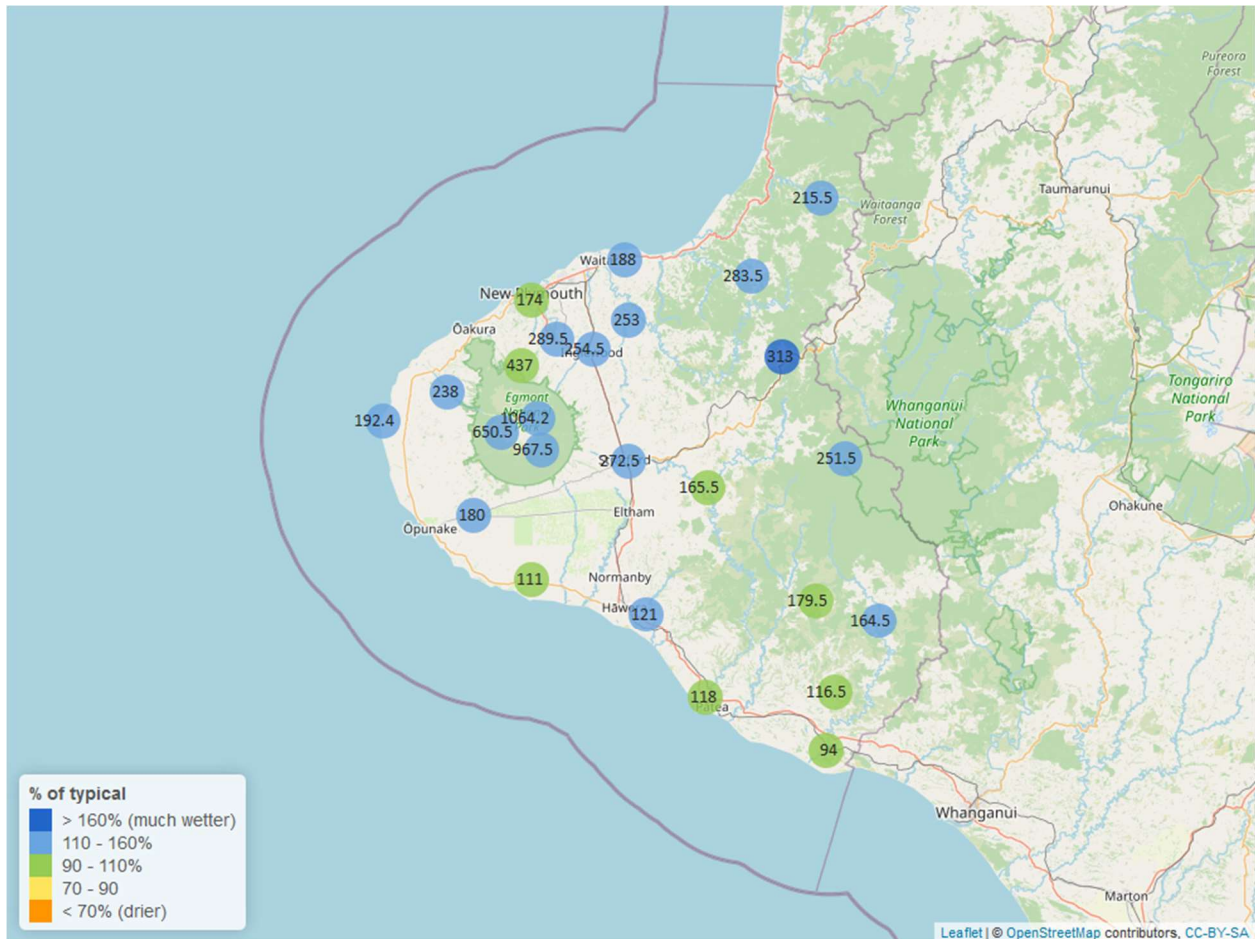


Taranaki Regional Council Monthly Rainfall and Environmental Data Report for August 2024

Note: The data presented here are provisional data only and may change as a result of quality control at a later date.

1. Rainfall

Map 1: August total rainfall (mm) and percentage of long-term mean (colour key).



Map 1a. Total rainfall 1 January to end August (mm) and percentage of long-term mean (colour key).

