

# Hydrology information for the situation report – 15 May 2020

## Current situation summary

Little rain has been received between the previous sitrep on 8<sup>th</sup> May to now (14<sup>th</sup> May). Northland has received only a small amount of rain from the low north of NZ over the last two days (0-13mm).

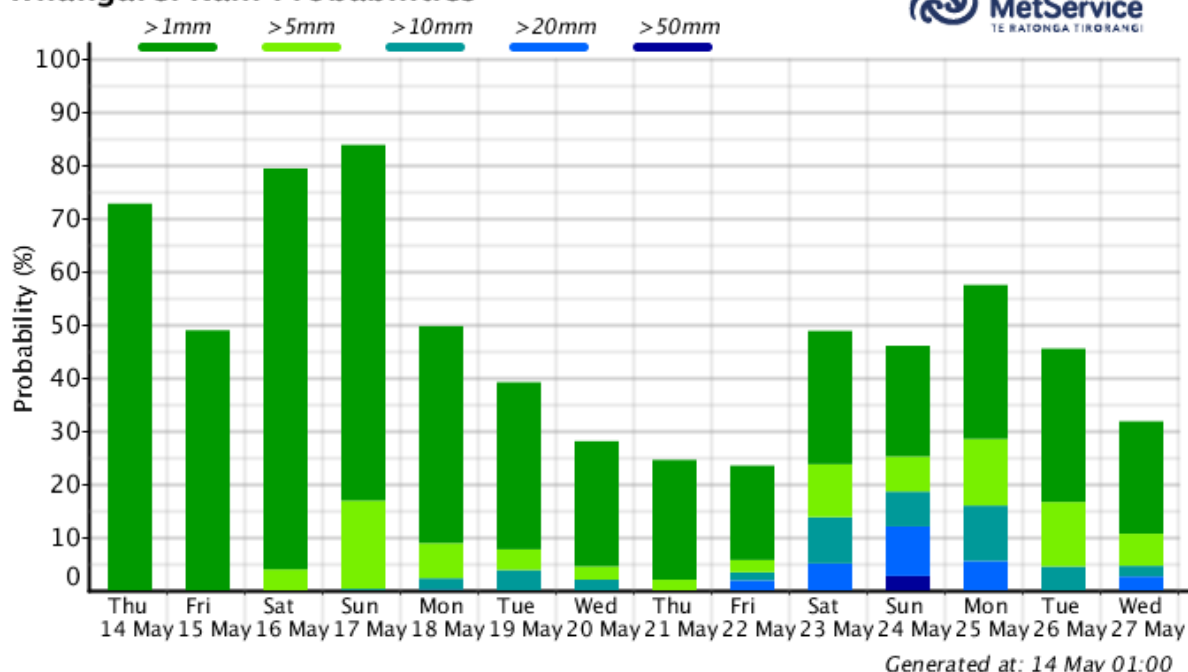
Rivers remain low with 40% below drought flows. These flows are likely to continue dropping with little rain in the forecast over the next week. There is some sign of recovery, with small increases in base flow after the small rain events, but we won't be convincingly out of the drought until we start seeing rivers consistently above drought flows levels across the region. Consecutive months of above normal rainfall may be needed to achieve this.

