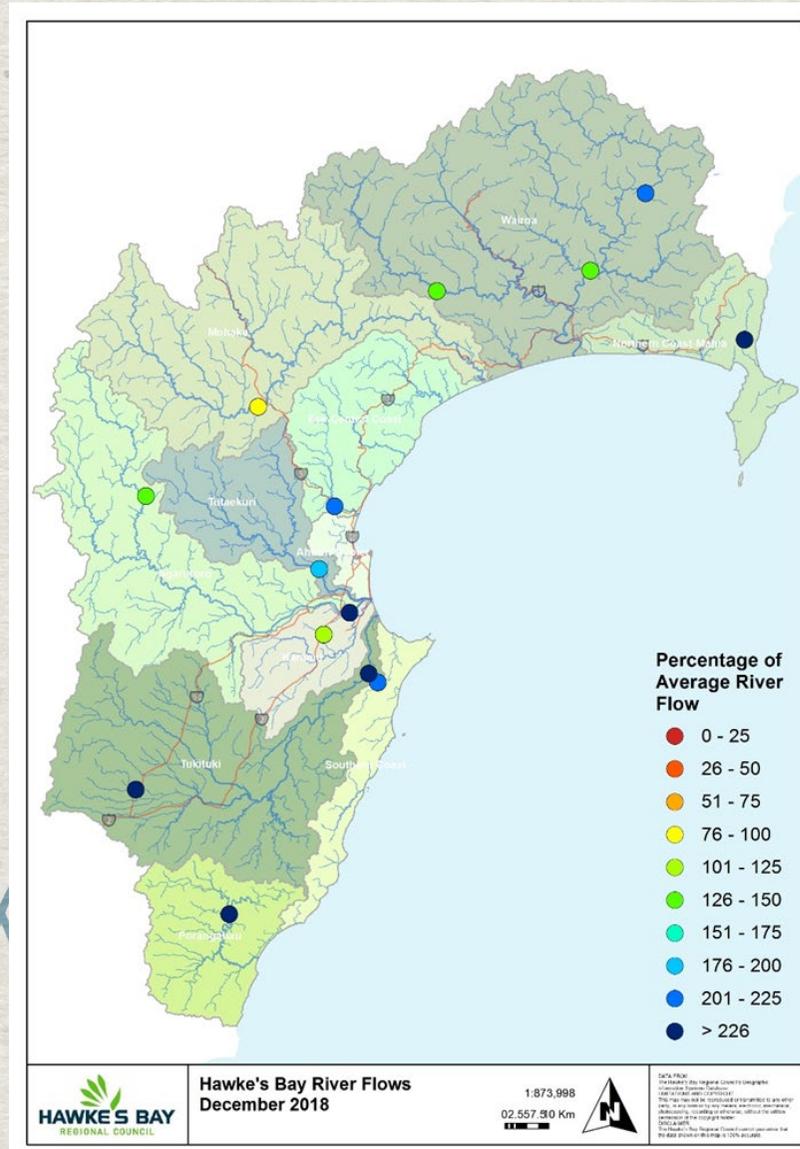
Location: Taharua



# RIVER FLOW

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

Northern Coastal	299%
Northern HB – Hangaroa River	209%
Northern HB – Wairoa River	149%
Northern HB – Waiau River	126%
Mohaka	93%
Central Coastal	201%
Tūtaekuri	187%
Karamu	116%
Ngaruroro - Upper	126%
Ngaruroro - Lower	367%
Southern Coastal	218%
Tukituki – Tukipo River	663%
Tukituki – Tukituki River	343%
Porangahau	908%
<b>Hawke's Bay Region</b>	<b>286%</b>



# GROUNDWATER & SOIL MOISTURE

## Groundwater:

### Heretaunga basin:

Mostly normal and above normal levels.