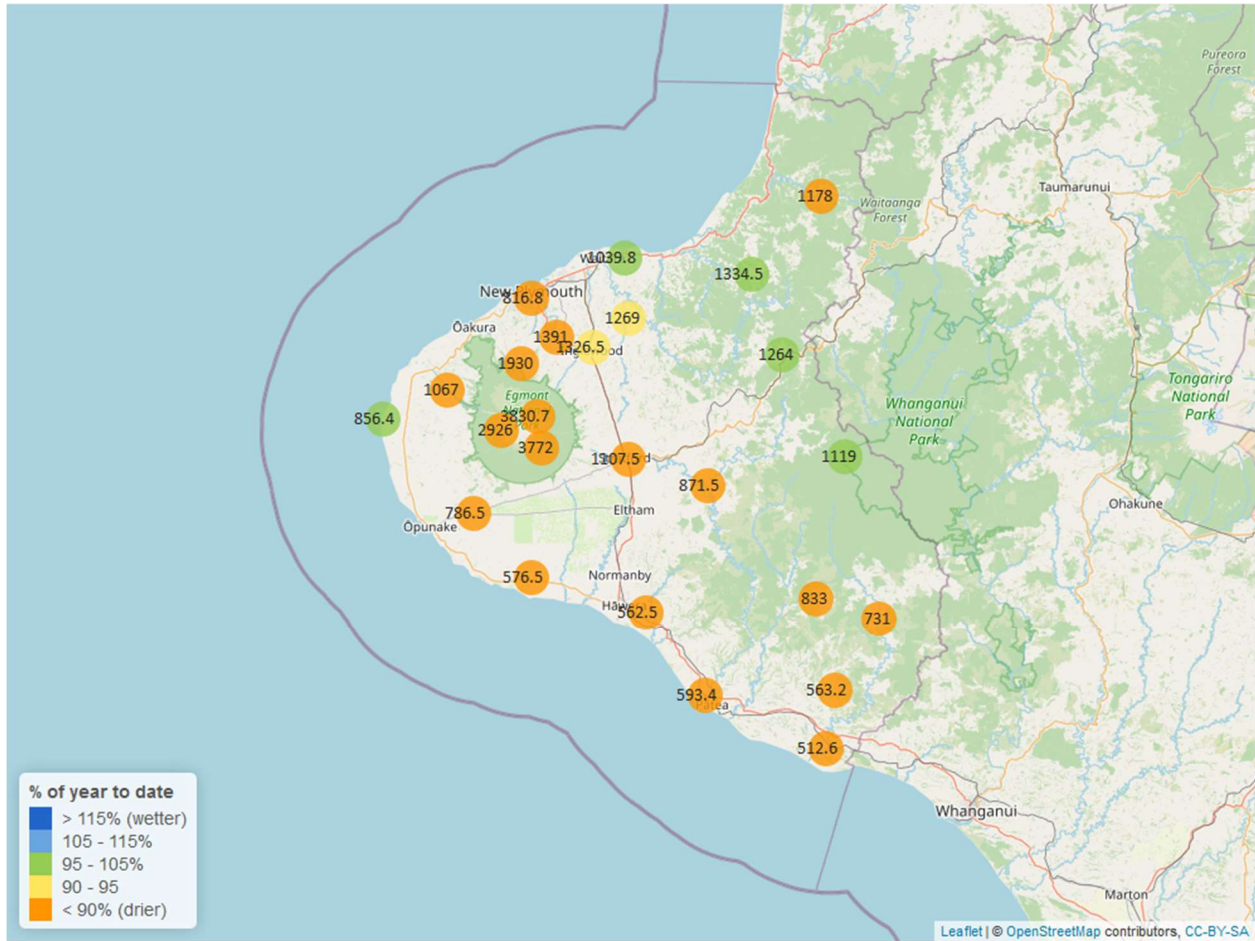


Table 1: Rainfall August and year-to-date totals for rain gauge sites in Taranaki.

Rain gauge	August			Year to Date			Records Began
	# days with rain	Total rain (mm)	% of typical month	Total to date (mm)	% of typical year to date	% of typical full year	
North Egmont at Visitors Centre	19	1064.2	156.0	3830.7	86.3	56.5	1994
Dawson Falls	18	967.5	145.5	3772.0	89.1	58.8	1998
Kapoiaiaia at Kahui Hut	24	650.5	123.4	2926.0	84.5	58.4	2005
Mangorei Upper at Forest Hill	18	437.0	105.5	1930.0	78.4	52.3	2017
Waiwhakaiho at Hillsborough	12	197.0	103.1	993.5	80.2	54.8	2012
Brooklands Zoo at New Plymouth	16	174.0	105.9	816.8	76.8	51.9	2011
Motunui M39 at Weston W3	16	188.0	124.6	1039.8	98.2	65.2	1998
Waiwhakaiho at Egmont Village	17	289.5	132.7	1391.0	89.4	58.5	1994
Manganui at Everett Park	16	253.0	131.2	1269.0	94.8	61.7	1994
Inglewood at Oxidation Ponds	17	254.5	115.9	1326.5	90.0	57.0	1999
Stony at Mangatete Bridge	18	238.0	122.6	1067.0	80.3	53.3	2004
Kapoiaiaia at Lighthouse	15	192.4	149.8	856.4	96.6	64.2	1998
Taungatara at Eltham Rd	15	180.0	120.6	786.5	75.7	52.2	2004
Kaupokonui at Glenn Rd	12	111.0	105.5	576.5	74.9	50.6	1997
Patea at Stratford	12	272.5	132.2	1107.5	88.7	58.5	1998
Mangaehu at Bridge	14	165.5	106.0	871.5	85.9	55.5	1998
Kotare at OSullivans	15	215.5	112.4	1178.0	88.3	54.6	1998
Uruti at Kaka Rd	16	283.5	144.4	1334.5	97.4	61.0	1994
Pohokura Saddle	12	313.0	164.7	1264.0	101.4	64.6	1994
Omaru at Charlies	18	251.5	140.7	1119.0	95.1	62.3	2005
Omahine at Moana Trig	16	179.5	109.1	833.0	75.2	49.1	2006