## MetService Outlook

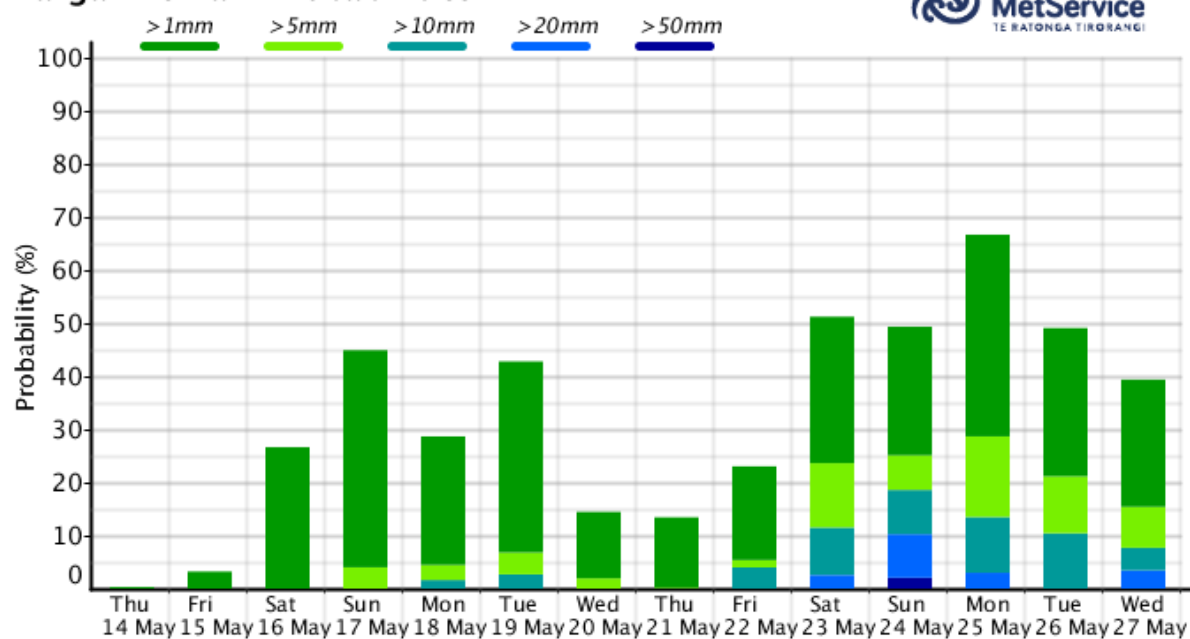
### Short term: 3-5 days:

There is little rain in the forecast from the 14<sup>th</sup> to 19<sup>th</sup> May, with a high centred around the South Island. Easterly winds and a few showers are likely.

### Whangarei Rain Probabilities



## Dargaville Rain Probabilities

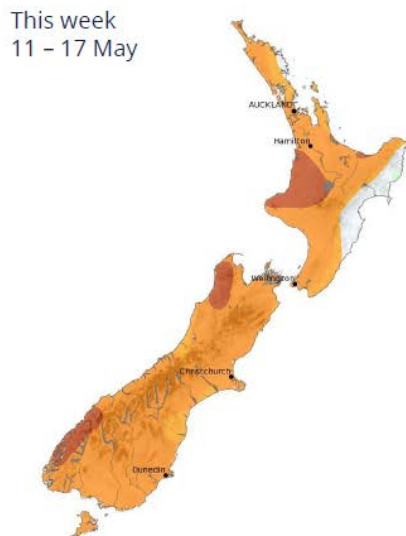


Generated at: 14 May 01:00

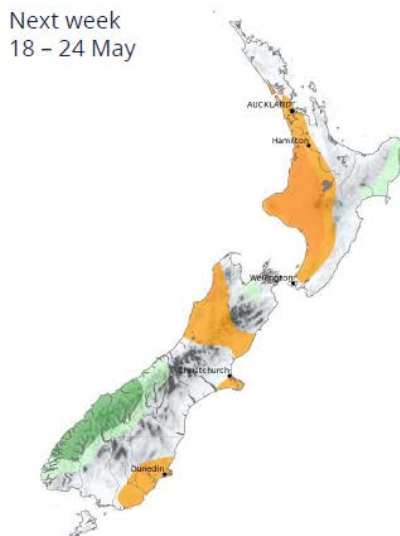
## Long range:

### Weekly rainfall anomaly forecasts (deviation from weekly normal, mm)

This week  
11 – 17 May



Next week  
18 – 24 May



Green colours indicate  
wetter than usual  
conditions, overall.

