

# Hydrology information for the situation report – 27 March 2020

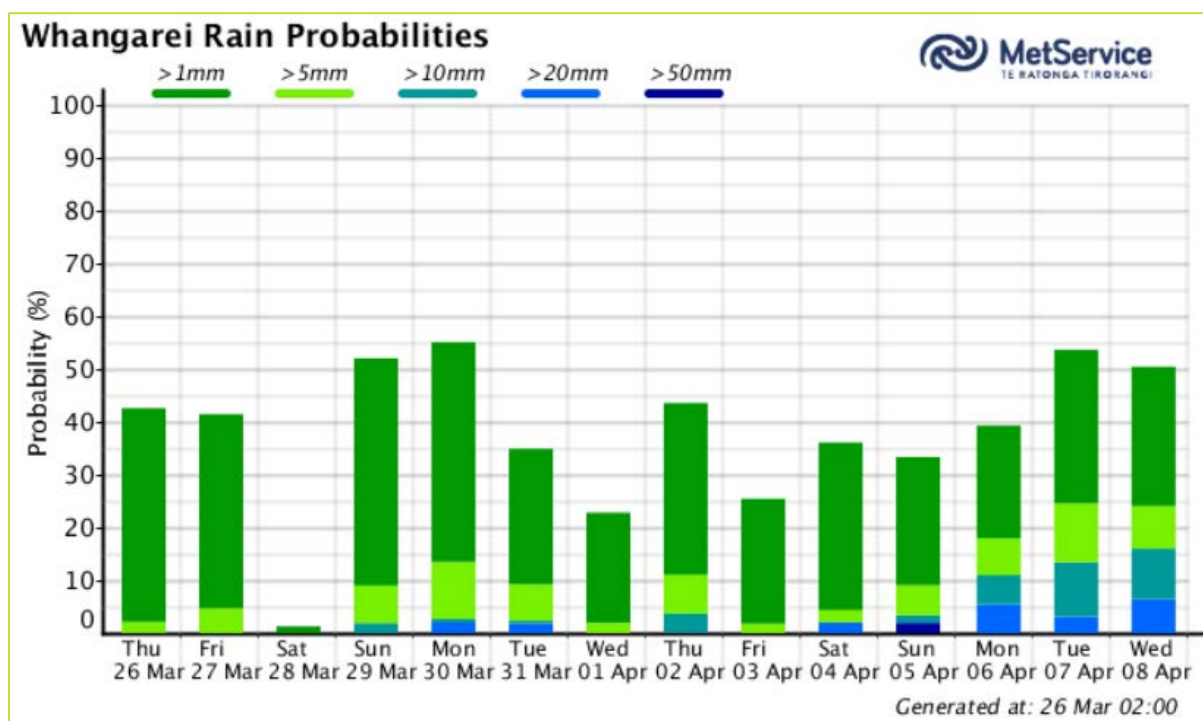
## Current situation summary

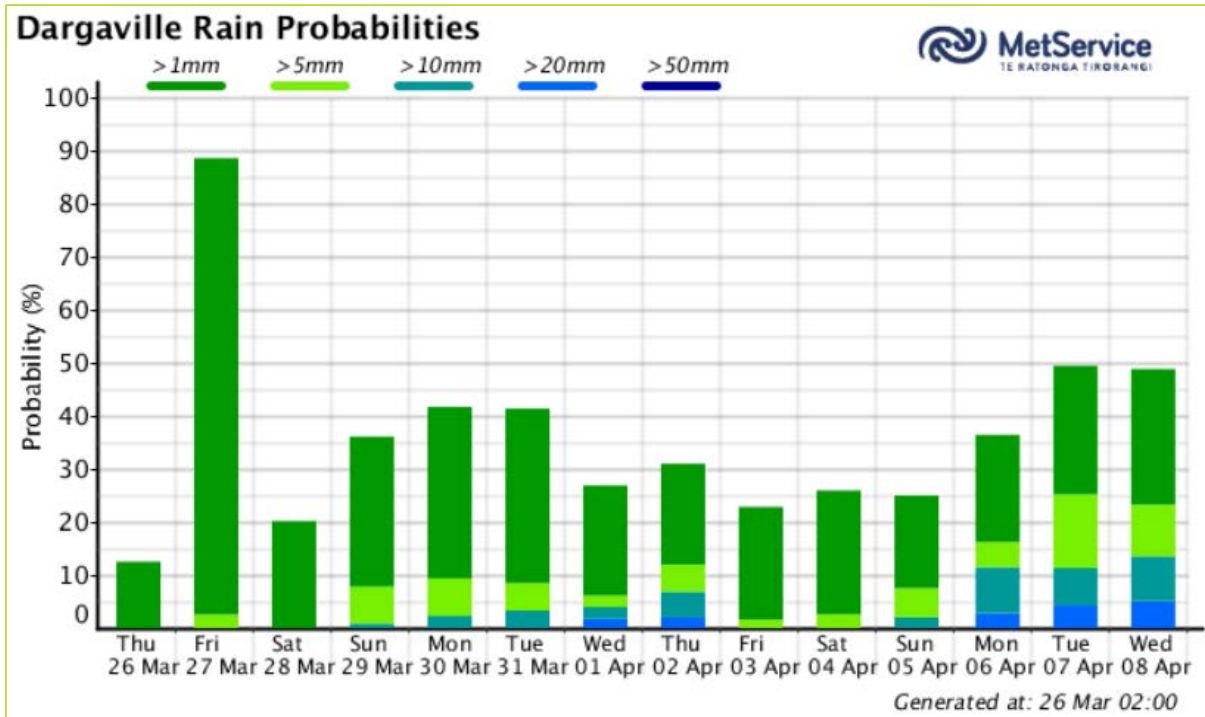
- Showery weather has continued across the region over the past week.
- Most rivers remain low (80% below DMF), although rivers some in areas of higher rainfall are above DMF (Kaihu, Mangakahia, Opouteke and Te Puhe).
- Groundwater remains low although Russell has shown an increase in levels with recent rain.
- Showers continue to increase soil moisture levels.
- Further showers are forecast over the next week, with minor rain on the west on the 27th, but with high pressure becoming dominant, rainfall is likely to be minimal for the next week overall.

## MetService Outlook

### Short term: 3-5 days:

- A small low moving in from the south west on Friday may deliver showers to the west coast of northland. These are only likely to be light showers
- After this, a high-pressure system becomes the dominant feature. The odd shower may occur to the 30<sup>th</sup>, but no significant rainfall is likely.





**Long range:**

- The week from 30 March to 5 April was earlier forecast to be settled with slightly higher than average rainfall. With a high-pressure system becoming established over the North Island, little rainfall is now expected.

Temperature anomaly Deg C	Week 1	Week 2	Week 3	Week 4
Kaitaia	-0.7	-1.0	0.0	0.3
Kaikohe	-0.8	-1.1	0.0	0.3
Whangarei	-0.8	-1.0	0.0	0.3
Dargaville	-0.6	-1.0	0.0	0.2