Rain gauge	August			Year to Date			Records Began
	# days with rain	Total rain (mm)	% of typical month	Total to date (mm)	% of typical year to date	% of typical full year	
Waitotara at Rimunui Station	15	164.5	131.5	731.0	82.6	54.1	1994
Waitotara at Ngutuwera	13	116.5	104.5	563.2	69.2	44.0	1998
Tawhiti at Duffys	12	121.0	123.1	562.5	78.3	51.9	1994
Patea at Bore 3	13	118.0	104.9	593.4	78.1	51.0	2005
Waitotara at Hawken Rd	10	94.0	91.3	512.6	63.3	47.4	2015

1.2 Long-term data patterns

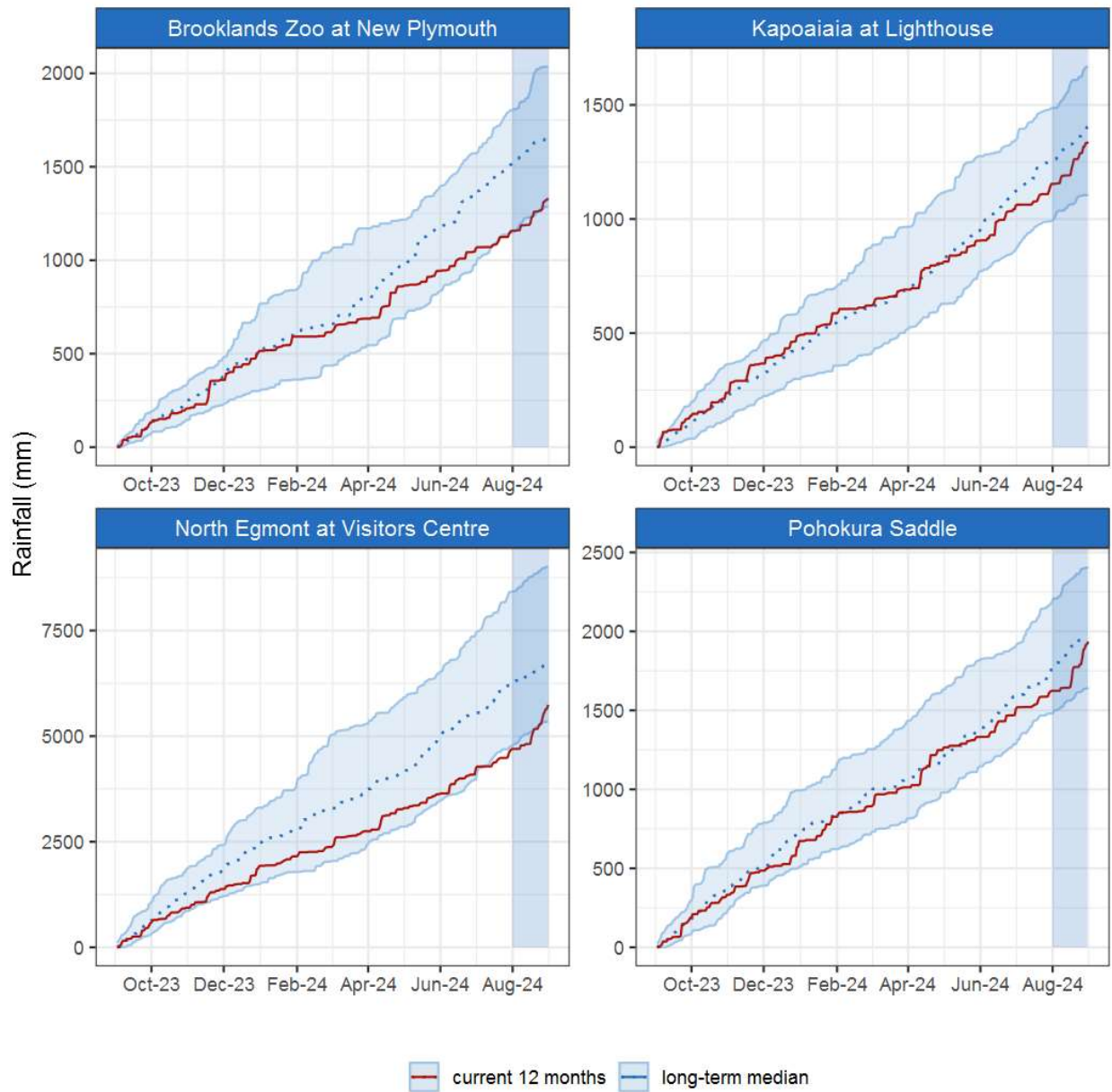


Figure 1.1: This year's and last year's data set in context of historic record at selected rain gauge sites in Taranaki.