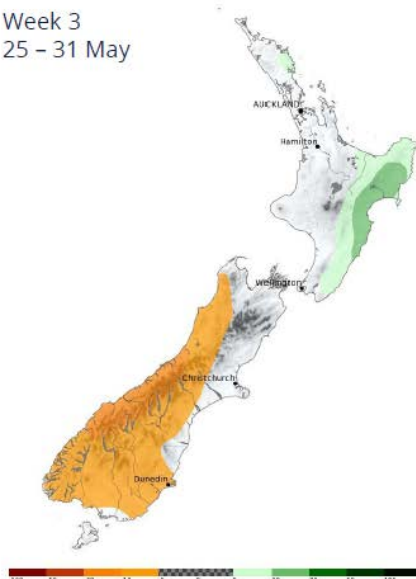
No shading indicates  
near average weekly  
rainfall totals

Orange colours indicate  
drier than usual  
conditions, overall.



### Weekly rainfall anomaly forecasts (deviation from weekly normal, mm)

Week 3  
25 – 31 May



Week 4  
01 – 07 June



Green colours indicate wetter than usual conditions, overall.

No shading indicates near average weekly rainfall totals

Orange colours indicate drier than usual conditions, overall.



- Week 2 from the 18<sup>th</sup> to 24<sup>th</sup> May, a blocking high is expected to remain, keeping the rain makers at bay and leading to a dry week. There is a chance of a low from the Tasman late in the week or early the following week.
- Week 3 from 25<sup>th</sup> to 31<sup>st</sup> May is uncertain, but Northland may experience showery conditions and near average rainfall.
- Week 4 from 1<sup>st</sup> June to 7<sup>th</sup> June is highly uncertain at this point of time.

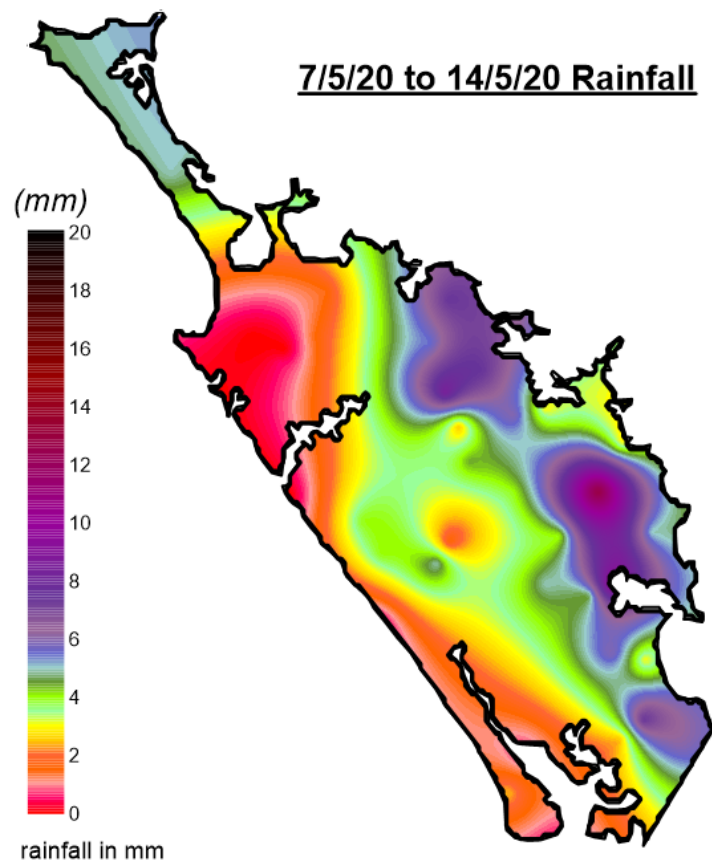
## Rainfall

The week from the previous sitrep has been non eventful for rainfall. The low to the north of the region has produced a small amount of rain over the last two days, but nothing of significance (between 0-13mm across the region for the week).

Northland still needs back to back months of normal or higher than normal rainfall to escape this hydrological drought.

