

Hydrology information for the situation report – 08 April 2020

Current situation summary:

Very little rainfall has been recorded in the week from 1/4/20 to 8/4/20 (0-11mm).

River flows are extremely low, with most at around the flows observed in February, and some even lower. All river flows are below drought flow limits (DMF).

There are some showers forecast on the 8th and 9th, then a low-pressure system moving over NZ from the west on the 13th. None of these systems are likely to deliver significant rainfall.

MetService Outlook

Short term: 3-5 days:

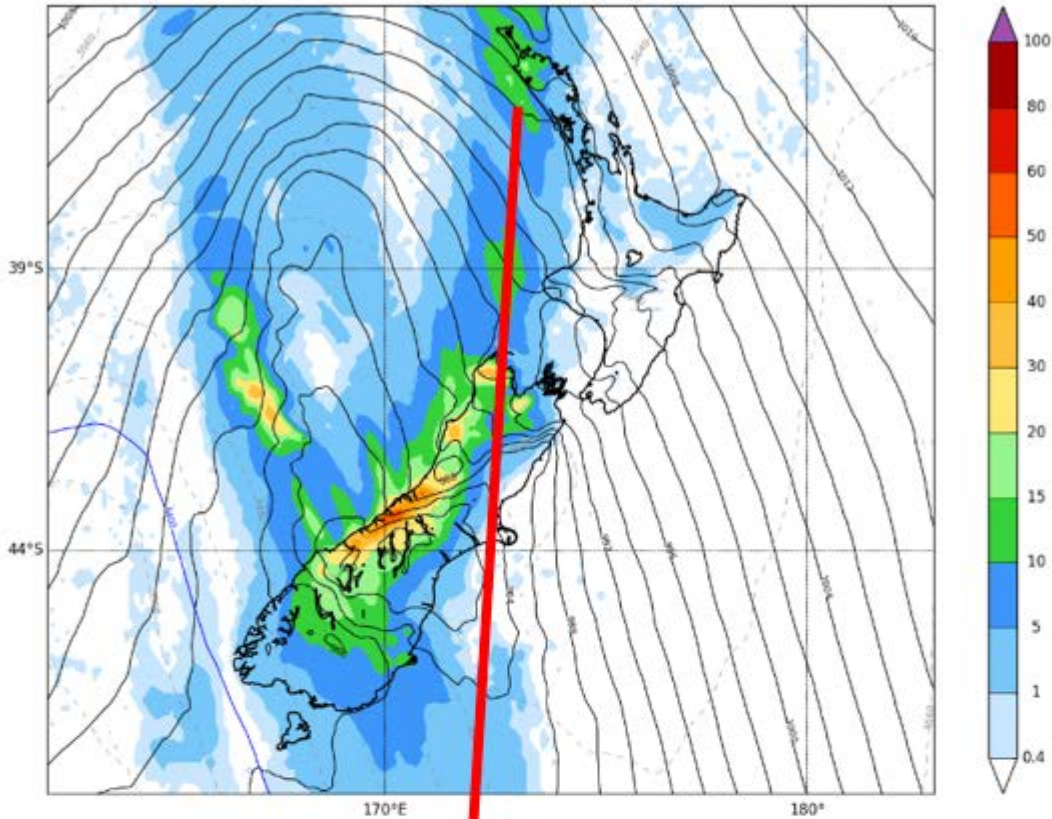
- South westerly fronts passing Northland on the 8th and 9th will produce some minor showers (<5mm each day)
- High pressure develops over the country on the 10th and 11th with a low likelihood of rain

Long range:

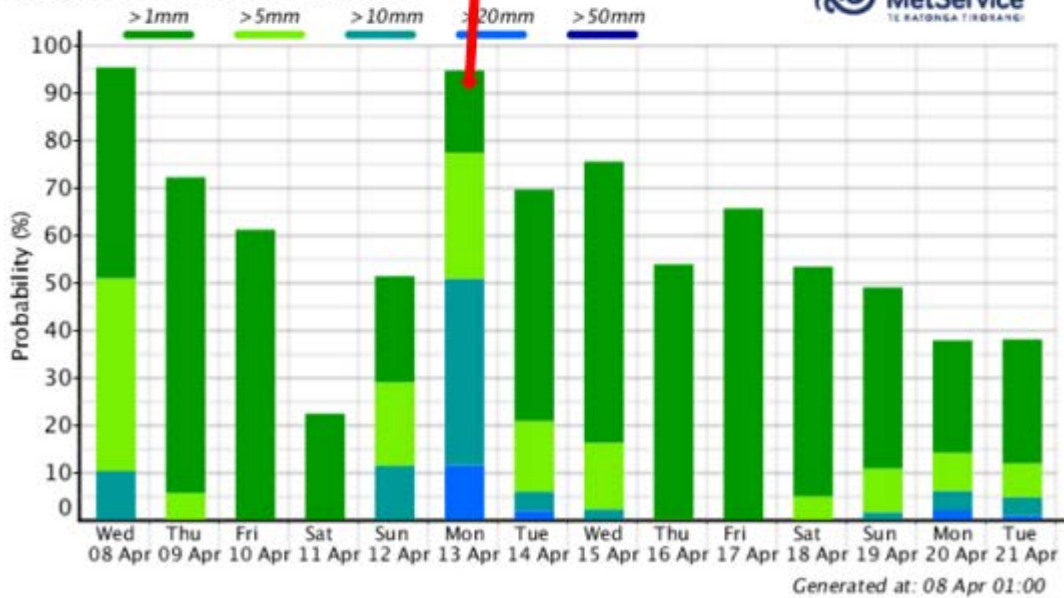
On the 13th April a low-pressure system approaches NZ from the west. Rain probabilities at this stage suggest that this system will pass quickly may produce 5-10mm of rain on the 13th and lesser showers on the days either side of this.

