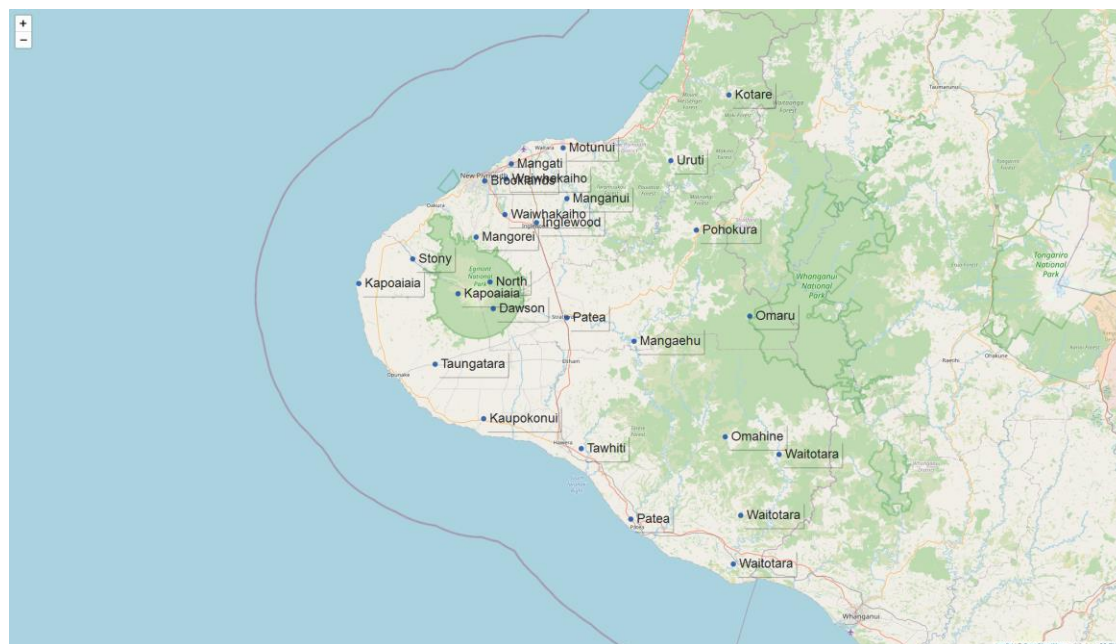


# Taranaki Regional Council Monthly Rainfall and Environmental Data Report for July 2022

Provisional Data Only. Note: some sites record a number of parameters

## 1. Rainfall at 27 sites throughout the region



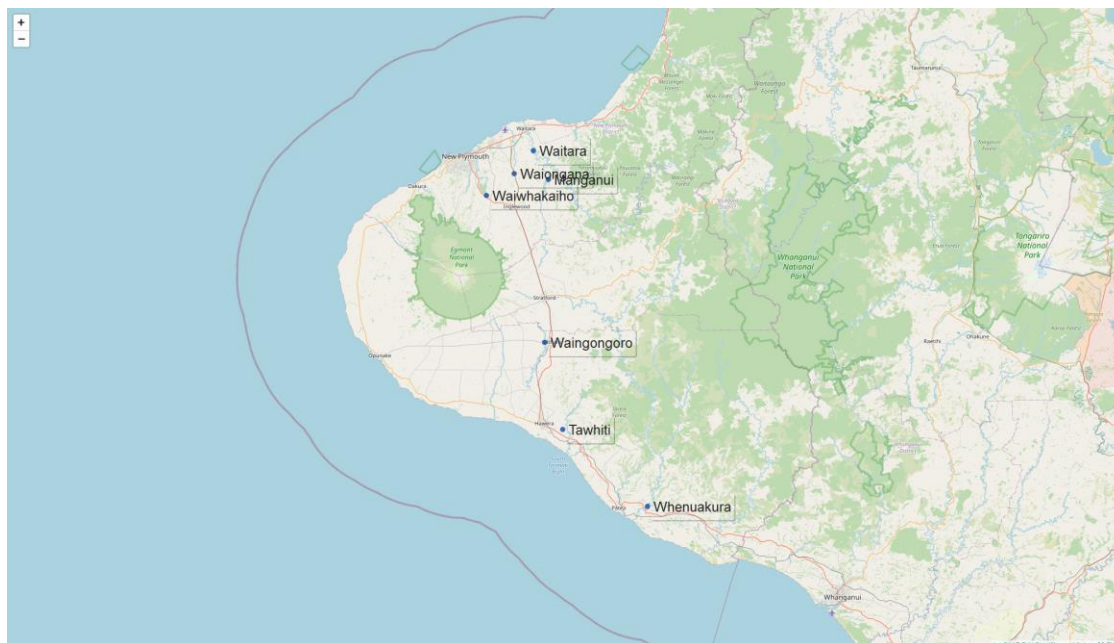
Map1: Rain gauge sites

Table 1: Rainfall monthly and year to date totals at 27 rain gauge sites in Taranaki.