Top three rainfall totals for each district from 7 May 2020 – 14 May 2020

FNDC		WDC		KDC	
Waitangi	8.5mm	Whakapara	13.0mm	Hakara (Tara)	6.0mm
Kerikeri	8.8mm	Waiarohia	9.8mm	Hakaru (Topuni Creek)	5.5mm
Towai	7.5mm	Hatea	8.5mm	Tutamoe Ranges	4.0mm
CENTRES					
Kaitiāia	0.0mm	Whangārei	9.8mm	Dargaville	0.6mm
Kaikohe	2.5mm				
Kerikeri	8.8mm				



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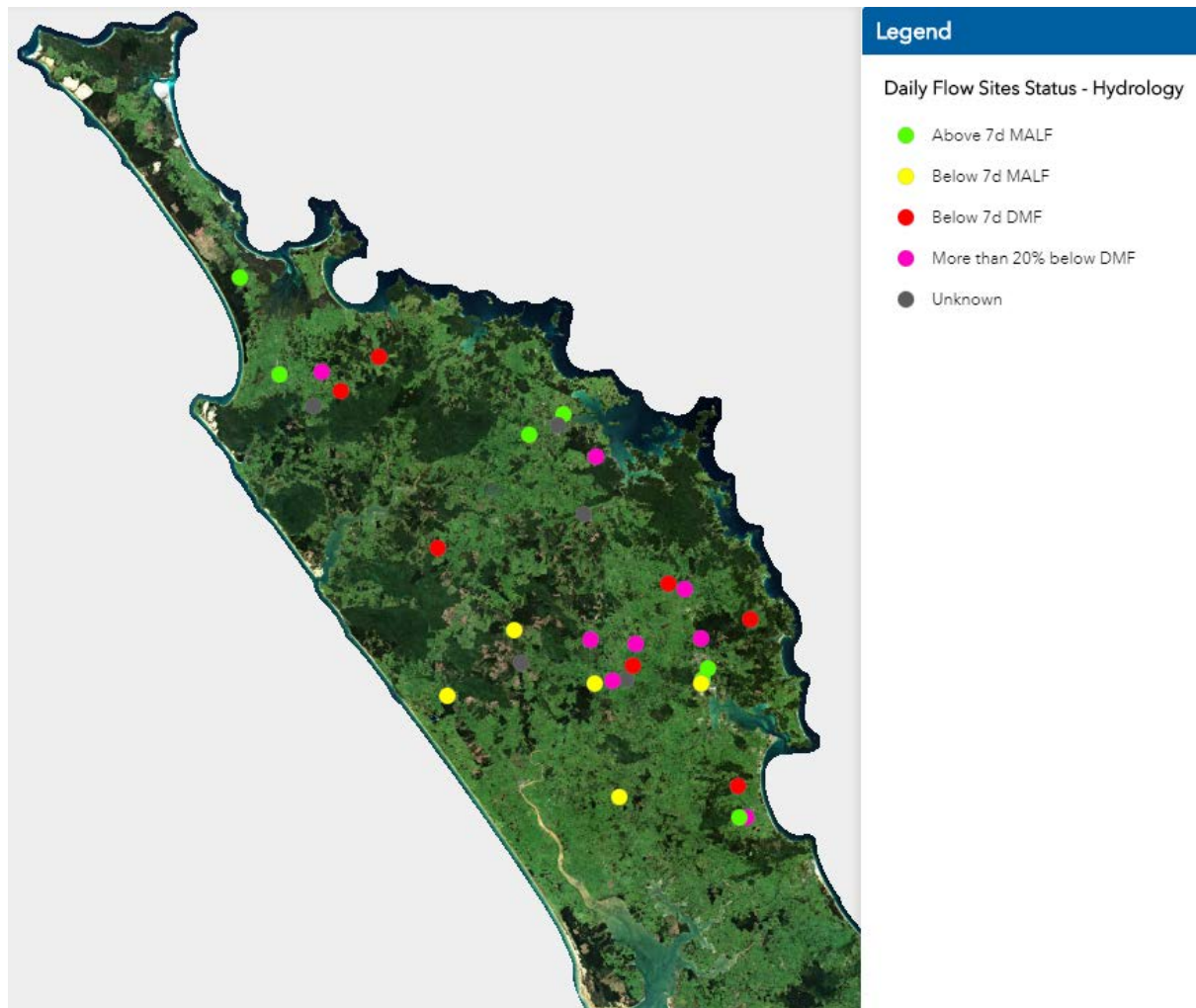
## River flows

River flows have not changed a lot with the small amount of rain during the week and many continue to recede. 40% of river stations are currently below drought flows.