1.3 Monthly Bar Charts

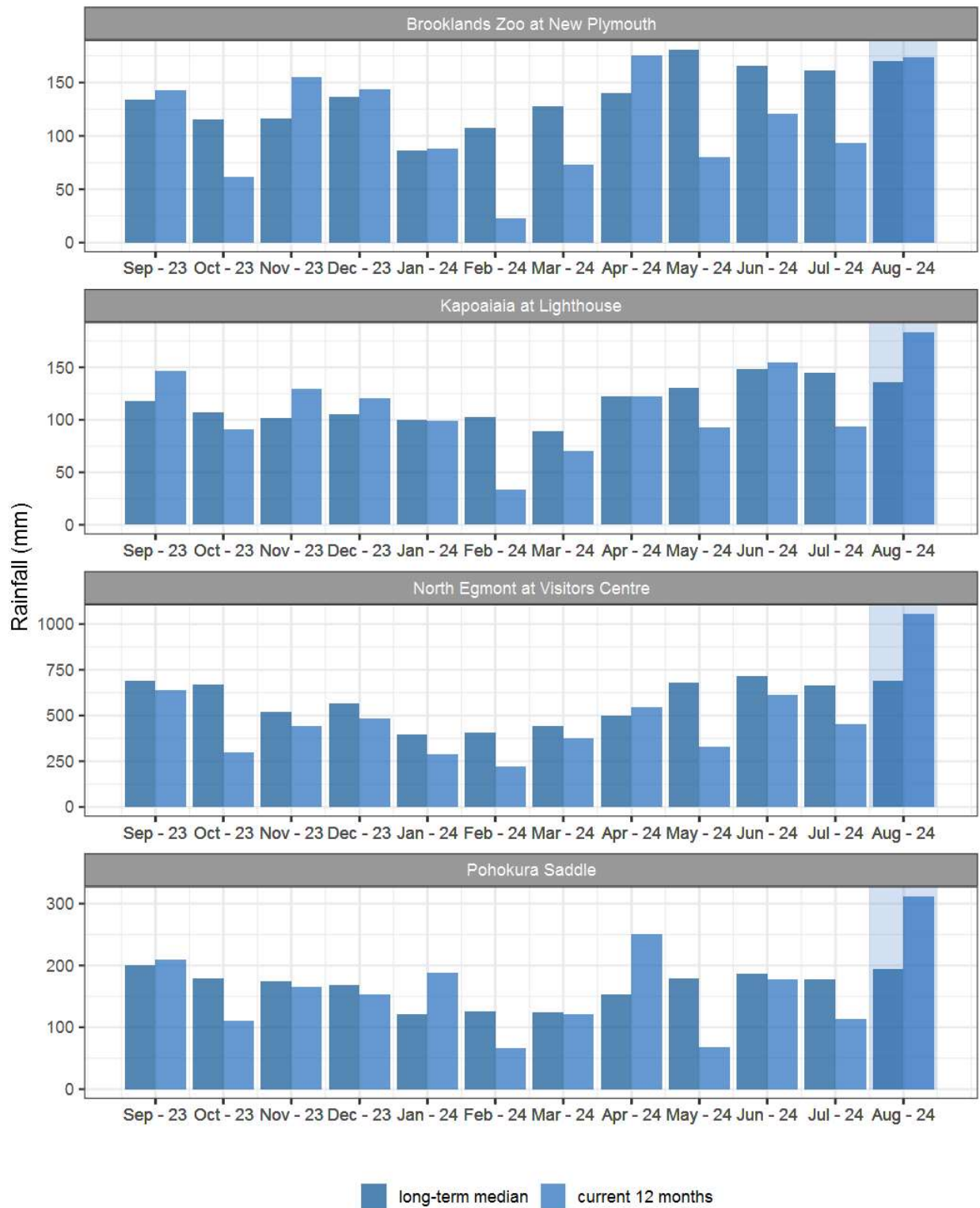


Figure 1.2: Monthly rainfall totals for this month and the mean of all previously recorded months.

2. River Flow

Map 2: August mean river flows (m³/sec), with difference as percentage of long-term mean.