Hydro_Sites	July			Year to Date			Records Began
	# Zero Rain days	Total Rainfall (mm)	% of typical month	Total to date (mm)	% of typical year to date	% of typical full year	
North Egmont at Visitors Centre	6	1196.0	179.9	4111.000	113.9	61.1	1991
Dawson Falls	4	1418.5	296.4	4521.000	178.9	100.5	1933
Kahui Hut	3	1117.0	215.5	3289.000	122.0	67.0	2006
Mangorei Upper at Forest Hill	5	629.0	154.2	2575.000	133.9	72.0	2017
Waiwhakaiho at Hillsborough	8	341.0	194.7	1310.500	127.9	74.2	2012

	July			Year to Date			
Hydro_Sites	# Zero Rain days	Total Rainfall (mm)	% of typical month	Total to date (mm)	% of typical year to date	% of typical full year	Records Began
Brooklands Zoo at New Plymouth	4	282.2	178.2	1137.400	130.4	73.7	2011
Mangati at SH3	7	254.8	198.3	1093.600	137.2	78.9	2013
Motunui M39 at Weston W3	9	251.6	158.4	1079.843	120.0	68.5	1998
Waiwhakaiho at Egmont Village	8	454.0	203.3	1829.500	143.3	77.9	1991
Manganui at Everett Park	8	341.0	169.3	1332.000	116.8	64.6	1987
Inglewood at Oxidation Ponds	8	402.0	175.9	1526.500	123.3	66.3	1999
Patea at Stratford	9	369.5	186.1	1357.000	128.4	70.3	1998
Mangaehu at Bridge	7	260.5	180.2	1175.000	140.0	76.2	1998
Kotare at OSullivans	5	354.5	172.3	1244.500	109.3	57.9	1998
Uruti at Kaka Rd	8	356.0	181.9	1392.000	121.6	64.0	1991
Pohokura Saddle	7	289.5	157.1	1185.000	115.5	60.8	1991
Stony at Mangatete Bridge	5	336.0	185.4	1478.500	140.7	78.8	2004
Kapoaiaia at Lighthouse	7	275.6	209.9	1426.800	200.8	117.6	1930
Taungatara at Eltham Rd	4	298.0	190.7	1325.500	162.9	89.6	2005
Kaupokonui at Glenn Rd	8	196.5	170.0	961.500	154.4	85.2	1998
Tawhiti at Duffys	9	182.0	169.9	888.000	146.8	81.6	1993
Patea at Bore 3	11	164.4	145.4	914.400	145.9	80.1	2005
Omaru at Charlies	4	303.0	173.8	1223.500	130.0	71.0	2005
Omahine at Moana Trig	4	190.0	111.8	1096.500	116.8	64.6	2006
Waitotara at Rimunui Station	8	174.0	133.0	964.500	132.6	71.9	1993
Waitotara at Ngutuwera	9	176.0	142.7	911.500	132.2	72.0	1998
Waitotara at Hawken Rd	8	174.6	183.0	890.800	152.7	86.0	2016

