

AUGUST 2015

Hawke's Bay Trends

TEMPERATURES
RAINFALL
RIVER FLOW
GROUNDWATER & SOIL
AIR QUALITY

THE STATE OF OUR ENVIRONMENT

Weather-wise August was a bit of yawn – both temperature and rainfall were boringly average.

In this case boring isn't such a bad thing. After two months of lower than normal rainfall and temperatures see-sawing from positively balmy in June to frigid in July, it's good to be back on an even keel. A lean towards more rainfall would have been helpful though. We head into an El Niño spring just a little below our usual levels for both river flows and soil moisture, but nothing too unusual.

Groundwater levels are giving eyebrows a bit more of a workout and they may be yet to fully respond to the past month's rain. Definitely raising eyebrows is the stellar result we had over winter in terms of air quality – only one exceedance of the PM₁₀ standard for all of winter and just at our Hastings site. Blimey, that's good compared to previous years. El Niño can be a problem child in terms of its impact on our water resources but when it comes to air quality, it's looking like the teacher's pet.

Kathleen Kozyniak
Senior Scientist Climate & Air



SUMMARY

Great air quality, average weather, water levels could do better.

This is a summary of the regions rainfall, river flows, ground water, air quality and soil moisture levels.

Data and images provided by HBRC.

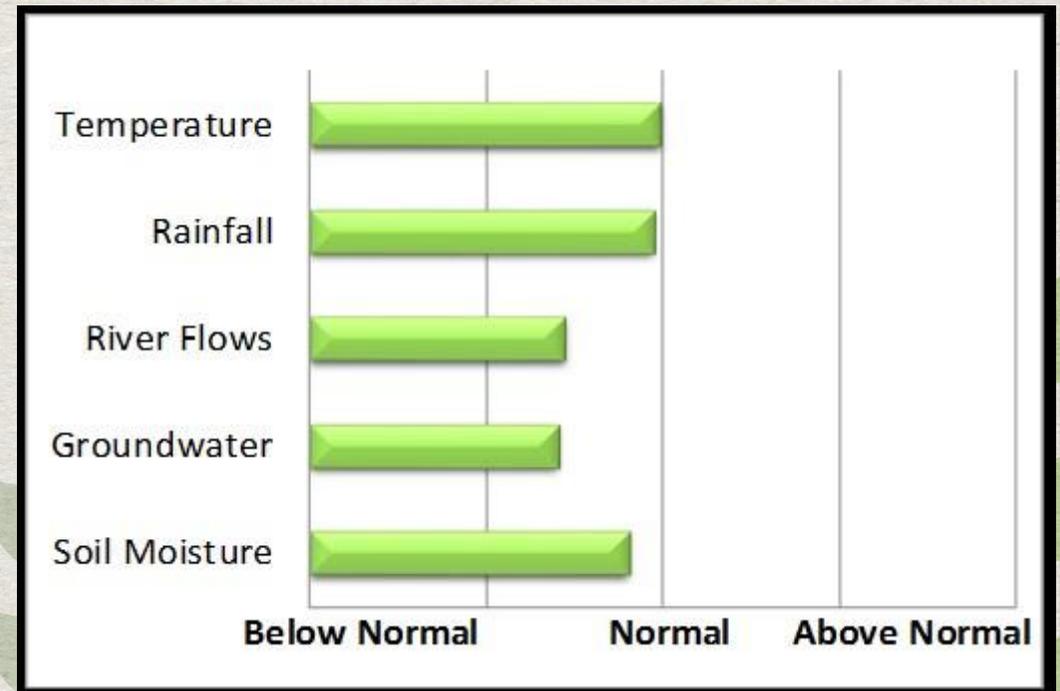
September to November Forecast:

| | |
|----------------------|--------------------------|
| Temperature | Average or below average |
| Rain | Near or below normal |
| River flows | Near or below normal |
| Soil moisture | Below normal |