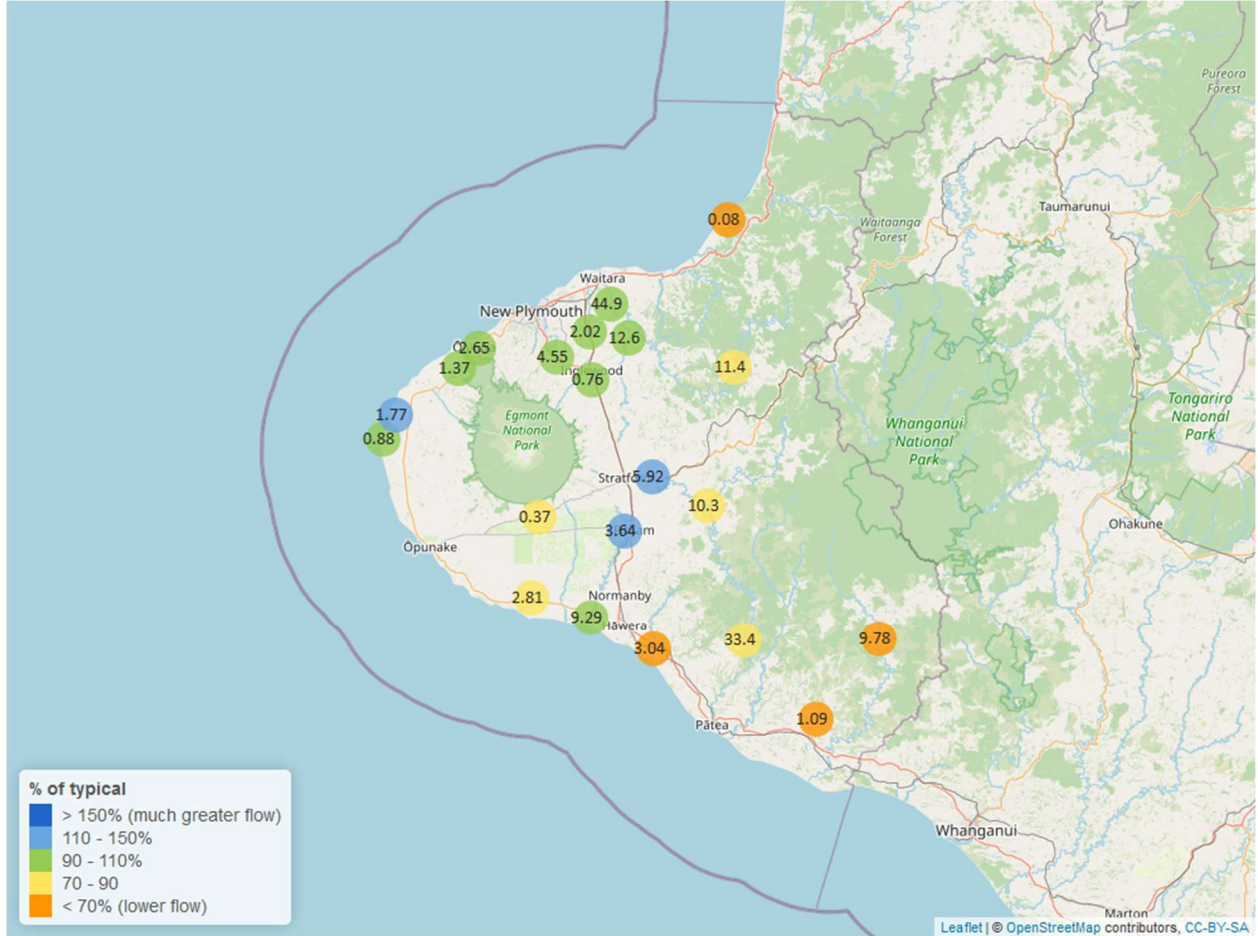
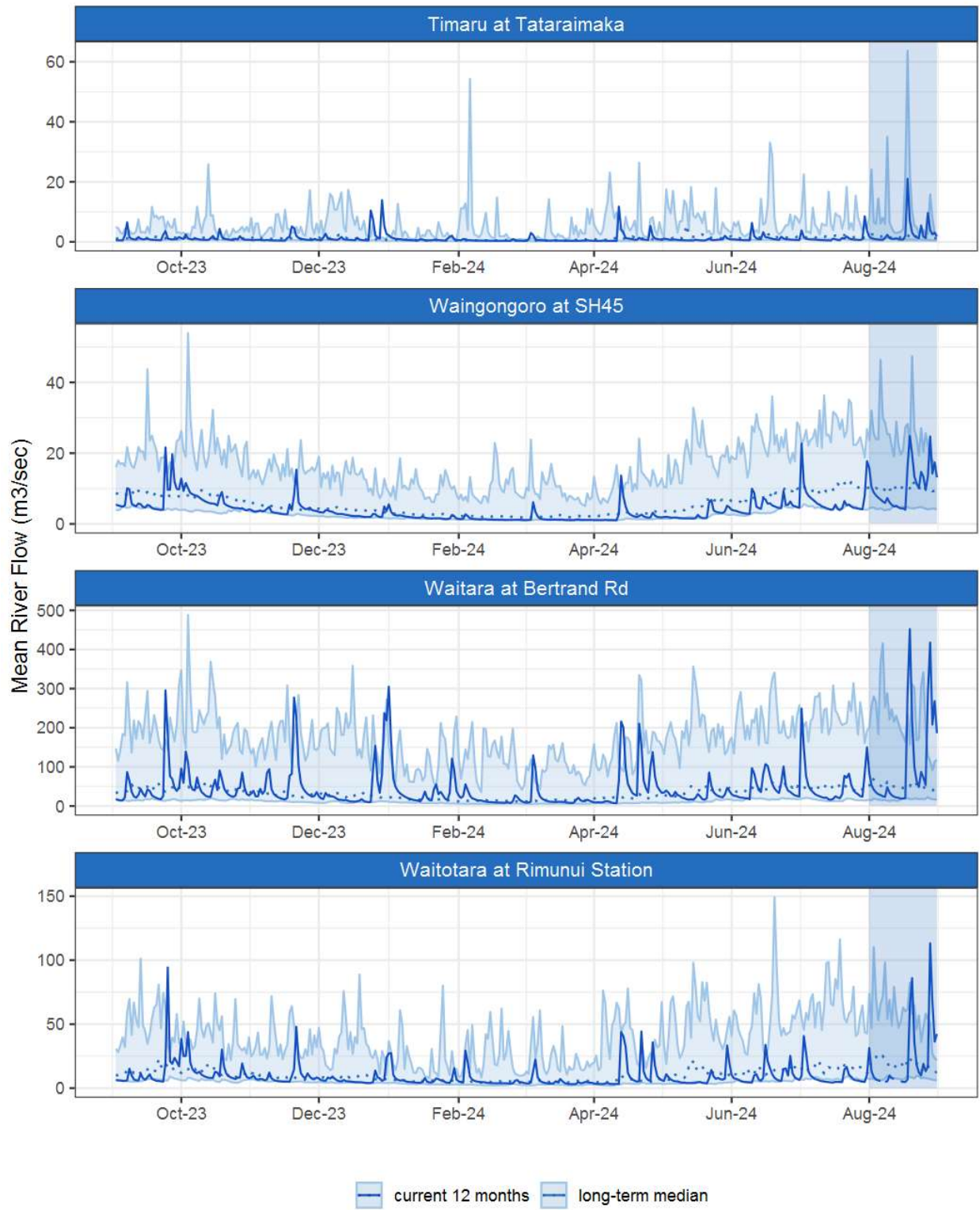