## 2. River Flow at 8 sites in Taranaki

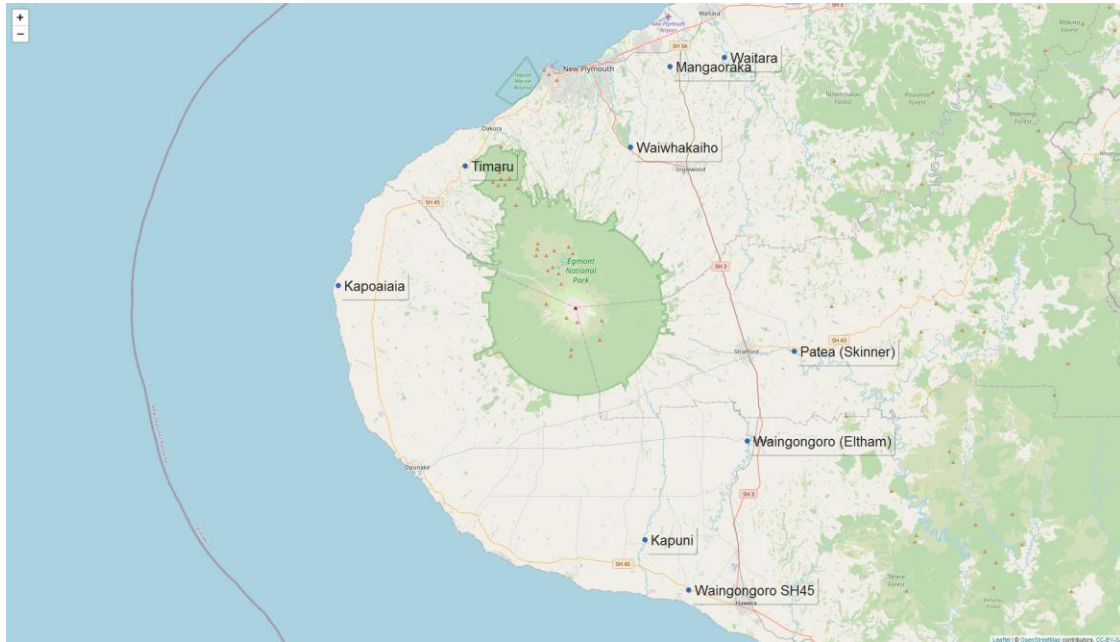


Map2: Flow sites

Table 2: Summary of maximum, minimum and mean flow for the current reporting month and the same month for all preceding years of record.

River and Site	Recorded flows (m3/sec)						Years of record	Records Began
	Maximum		Minimum		Mean			
	July 2022	July all previous years	July 2022	July all previous years	July 2022	July all previous years		
Waitara at Bertrand Rd	489.29	1314.78	-5.36	8.62	123.66	83.08	42	1980
Manganui at Everett Park	386.83	853.39	6.98	3.95	45.89	28.88	31	1991
Waiwhakaiho at SH3	181.64	336.74	2.60	1.87	16.49	10.68	42	1980
Waiongana at SH3a	58.65	118.86	1.19	0.56	6.34	4.07	42	1980
Waingongoro at Eltham Rd	40.52	139.98	1.15	0.70	5.69	4.98	47	1975
Punehu at Pihama*	45.60	48.84	0.67	0.38	3.47	2.12	52	1970
Tawhiti at Duffy's Farm	4.25	18.92	0.82	0.24	1.74	1.32	37	1985
Whenuakura at Nicholson Rd	89.07	323.38	5.89	2.44	17.88	16.48	39	1983

### 3. River Temperature at 8 sites throughout the region

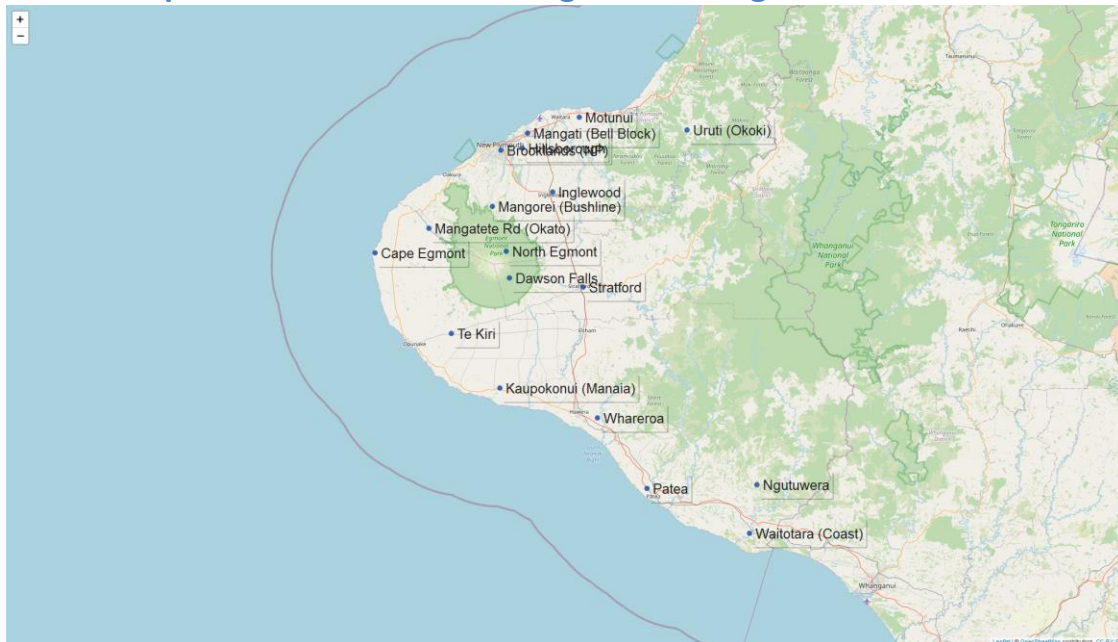


Map3: Temperature Measurement Stations

Table 3: Summary of maximum, minimum and mean river temperature for the current reporting month and the same month for all preceding years of record.