For more information

www.hbrc.govt.nz

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TEMPERATURES

Near Average for the last month of Winter

Maximum Temperature: -0.1°C

Minimum Temperature: -0.2°C

Mean Daily Maximum: 13°C

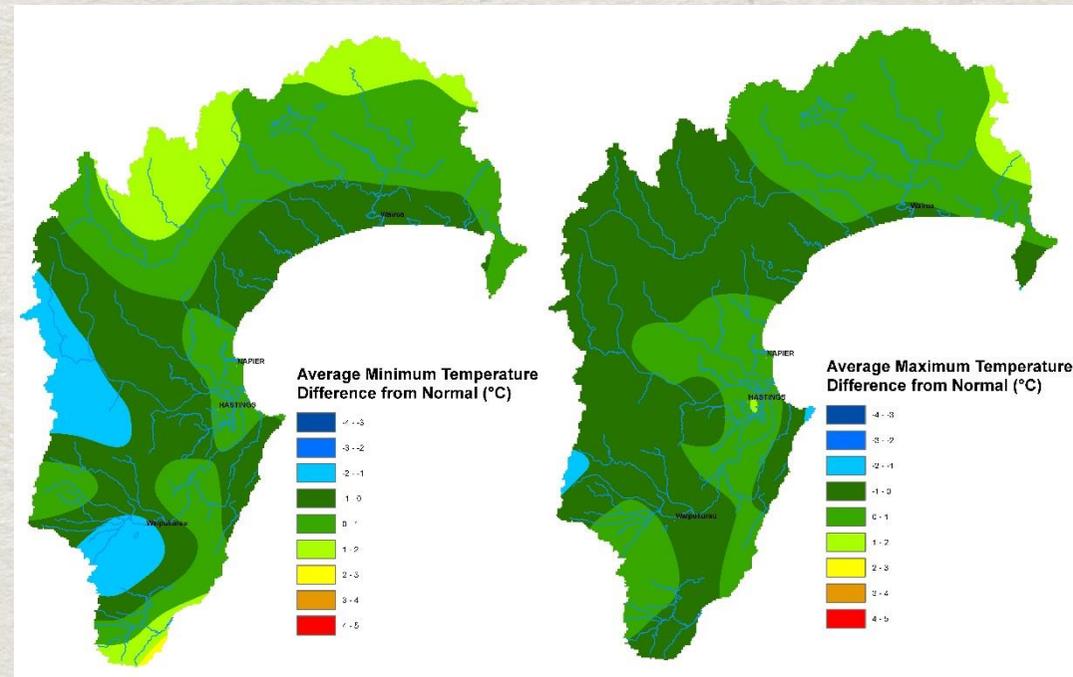
Mean Daily Minimum: 4°C

Highest Daily: 21.5°C

Location: Whakatu EWS

Lowest Daily: -7.3°C

Location: Taharua



August 2015

Pasture covers have generally lifted to near normal levels after welcome rain in mid-August and regular follow-up rain accompanied by warmer days. The dry conditions over winter have been pleasant to work in and reduced feed demand. Lambing has gone very well and farmers will be focussing on drafting good numbers of prime lambs at weaning.

Dairy farms are in good shape, production and feed-wise. Calving has gone well and cows are in good condition.

Rain over the next few months will be critical to build on the good start to spring. In many areas, there has not been enough rain to fully recharge the subsoil or fill farm dams.

Farmers are very conscious that El Niño weather patterns could lead to continuing relatively dry conditions and are being cautious in their planning for the rest of season.

The dry conditions over winter were also welcomed on orchards and vineyards with little interruption to maintenance work, pruning, and new and replacement plantings. Winter chill has been adequate for all fruit trees this season with good blossom observed to date on summerfruit. As is usual in spring, fruit growers will be monitoring weather conditions closely for frost and pest and disease risk.

The challenging cash flow situation for dairy farmers means that cropping farmers are looking at alternatives to dairy support.