Table 2: Summary of high, low and mean flow for August and for August in all preceding years of record.

August 2024 - Recorded flows (m3/sec)								
River and Site	Highs		Lows		Mean		August maximum	Data years
	current month	historic	current month	historic	current month	historic		
Kapoaiaia at Lighthouse	5.24	3.66	0.60	0.47	0.88	0.98	14.88	38
Kaupokonui at Glenn Rd	11.08	10.67	1.57	1.57	2.81	3.38	33.40	42
Mangaehu at Bridge	103.20	52.29	3.65	4.47	10.30	12.01	155.29	46
Manganui at Everett Park	122.66	68.54	6.69	5.97	12.60	13.40	485.00	33
Mangawheroiti Above Intake W.W	1.48	1.35	0.24	0.21	0.37	0.44	4.95	11
Moumahaki at Johnston Rd	10.52	9.02	0.61	0.96	1.09	2.57	35.38	6
Ngatoro at SH3	7.66	4.38	0.45	0.39	0.76	0.79	43.09	36
Oakura at Victoria Rd	17.34	11.89	1.17	1.14	2.65	2.52	90.88	5
Patea at McColls Bridge	137.31	105.13	5.68	4.09	33.40	46.77	215.60	34
Patea at Skinner Rd	29.42	17.13	2.68	2.01	5.92	5.08	93.29	46
Tangahoe below Railway Bridge	13.71	21.52	1.74	3.22	3.04	7.71	47.43	6
Timaru at Tataraimaka	8.52	7.11	0.67	0.64	1.37	1.45	82.50	11
Waikaramarama at Bridge	0.85	1.46	0.03	0.03	0.08	0.15	5.18	6
Waingongoro at Eltham Rd	13.55	10.37	1.41	1.23	3.64	3.08	40.22	49
Waingongoro at SH45	24.94	26.05	4.21	4.22	9.29	9.96	54.41	43
Waiongana at SH3a	13.07	8.83	0.99	0.82	2.02	2.20	80.83	44
Waitara at Bertrand Rd	455.99	232.23	18.86	15.61	44.90	48.26	698.24	44
Waitara at Purangi Bridge	199.48	106.02	3.12	2.10	11.40	13.83	297.47	25
Waitotara at Rimunui Station	81.36	65.58	4.83	5.49	9.78	15.96	200.38	19
Waiwhakaiho at Egmont Village	32.70	25.38	2.84	2.54	4.55	5.05	206.21	44
Warea at Coast	9.15	4.49	0.97	0.61	1.77	1.47	21.12	7