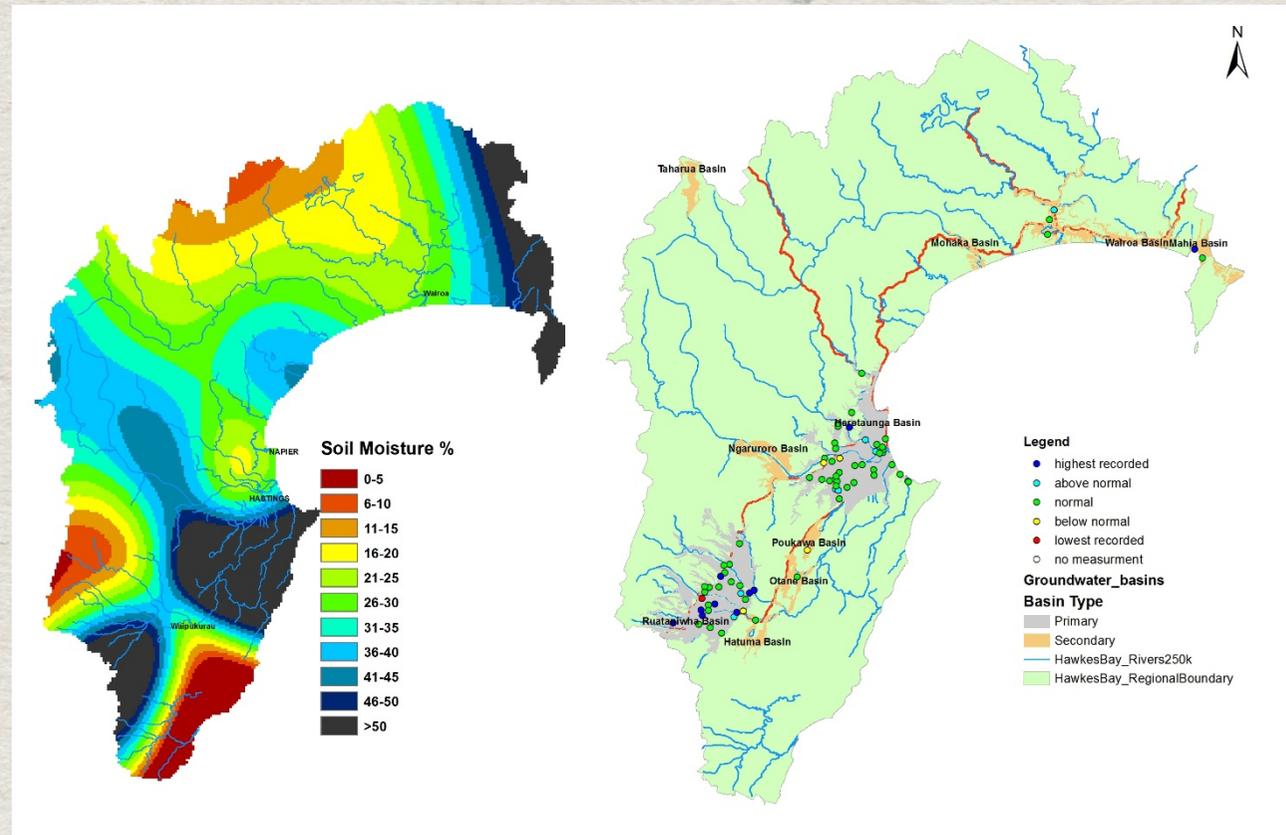
### Ruataniwha basin:

Mostly normal and above normal levels.

### Secondary basins:

Mostly normal and above normal levels.