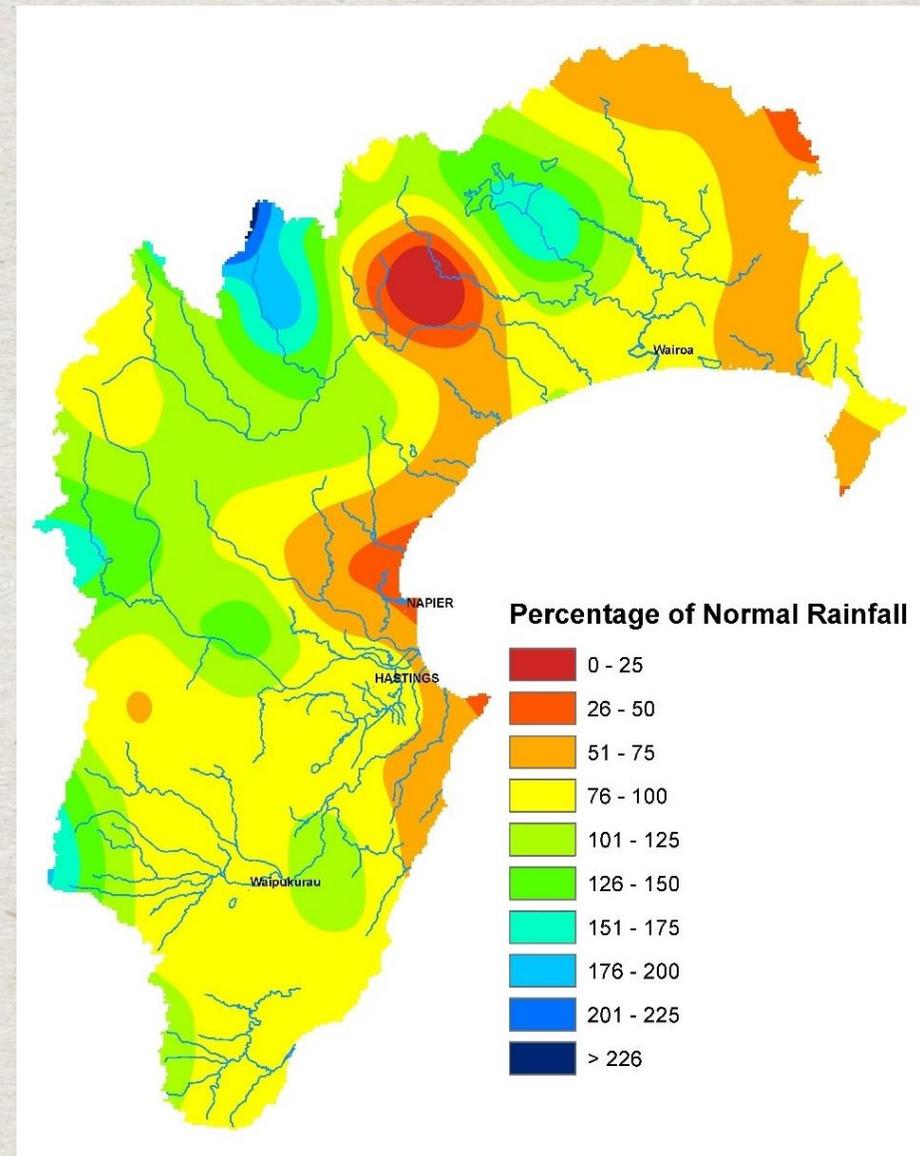
RAINFALL

Normal

Percentage of normal August rainfall (30 year average)
For areas in the region:

| | |
|--------------------|------------|
| Waikaremoana | 116% |
| Northern HB | 85% |
| Tangoio | 84% |
| Kaweka | 117% |
| Ruahine | 110% |
| Heretaunga Plains | 90% |
| Ruataniwha Plains | 90% |
| <u>Southern HB</u> | <u>85%</u> |