Monthly River Temperatures (°C)								
River and Site	Maximum		Minimum		Mean		Years of record	Records Began
	July 2022	July all previous years	July 2022	July all previous years	July 2022	July all previous years		
Kapoiaiaia	13.92	14.80	8.45	4.00	11.59	9.88	24	1998
Kapuni	12.50	13.40	8.44	3.00	10.71	9.21	23	1999
Mangaoraka	14.15	14.00	9.85	6.40	12.39	10.82	18	2004
Patea (Skinner)	12.49	12.50	8.28	4.70	10.63	9.42	18	2004
Timaru	13.18	14.14	9.02	6.06	11.42	10.14	8	2013
Waingongoro (Eltham)	12.21	12.16	8.38	4.80	10.50	9.42	18	2000
Waitara	12.76	13.50	8.84	4.00	11.32	9.34	35	1981
Waiwhakaiho	11.84	13.10	6.87	3.30	9.66	8.47	33	1980

#### 4. Air Temperature at 17 sites throughout the region



Map4: Temperature Measurement Stations

Table 4: Summary of maximum, minimum and mean air temperature for the current reporting month and the same month for all preceding years of record.

Monthly Air Temperatures (°C)								
Site	Maximum		Minimum		Mean		Years of record	Records Began
	July 2022	July all previous years	July 2022	July all previous years	July 2022	July all previous years		
Dawson Falls	13.05	13.17	-0.18	-2.06	6.28	4.94	7	2015
Brooklands (NP)	18.78	20.10	2.74	0.40	11.77	10.58	10	2012
Hillsborough	16.71	18.02	2.90	1.05	11.58	10.47	10	2012
Inglewood	15.59	17.57	-1.14	-2.77	9.43	8.71	11	2011
Cape Egmont	17.49	18.34	4.96	-0.13	12.79	11.39	10	2012
Kaupokonui (Manaia)	20.54	18.95	1.91	-0.60	11.64	10.43	7	2015
Mangati (Bell Block)	17.15	19.15	1.95	-1.16	11.80	10.66	9	2013
Mangorei (Bushline)	15.08	15.69	2.77	-1.26	9.80	8.42	5	2017
Motunui	16.75	18.47	2.12	0.49	11.37	10.49	5	2017

Monthly Air Temperatures (°C)								
	Maximum		Minimum		Mean			
Site	July 2022	July all previous years	July 2022	July all previous years	July 2022	July all previous years	Years of record	Records Began
Ngutuwera	18.67	17.25	3.72	0.42	10.72	10.09	4	2018
North Egmont	12.32	13.88	-0.90	-2.86	5.45	4.83	7	2015
Patea	19.81	20.02	4.00	-1.03	11.33	10.39	10	2012
Mangatete Rd (Okato)	16.61	20.10	2.53	1.83	11.17	10.39	6	2016
Te Kiri	17.84	17.32	3.07	0.35	10.95	9.79	7	2015
Whareroa	19.37	19.15	-0.38	-2.85	10.85	9.49	9	2013
Uruti (Okoki)	15.91	16.94	2.91	1.21	9.94	9.04	4	2018
Waitotara (Coast)	19.88	18.83	3.44	0.78	11.35	10.52	6	2016



## 5. Soil Moisture at 11 sites throughout the region



Table 5: Summary of maximum, minimum and mean soil moisture for the current reporting month and the same month for all preceding years of record.

