

Hydrology information for the situation report – 20 March 2020

Current weather situation

Regular showers have been occurring around the east coast of Northland through the week with some very isolated heavy downpours. Every bit helps, but rainfall so far this month has not had the impact on stream flows we hoped for.

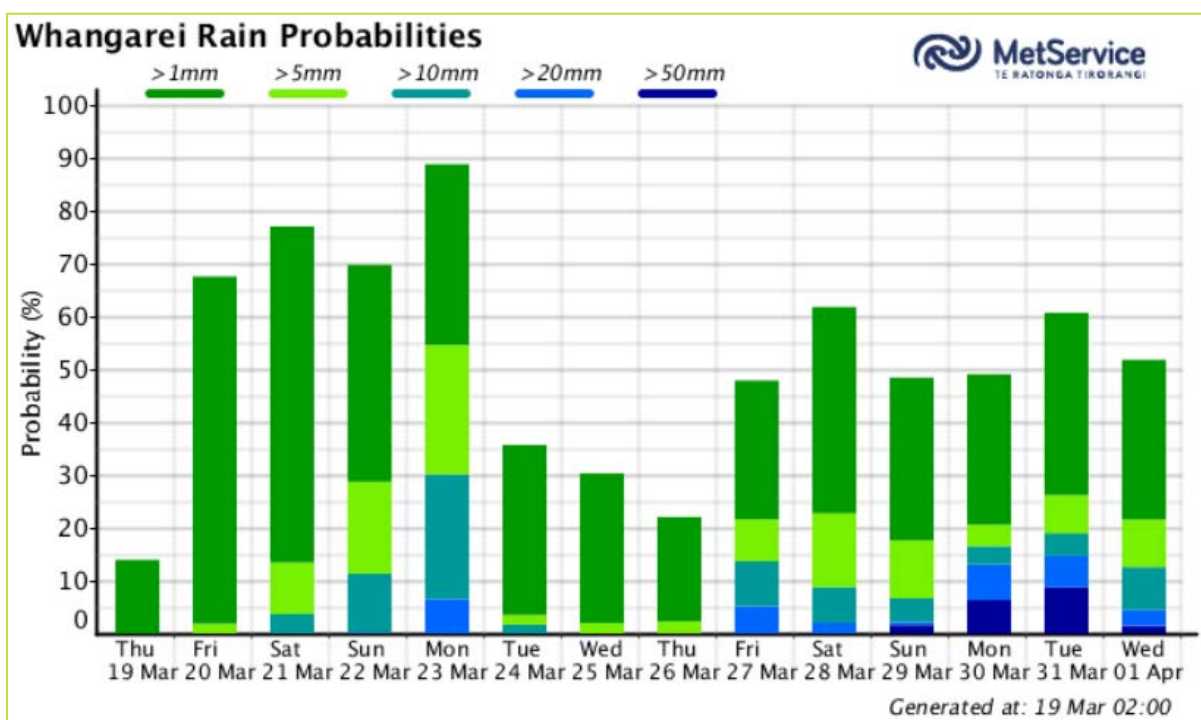
Ex tropical cyclone Gretel provided only small rainfall totals to the east coast (around 10mm), but non for many places towards the west. Stream flows remain very low and are still quickly receding following small showers, signalling dry catchments remain, despite recent increases in soil moisture.