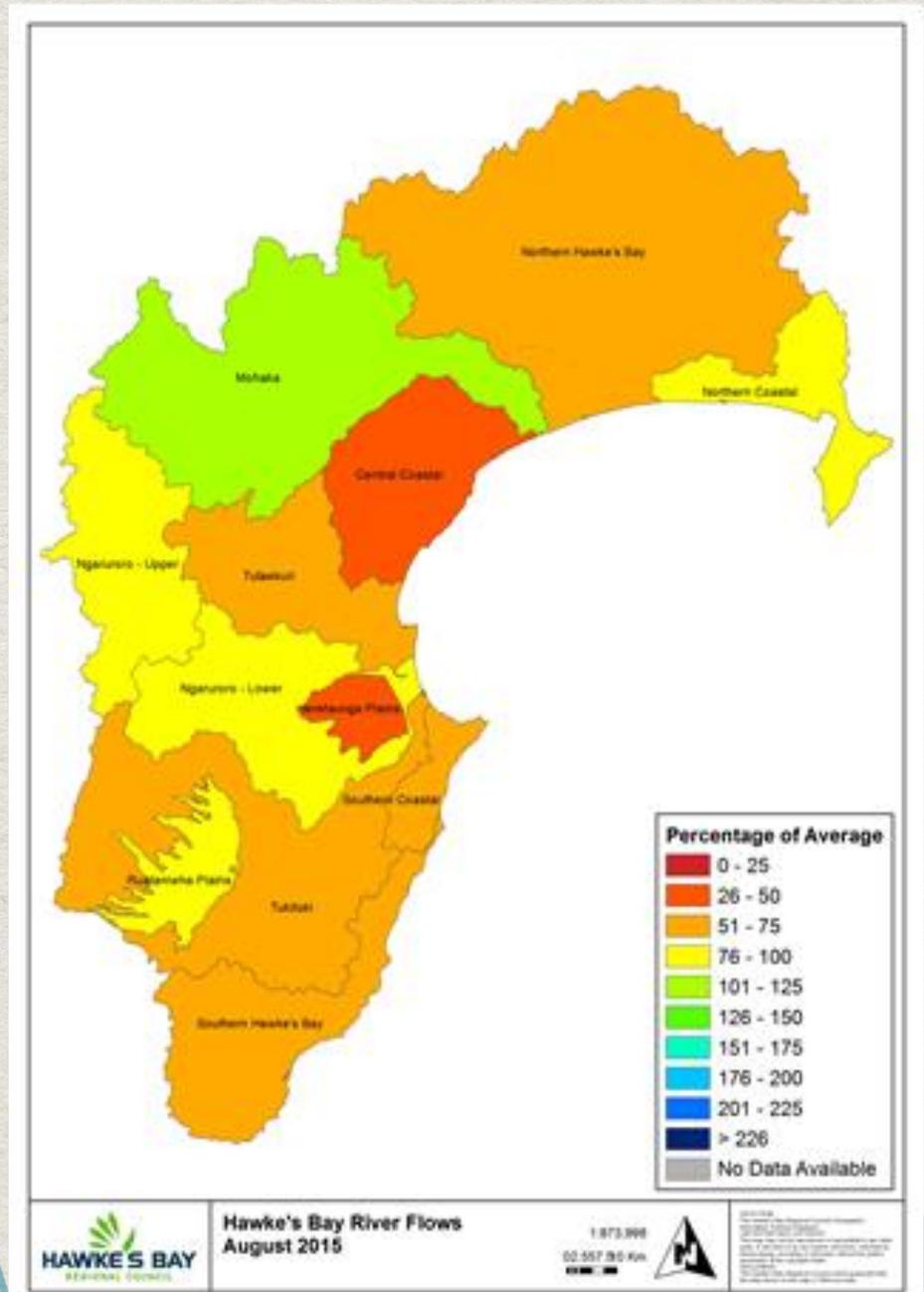
Hawke's Bay Region 97%



RIVER FLOW

Percentage of average August flows for areas in the region:

| | |
|------------------------------|------|
| Northern Coastal | 82% |
| Northern HB – Hangaroa River | 68% |
| Northern HB – Ruakituri Rver | 85% |
| Northern HB – Wairoa River | 65% |
| Mohaka | 118% |
| Central Coastal | 42% |
| Tūtaekuri | 51% |
| Heretaunga Plains | 41% |
| Ngaruroro - Upper | 96% |
| Ngaruroro - Lower | 82% |
| Southern Coastal | 52% |
| Ruataniwha Plains | 79% |
| Tukituki | 72% |
| Southern HB | 69% |
| | |
| Hawke's Bay Region | 72% |