2.2 Long-term data patterns



2.3 Monthly Bar Charts

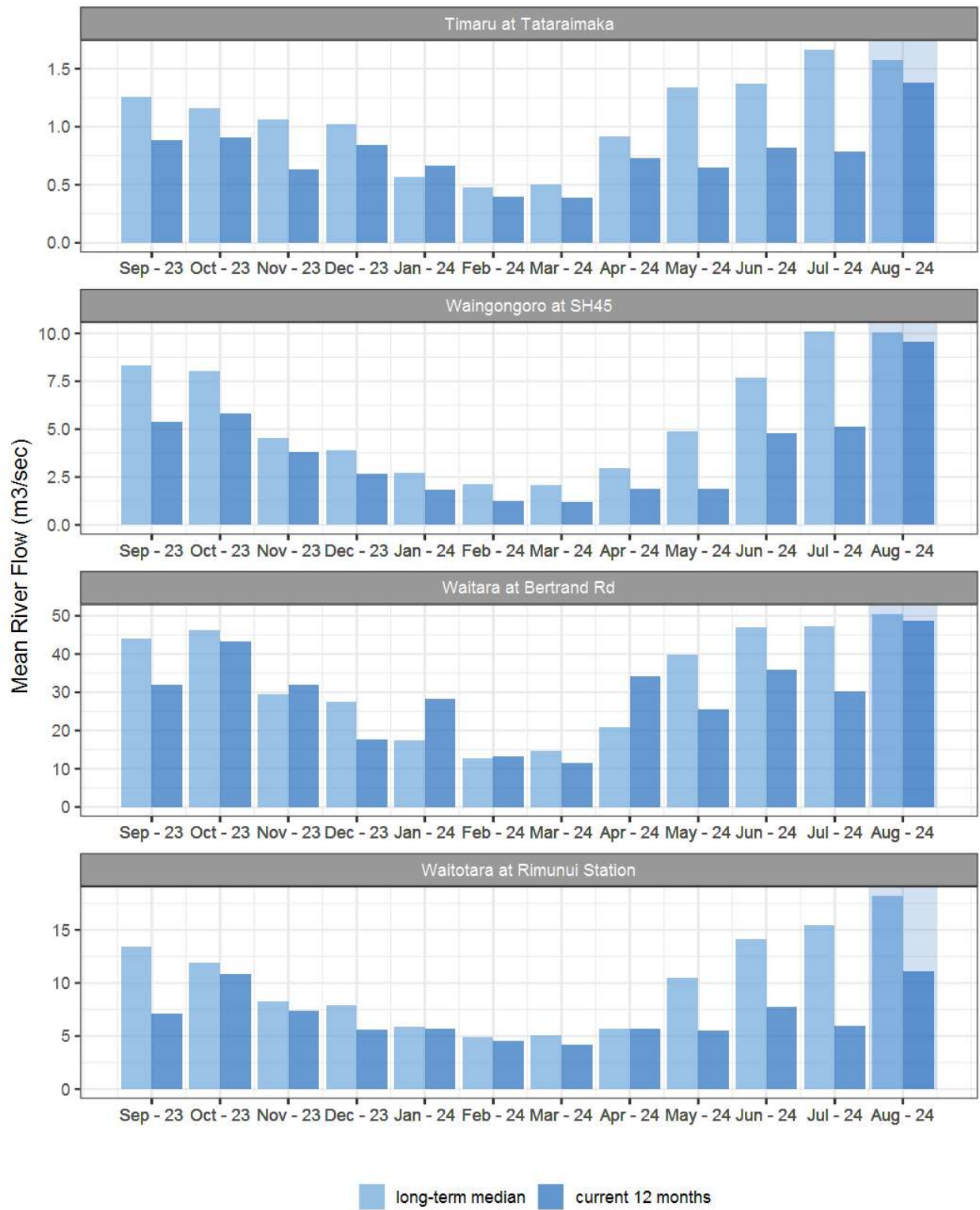


Figure 2.2: Monthly mean river flow for this month and the mean of all previously recorded months.

3. River Temperature

Map 3: August mean water temperature with difference to long-term mean (°C).