Monthly Soil Moisture Extremes (%)								
Site	Maximum		Minimum		Mean		Years of record	Records Began
	July 2022	July all previous years	July 2022	July all previous years	July 2022	July all previous years		
Hillsborough	38.23	38.64	29.74	25.75	31.69	29.97	10	2012
Kaka Rd (Okoki)	45.27	49.05	38.53	38.55	40.94	43.21	11	2011
Kapoaiaia (Cape Egmont)	31.64	43.04	25.48	22.44	28.06	28.29	11	2011
Kaupokonui (Manaia)	49.85	49.43	38.30	31.70	43.20	38.18	11	2011
Kotare (Tongaporutu)	56.28	59.90	38.72	35.80	43.93	43.55	10	2012
Mangatete Rd (Okato)	33.15	39.86	18.52	12.82	21.29	19.78	6	2016
Motunui	33.77	36.60	29.70	27.39	31.43	30.85	9	2013
Patea	33.67	37.75	28.11	25.02	30.21	29.62	6	2016
Pohokura Saddle	56.77	57.95	43.48	37.79	49.03	45.23	8	2014
Rimunui (Waitotara Valley)	34.87	34.67	27.67	25.76	29.55	28.97	4	2018

Monthly Soil Moisture Extremes (%)								
	Maximum		Minimum		Mean			
Site	July 2022	July all previous years	July 2022	July all previous years	July 2022	July all previous years	Years of record	Records Began
Te Kiri	42.27	59.70	16.70	27.79	32.82	41.09	11	2011



## 6: Soil Temperature at 11 sites throughout the region

Table 6: Summary of maximum, minimum and mean soil temperature for the current reporting month and the same month for all preceding years of record.

Monthly Soil Temperatures (°C)								
	Maximum		Minimum		Mean			
Site	July 2022	July all previous years	July 2022	July all previous years	July 2022	July all previous years	Years of record	Records Began
Hillsborough	13.01	13.49	9.44	6.64	11.38	10.17	10	2012
Kaka Rd (Okoki)	11.94	11.92	9.87	5.57	10.85	9.38	11	2011
Kapoaiaia (Cape Egmont)	14.83	14.10	9.06	6.48	12.44	10.87	11	2011
Kaupokonui (Manaia)	12.90	12.40	9.90	6.10	11.42	9.99	11	2011
Kotare (Tongaporutu)	12.27	12.29	9.12	3.75	10.63	8.91	10	2012
Mangatete Rd (Okato)	12.90	12.90	7.60	6.60	10.74	9.79	5	2016
Motunui	13.63	12.23	9.64	6.63	11.76	9.80	9	2013
Patea	12.82	13.07	9.01	6.94	11.22	10.38	6	2016
Pohokura Saddle	11.52	11.83	8.07	6.07	9.97	9.04	8	2014
Rimunui (Waitotara Valley)	12.50	12.20	7.94	6.57	10.60	10.00	4	2018
Te Kiri	32.82	13.60	8.80	5.70	11.00	9.70	11	2011

## Summary of month's conditions

### Rainfall

July was very wet. Rainfall for July was on average 178.4% of the long-term average, and ranged from 111.8% at Omahine at Moana Trig to 296.4% at Dawson Falls. Rainfall was elevated relative to typical July values across the region, but particularly high from Cape Egmont across the Maunga and heading south-west towards Eltham.

Year to date rainfall is sitting between 109.3% (Kotare at OSullivans) and 200.8% (Kapoaiaia at Lighthouse) with an average of 136.2% of normal. All areas have received more than typical rainfall quantities for the year to end July, although Hill Country stations have only received moderately more rain than would be expected, whereas Ring Plain rain gauges are showing 30 to 50% more rain than normal. Cape Egmont remains at 200.8% of normal to date and has already received 117% of a typical years rain in only seven months.

### River Flow

Mean river flows for July were way up from June, and generally above typical July averages at around 145.9% of normal. The minimum flows were all well above typical July lows (at 74.3%). Maximum flows at the eight sites were mostly below (on average 41.1% of) typical July values.

### River Water Temperature

Mean river water temperatures were an average of 1.4°C above long-term July values. Nighttime-low water temperatures were on average 4°C above historic lows, this fits a general trend to warmer nighttime temperatures throughout the region. Peak temperatures were mostly below historic highs mostly due to the prolonged wet and cloudy conditions.

### Air Temperature

The average air temperature for the region, excluding Te Maunga, was 10.8°C, which is 1°C higher than the long term July average. Minimum air temperatures for July were on average 2.6°C above previously recorded lows.

### Soil Moisture

Mean soil moistures for July were close to typical values (as in June). On average, minimum soil moistures were 0.31% above previous lows, and the maxima slightly below previous highs. The average range for soil moisture was 11.0%.

### Soil Temperature

Like June, July soil temperatures were generally 1.3°C above the long-term average. Nighttime minimum soil temperatures were on average 2.9°C above recorded minima, and

maximum July soil temperatures were on average 1.9°C below long-term maximum July values.

Report date 05 August, 2022.