GROUNDWATER & SOIL

Groundwater Levels

Heretaunga Basin

Mostly lowest ever and below normal groundwater levels

Ruataniwha Basin

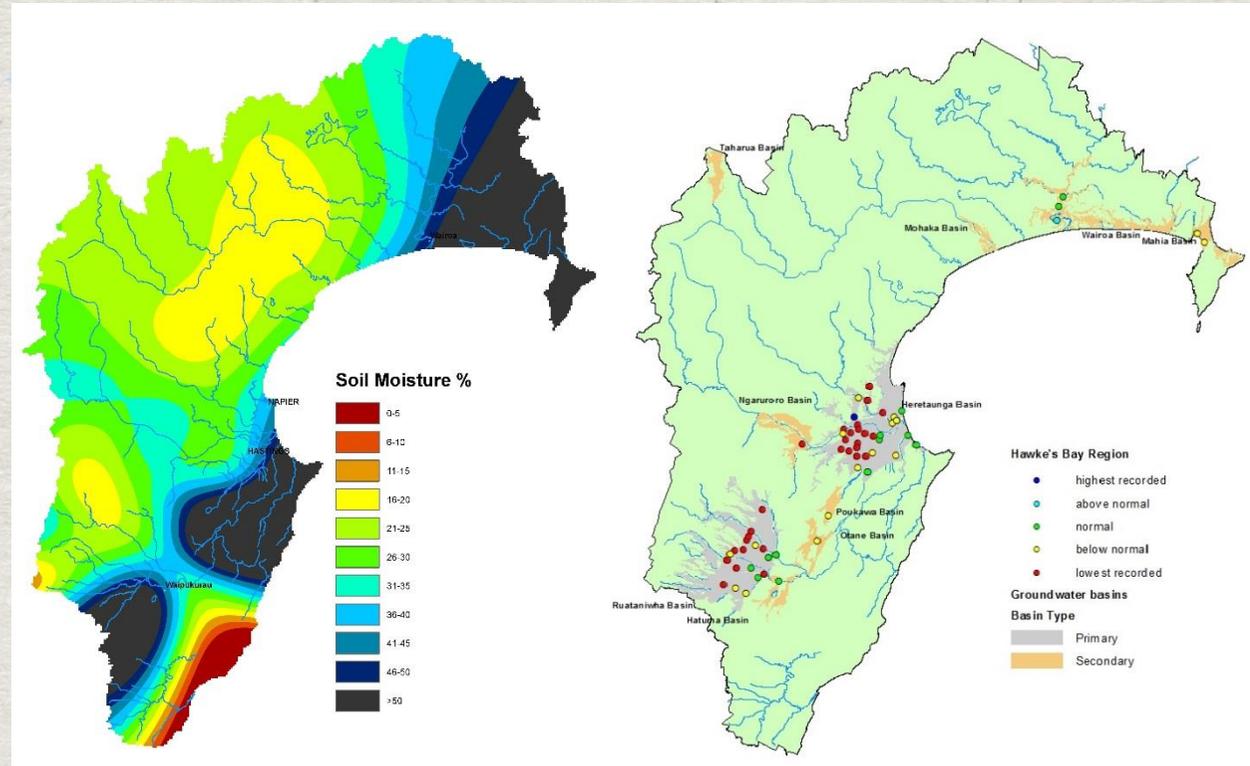
Mostly lowest ever and below normal groundwater levels

Secondary Basins

Mostly below normal groundwater levels.

Soil Moisture

Near to below normal



AIR QUALITY

No exceedences!

The National Environmental Standard (NES) for particulate matter (PM₁₀) of 50 micrograms per cubic metre (24 hour average) was not exceeded in the Hastings, Napier and Awatoto airsheds in August 2015.