Although rivers are still low, some are starting to show the signs of recovery, with base flows slightly higher after each small weather event. However, we won't be convincingly out of the drought until we start seeing rivers consistently above drought flows levels across the region.

Public water supply river flows (litres per second: l/s) as of 12pm 14 May 2020					
FNDC	WDC		KDC		
Awanui	448	Hatea	295	Kaihu	635
Wairoro	9	Ruakaka	18		
Waitangi	919	Ahuroa	93		
Puketotara	174				
Petaka	0.7				

Drought flow map:

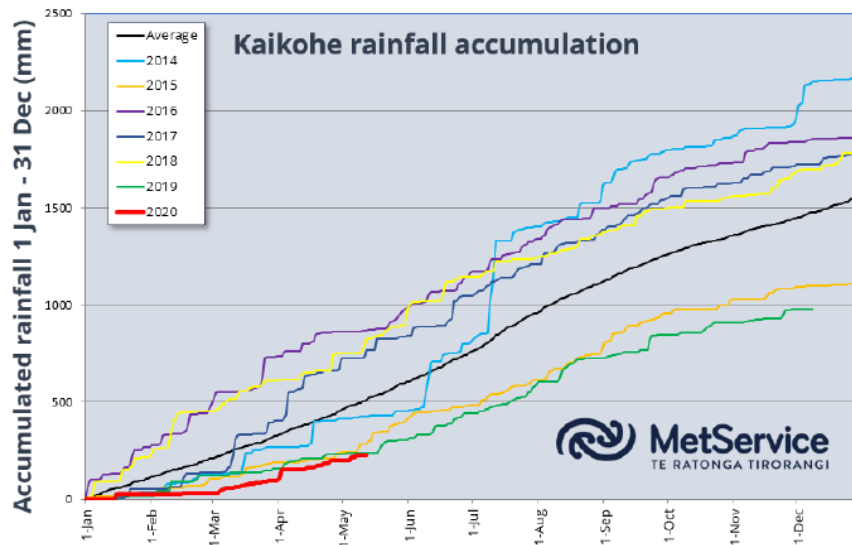


## Groundwater levels

## Soil moisture deficits

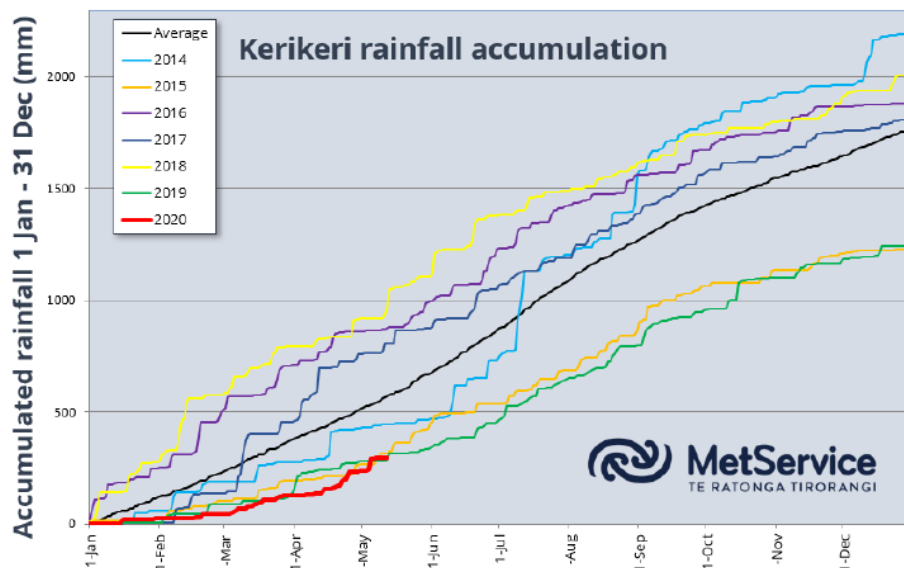
Soil moisture in most areas remains low for this time of year. Only Kerikeri is back to field capacity, while others are at around -75mm deficit. There remains a large deficit around Kaitia of around -125mm. With large soil moisture deficits, small rainfall events have little impact on river flows and groundwater levels.