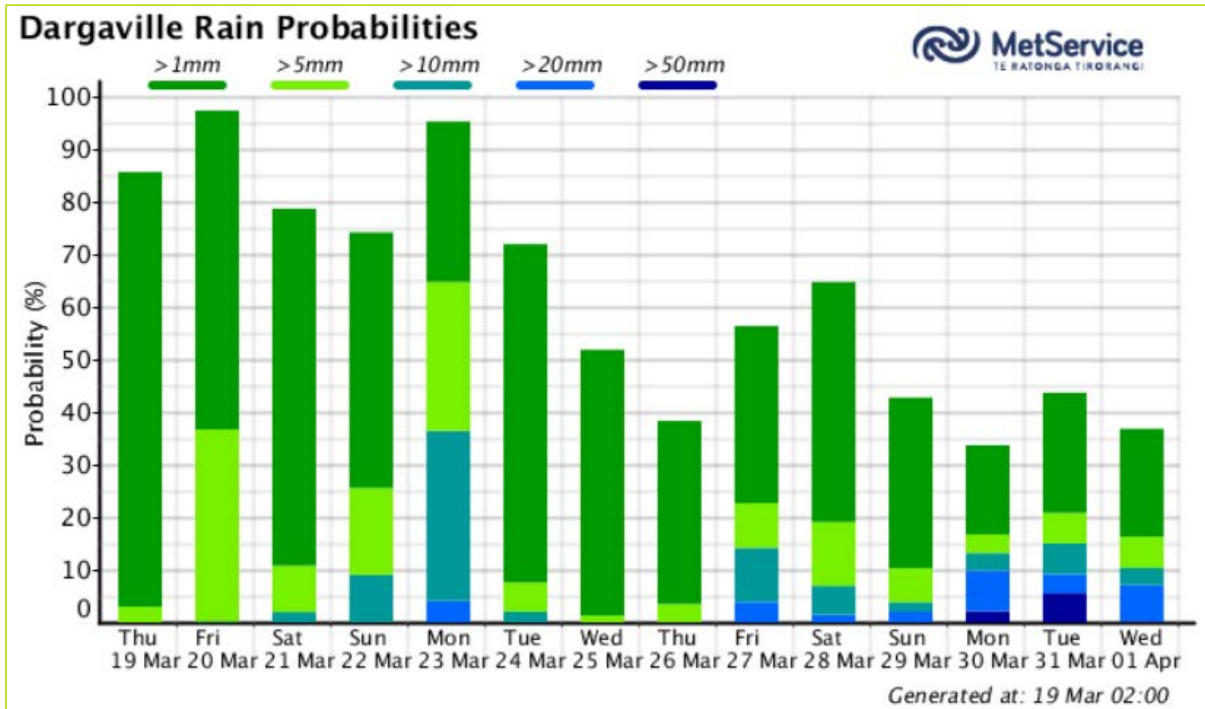
Further showers are likely early next week with westerly winds, and fairly regular minor rain events are signalled to continue. No significant rainfall events are on the horizon. With these conditions, rivers are likely to remain low over the coming week at least.

MetService Outlook

Short term: 3-5 days:

- Showers around the west coast of Northland on Friday 20/3/20.
- A low-pressure system and associated front will move across the county on Sunday and may bring rain to the west coast or Northland on Monday. This will likely come and go quite quickly





Long range:

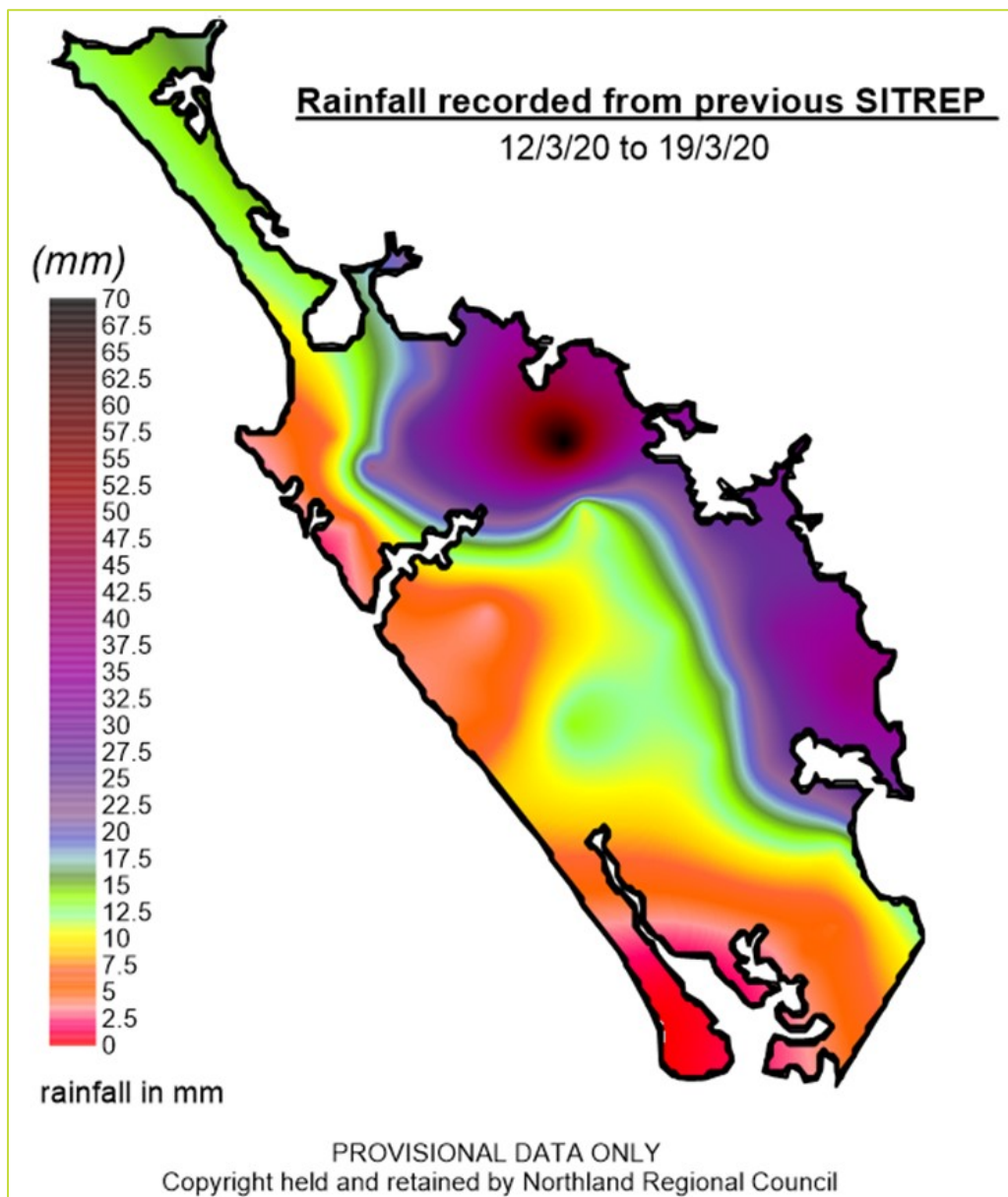
- The week of the 23rd to 29th will experience some showers with a low from the south west and westerly winds. The week is forecast to have near average rainfall overall.
- The following two weeks from the 30th March to 12th April are forecast to be settled with near average rainfall, but MetService have noted the chance of Tasman Low features appearing.

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



Ex tropical cyclone Gretel glanced Northland and delivered a small amount of rain to the east coast.

For the past week, since the previous sitrep, there has been moderate rainfall accumulations with showers here and there, but very much isolated to the east coast of the region. The table below and the map above show how little rainfall there has been on the west coast (0 – 12 mm). Thunderstorm activity and heavy rain at Kaeo was the standout with nearly 30 mm per hour recorded on the 12th March.

Rainfall accumulation from Thursday (12 March 2020) to Thursday (19 March 2020). Below are the top three rainfall totals for each district:

FNDC		WDC		KDC	
Kaeo	71.5 mm	Ngunguru	39 mm	Kai Iwi	9.0 mm
Towai	40.5 mm	Whakapara	32.5 mm	Tara	8.5 mm
Mangakawakawa	28.5 mm	Glenbervie	29.5 mm	Hakaru	6.0
CENTRES					
Kaitiāia	9.0 mm	Whangārei	26.8 mm	Dargaville	1.0 mm
Kaikohe	12.5 mm				
Kerikeri	49.0 mm				

River flows

River flows remain very low throughout most of the region despite the recent showers, with 90% of stations below drought flows. Note that the Kaihu at Gorge recorder is currently reading above drought flows but I believe this is a malfunction and true flows are below drought flows.

The Awanui, Wairoro, Ruakaka and Ahuroa rivers remain very low.

Public water supply river flows (litres per second: l/s) as of 12pm 09 March 2020					
FNDC		WDC		KDC	
Awanui	245	Hatea	97	Kaihu	536
Wairoro	~ 14 U/S	Ruakaka	25		
Waitangi	527	Ahuroa	69 (at Braigh Flats)		
Puketotara	130				
Petaka	1.9				

Groundwater levels

Nothing new to report

Lake levels

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

Soil moisture deficits

Nothing new to report