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

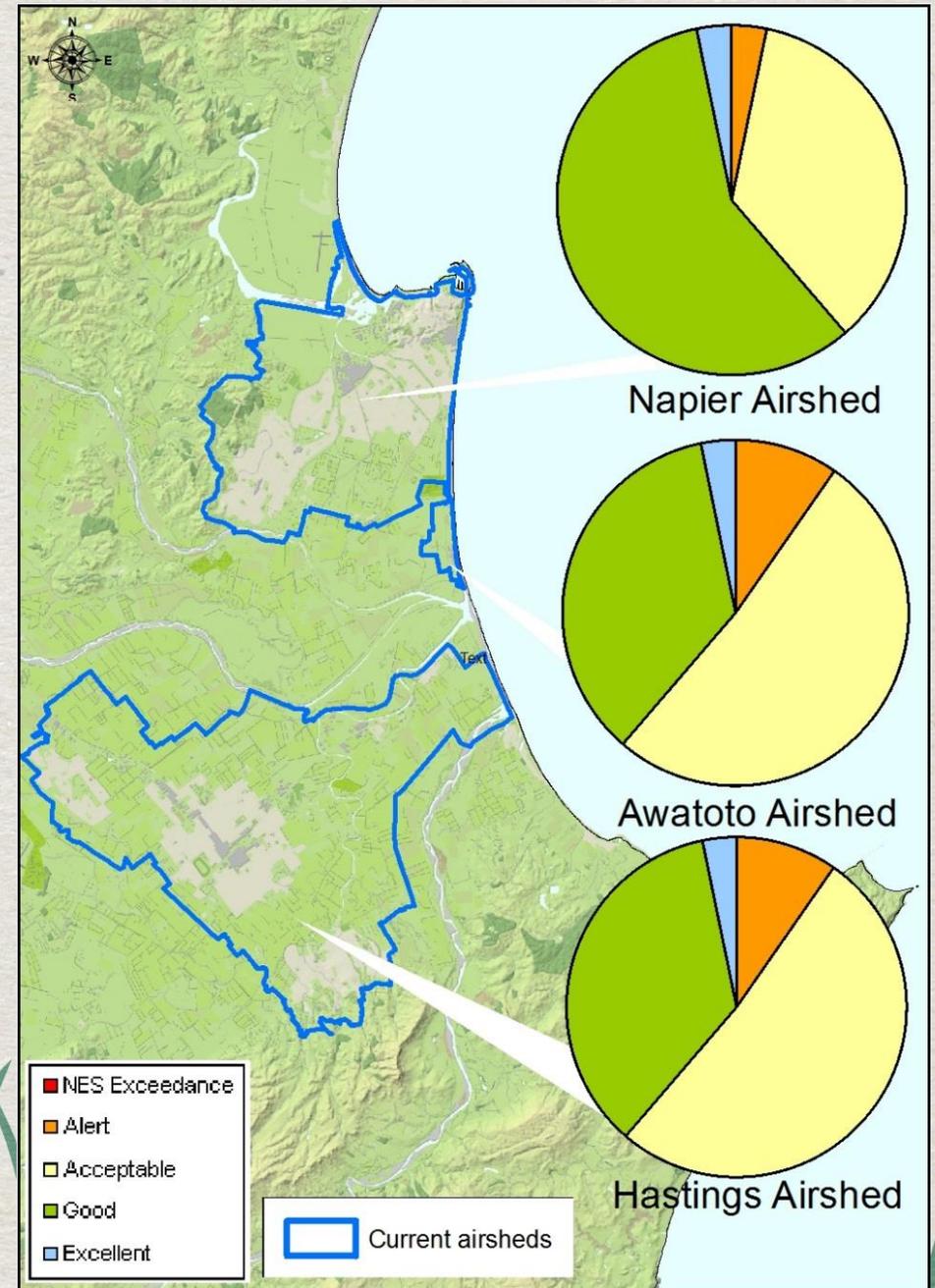


Figure 1: PM₁₀ levels in the Napier, Hastings and Awatoto airsheds during August 2015