Data Source: ECMWF AusNZ
 Validity: H+123
 Model Run UTC: 2020-04-07 12:00:00

Field(s): MSL (hPa), 1000-500 Thickness (gpm), Rainfall Three Hourly (mm)
 Chart Time NZST: Monday 2020-04-13 03:00:00
 Chart Time UTC: 2020-04-12 15:00:00



Dargaville Rain Probabilities



Drier than normal conditions were predicted for 13 to 19 April in the MetService long range report produced at the end of March.

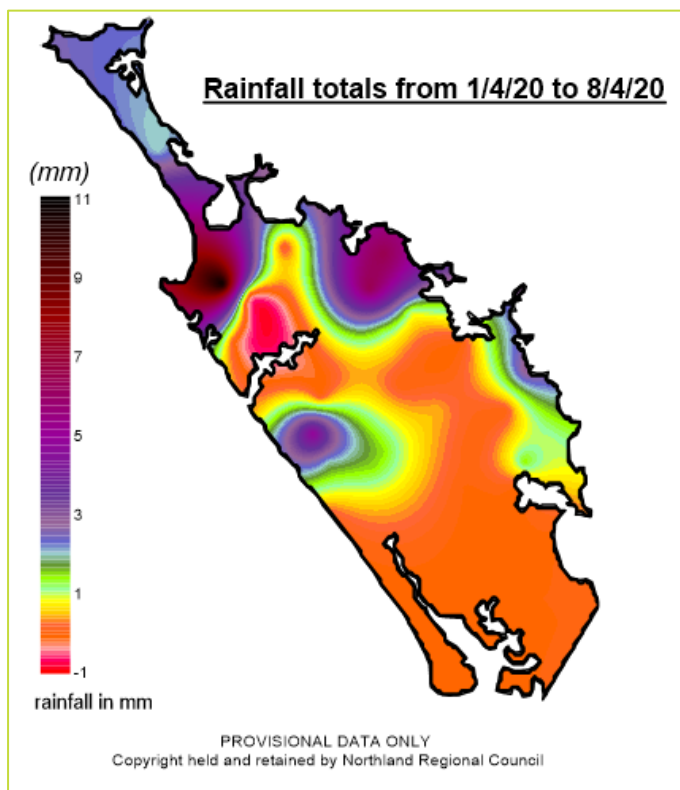
Rainfall anomaly (mm)	Week 1	Week 2	Week 3	Week 4
Kaitaia	-17	0	-4	3
Kaikohe	-20	1	-5	1
Whangarei	-17	-2	-5	4
Dargaville	-16	3	-3	5

Rainfall (% anomaly)	Week 1	Week 2	Week 3	Week 4
Kaitaia	-85%	0%	-23%	15%
Kaikohe	-74%	3%	-17%	5%
Whangarei	-59%	-8%	-16%	13%
Dargaville	-64%	12%	-12%	18%

	Week One	Week Two	Week Three	Week Four
	30/03/2020	6/04/2020	13/04/2020	20/04/2020
	5/04/2020	12/04/2020	19/04/2020	26/04/2020

Rainfall

The first week of April has had very little rainfall, between 0 mm for most of the region to 11 mm in the Tarawhataroa (Awanui catchment).



Top 3 highest rainfall totals in each district for 1/4/20 to 8/4/20. Rainfall totals for the centres shown below.

FNDC		WDC		KDC	
Tarawhataroa	11.0 mm	Oakura	3.0 mm	Waimamaku	5.0 mm
Kaeo	6.5 mm	Mangakahia	1.5 mm	Waima	2.0 mm
Towai	6.5 mm	Glenbervie	1.5 mm	Dargaville	0.6 mm
CENTRES					
Kaitiāia	0.4 mm	Whangārei	0.0 mm	Dargaville	0.6 mm
Kaikohe (Ohaeawai used)	0.5 mm				
Kerikeri	13.0 mm				

River flows

All flow stations that have established drought flow levels are recording flows below these levels (DMF). Some stations in the Wairua and Waitangi catchments are currently the lowest they have been on record, and others such as the Awanui, Kaihu and Mangakahia are rapidly approaching the lowest recorded flows once again. Long term and short-term rainfall that is currently forecast is not likely to have significant impact on river flows.

Public water supply river flows (litres per second: l/s) as of 12pm 08 April 2020					
FNDC		WDC		KDC	
Awanui	227	Hatea	70	Kaihu	630
Wairoro	~ 2 D/S	Ruakaka	16		
Waitangi	380	Ahuroa	~ 55		
Puketotara	111				
Petaka	0.35				

Groundwater levels

Data has been compiled for an assessment to be carried out of risk of salt water intrusion into the Russell and Ruawai aquifers.

An increased frequency of groundwater level, conductivity and chloride has begun in these aquifers, with fortnightly measurements carried out.

Soil moisture deficits

No new information