**Soil Moisture:** Above normal



# Recreational Water Quality

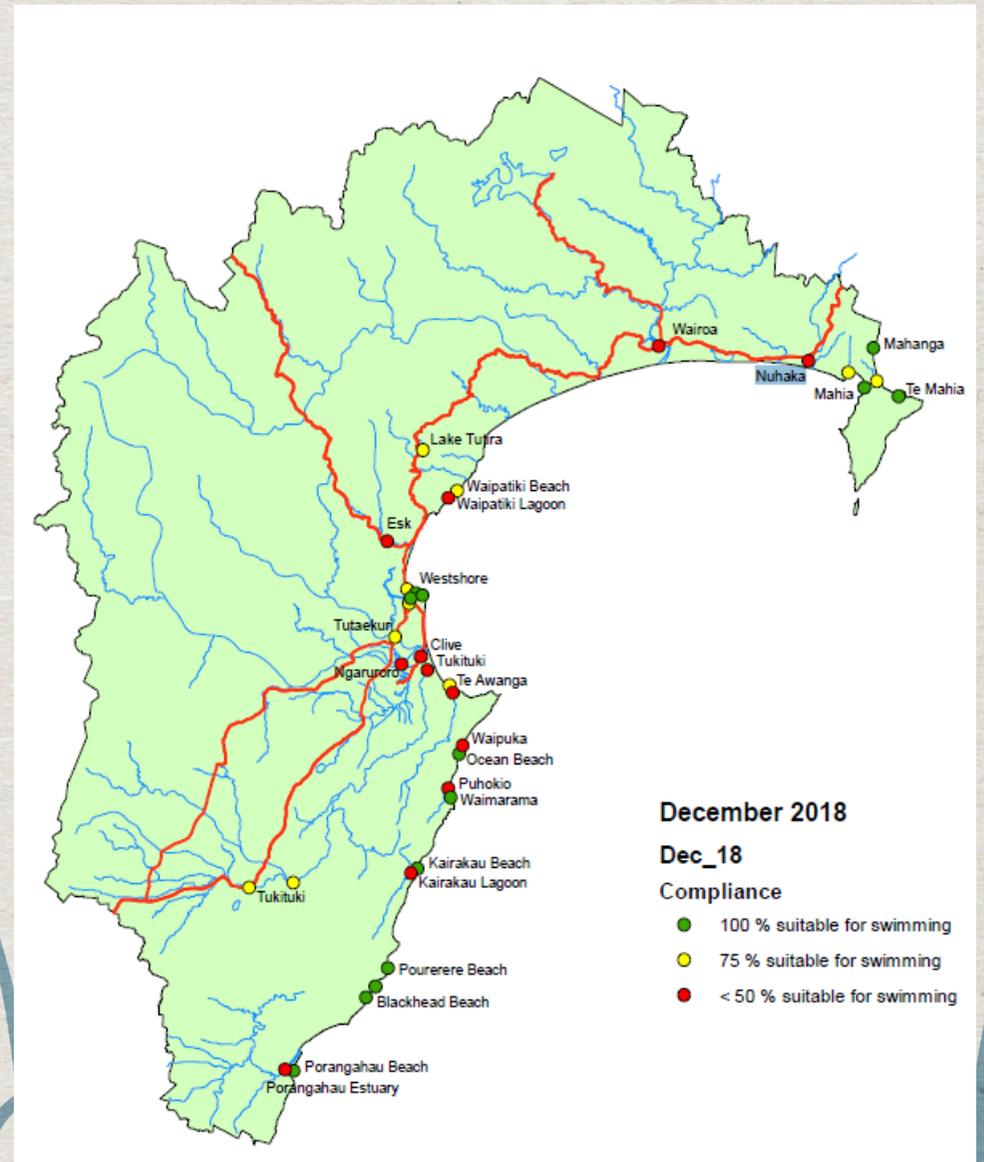
It was a great December for the grass, but less so for swimming in Hawkes Bay.

Water quality closely followed rainfall throughout December, with most exceedances being related to significant rainfall throughout the region. On the odd occasion where a Monday sample 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 in the Mahia Region and Southern Coastal; from Ocean to Porangahau Beach. Our Coastal Lagoons and Estuaries such as Puhokio, Waipatiki Lagoon and Waipuka have all exceeded numerous times, making them unsuitable for swimming due to the significant rainfall in their catchments.

Lowland rivers were also affected by the floods in the weeks surrounding Christmas, resulting in a few exceedances and an 'unsuitable for swimming' status in the Ngaruroro and Esk for December.

Ariana Mackay  
Resource Technician WQE  
Hawke's Bay Regional Council



## LONGER FORECAST

The El-Niño I keep saying is teetering on the brink hasn't yet established itself. Conditions are still considered neutral. Hence any influence usually associated with the phenomenon hasn't materialised.

The pressure pattern over the next few months is characterised by higher pressures extending from Australia towards New Zealand and weaker pressures extending from southwest of the country to the northeast.

As usual, the positioning of those features is crucial with potential wind directions of westerly, easterly and southerly all thrown into the mix. Generally the seasonal models are opting for normal rainfall and warm temperatures.