Appendix



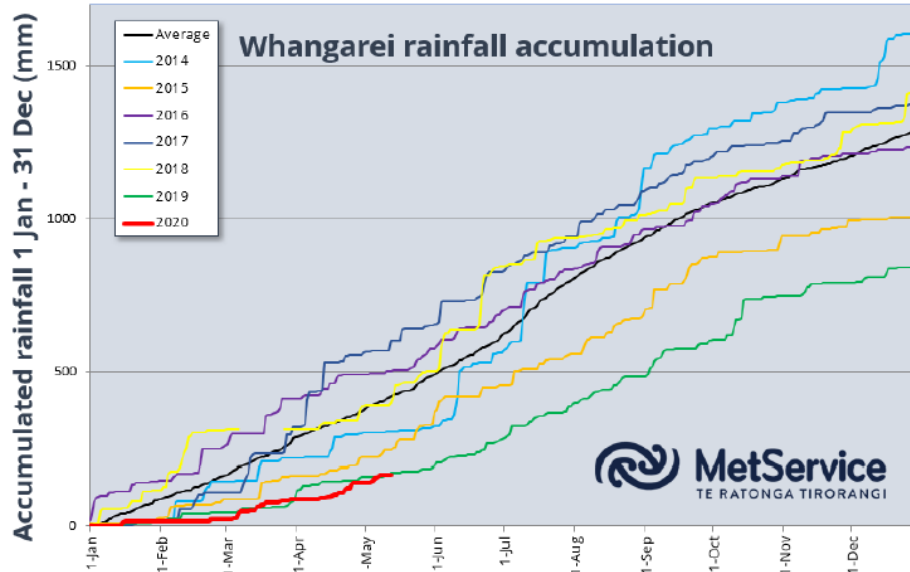
Recent rainfall over Northland has helped accumulations – but we're still playing 'catch up' after a very dry 2019.

Kaikohe is currently sitting at **44% of year-to-date average rainfall**, as at 12 May.

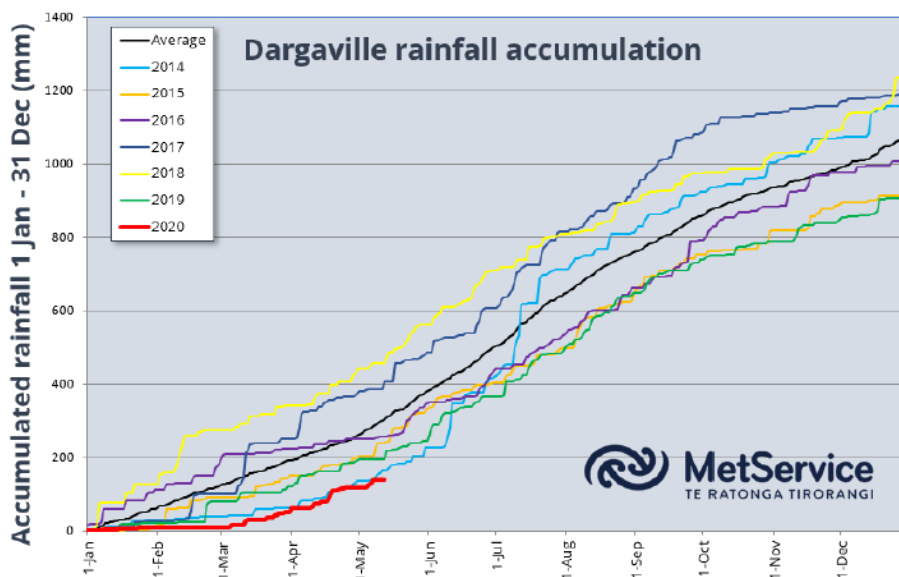


Kerikeri is currently sitting at **52% of year-to-date average rainfall**, as at 12 May.