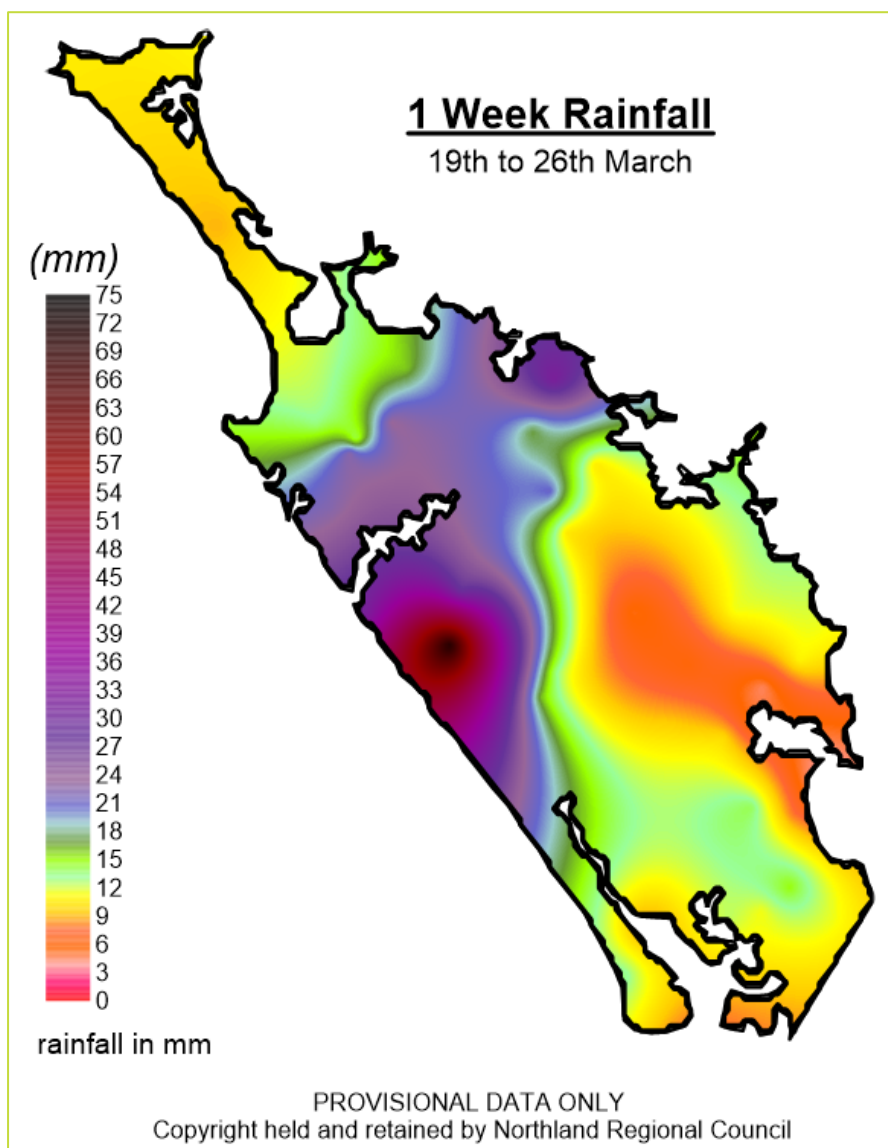
  

Rainfall anomaly (mm)	Week 1	Week 2	Week 3	Week 4
Kaitaia	2	-3	3	0
Kaikohe	3	-3	2	-1
Whangarei	2	-5	6	0
Dargaville	-1	-1	2	1

Midday to Midday NZ Time	Week One	Week Two	Week Three	Week Four
From:	16/03/2020	23/03/2020	30/03/2020	6/04/2020
To:	22/03/2020	29/03/2020	5/04/2020	12/04/2020

# Rainfall



Similar to previous reports, rainfall has been unevenly spread across the region. Bream Bay, Whangārei, the eastern hills, southern Kaipara and Kaitāia received very little rainfall (5 – 15 mm), while Kaeo, across to Hokianga received around 15 – 30 mm. The stand out over the week was Waimamaku (71 mm) the Tutumoe ranges with 46.5 mm.

Rainfall accumulation from Thursday (19 March 2020) to Thursday (26 March 2020). Below are the top three rainfall totals for each district, and the rainfall at the main centres:

FNDC		WDC		KDC	
Towai	32.0 mm	Opouteke	16.5 mm	Waimamaku	71.0 mm
Opononi	31.5 mm	Brynderwyns	15.0 mm	Tutumoe Ranges	46.5 mm
Taheke	28.5 mm	Waikokopa	14.0 mm	Kai Iwi	33.5 mm
CENTRES					
Kaitāia	26.4 mm	Whangārei	5.6 mm	Dargaville	18.4 mm
Kaikohe	10.5 mm				
Kerikeri	13.0 mm				

## River flows

River flows remain low throughout most of the region with 80% of stations flows below DMF, but flows are improving and beginning to approach DMF.

Rainfall events on the 20<sup>th</sup> and 23<sup>rd</sup> March have slightly elevated the flows above DMF in the Kaihu, Mangikahia, Opouteke and Te Puhe rivers. These rivers will be back below DMF in two weeks if no further rain was to occur in the time.

The Awanui, Wairoro, Ruakaka and Ahuroa rivers remain low but are showing signs of improvement with recent rain.

Public water supply river flows (litres per second: l/s) as of 12pm 09 March 2020					
FNDC	WDC			KDC	
Awanui	391	Hatea	86	Kaihu	745
Wairoro	~ 19 U/S	Ruakaka	26		
Waitangi	595	Ahuroa	58 (at Braigh Flats)		
Puketotara	123				
Petaka	5.8				

## Groundwater levels

Groundwater levels at Russell are showing some signs of recovery with the recent showers. All other aquifers, including Ruawai at Poroti remain low.

## Lake levels

The recent sensors installed at the far north lakes indicate that levels are continuing to decline. Rainfall in the Kaitaia area has been minor.

## Soil moisture deficits

Continue to be on the rise with the showery weather.

## Appendices:

Groundwater plots below showing levels relative to average (black line) and 0-20<sup>th</sup> percentile (bottom grey area):