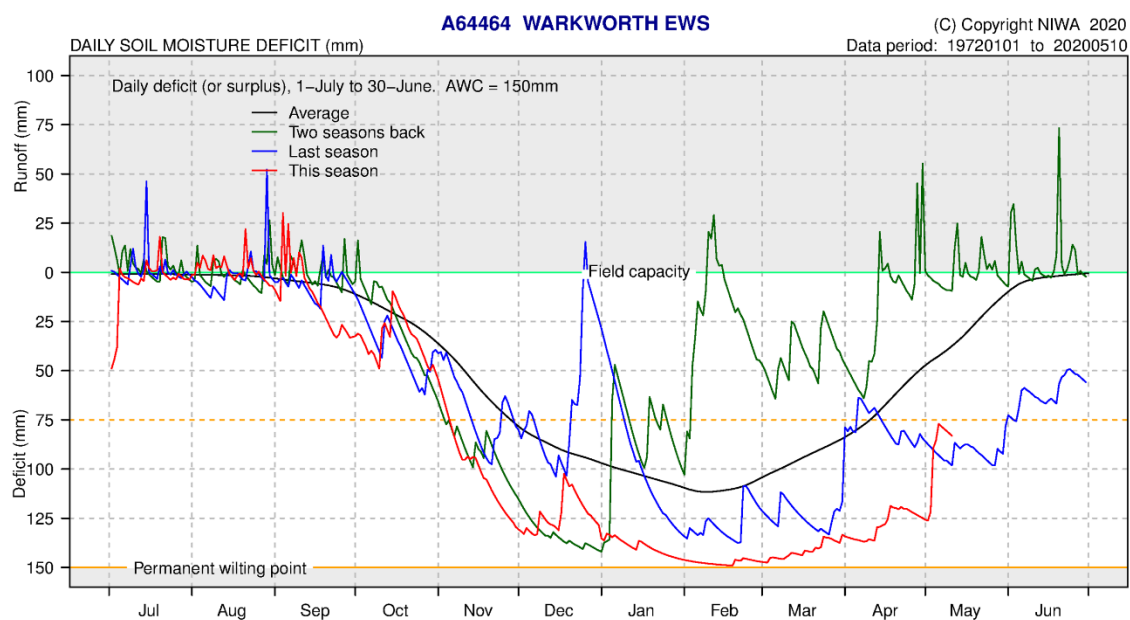
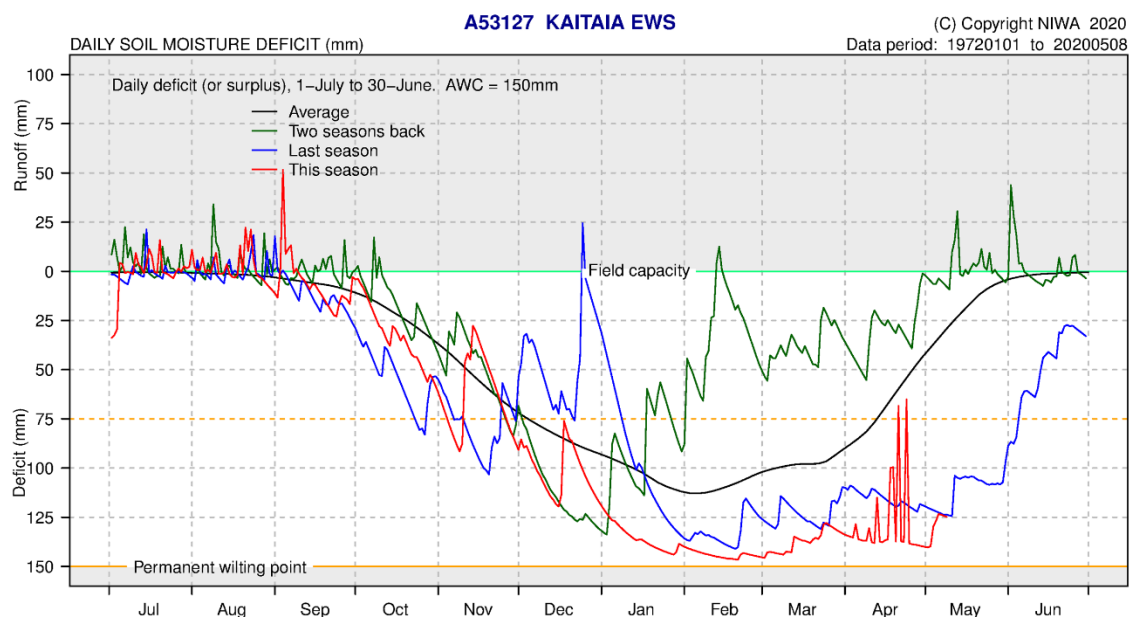
Whangarei is currently sitting at **40% of year-to-date average rainfall**, as at 12 May.



Dargaville is currently sitting at **46% of year-to-date average rainfall**, as at 12 May.





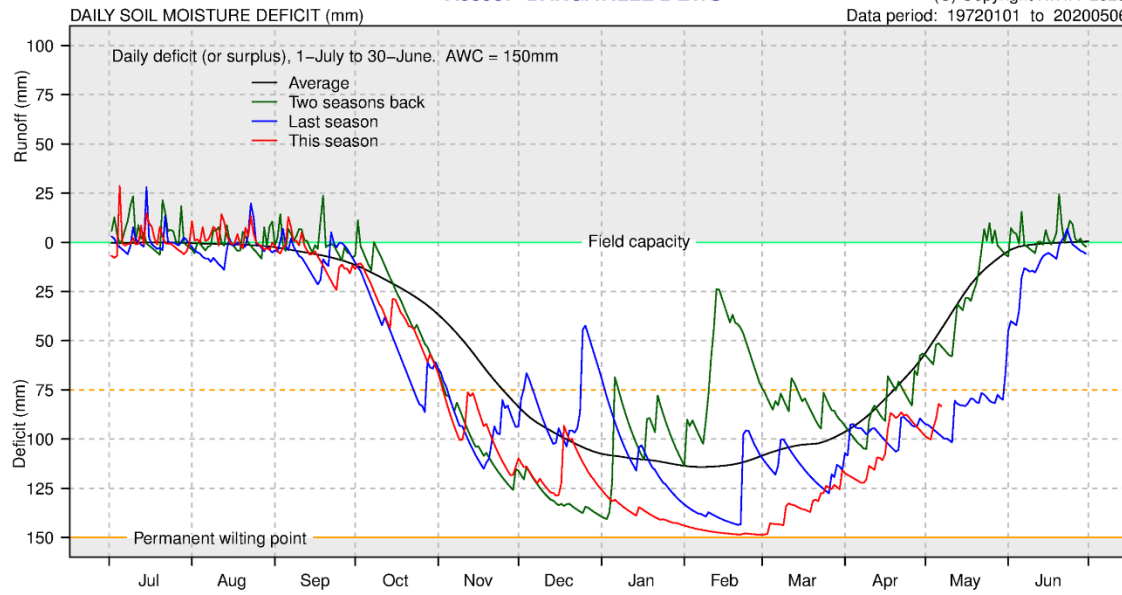




### A53987 DARGAVILLE 2 EWS

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Data period: 19720101 to 20200506



### A53487 KAIKOHE AWS

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Data period: 19730101 to 20200509