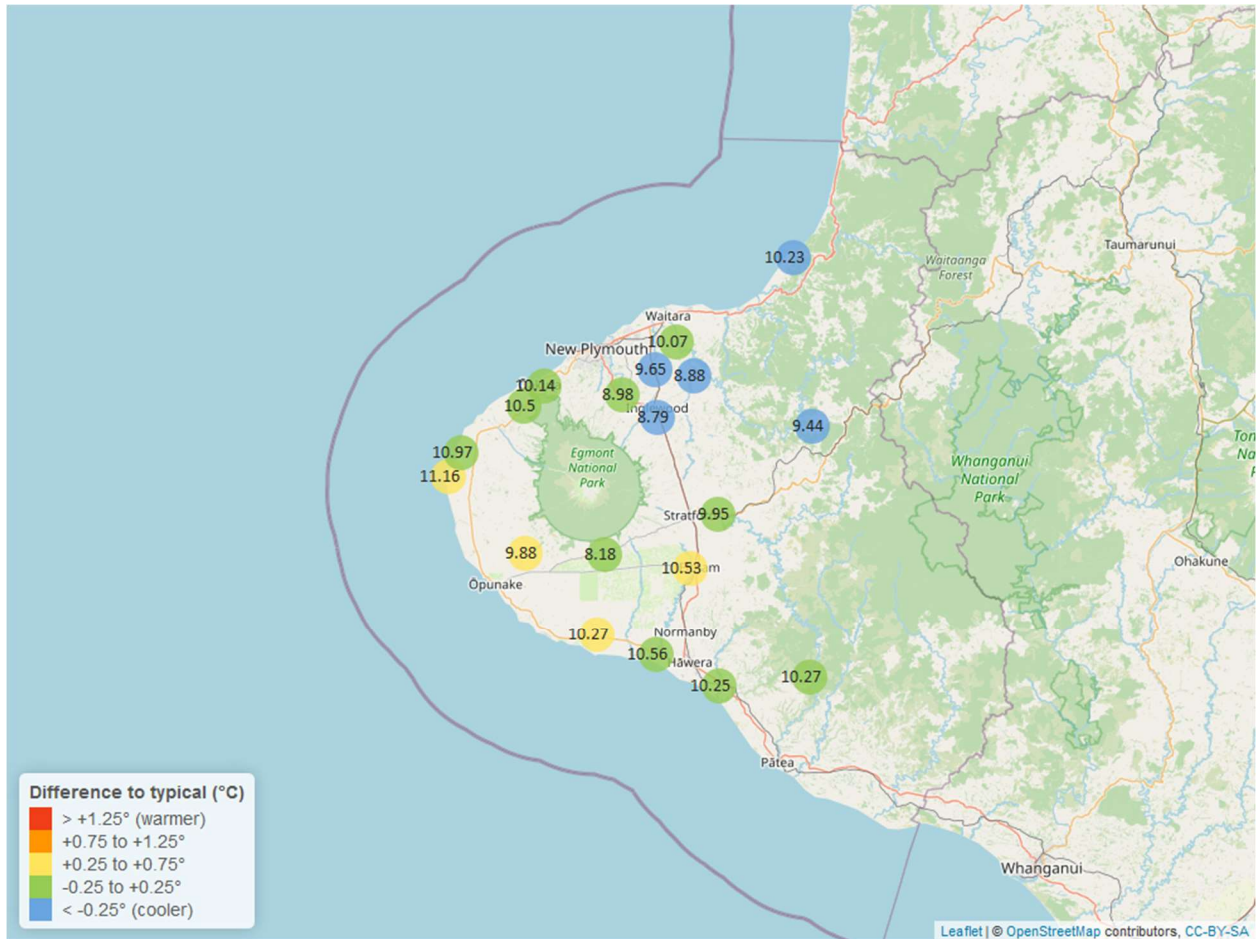


Table 3: Summary of high, low and mean river temperature for August and for August in all preceding years of record.

August 2024 - River Temperature (°C)								
River and Site	Highs		Lows		Mean		August maximum	Data years
	current month	historic	current month	historic	current month	historic		
Kapoaiaia at Lighthouse	13.48	13.00	8.33	7.94	11.16	10.81	14.42	26
Kaupokonui at Glenn Rd	12.96	12.16	7.48	7.51	10.27	9.95	14.77	32
Manganui at Everett Park	11.54	11.89	7.31	7.85	8.88	10.09	12.15	15
Mangawheroiti Above Intake W.W	10.28	9.55	6.64	6.39	8.18	8.13	11.07	11
Matau at Woolshed	11.88	11.90	6.95	7.30	9.44	9.83	12.63	7
Ngatoro at SH3	11.19	10.96	6.81	6.62	8.79	9.06	12.28	23
Oakura at Victoria Rd	12.19	12.17	8.52	8.15	10.14	10.19	13.00	5
Patea at McColls Bridge	11.33	11.52	9.50	9.70	10.27	10.46	11.75	10
Patea at Skinner Rd	12.24	11.47	8.37	7.77	9.95	9.90	13.20	20
Tangahoe below Railway Bridge	12.51	12.21	7.60	8.20	10.25	10.33	13.60	6
Timaru at Tataraimaka	12.49	12.41	8.76	8.39	10.50	10.62	13.26	9
Waiaua 2 at Barraclough Opua	12.38	11.94	6.87	6.71	9.88	9.36	14.53	5
Waikaramarama at Bridge	12.59	12.66	8.30	8.55	10.23	10.79	13.39	6
Waingongoro at Eltham Rd	12.49	11.57	8.92	8.01	10.53	9.98	13.71	19
Waingongoro at SH45	12.74	12.20	8.43	8.69	10.56	10.70	13.63	19
Waiongana at SH3a	12.14	12.11	7.64	8.10	9.65	10.29	12.81	13
Waitara at Bertrand Rd	12.37	11.82	8.61	8.21	10.07	10.16	12.76	34
Waiwhakaiho at Egmont Village	11.15	10.84	7.08	6.62	8.98	8.94	12.08	33
Warea at Coast	13.19	13.27	8.47	8.60	10.97	11.11	13.96	5

3.2 Long-term data patterns

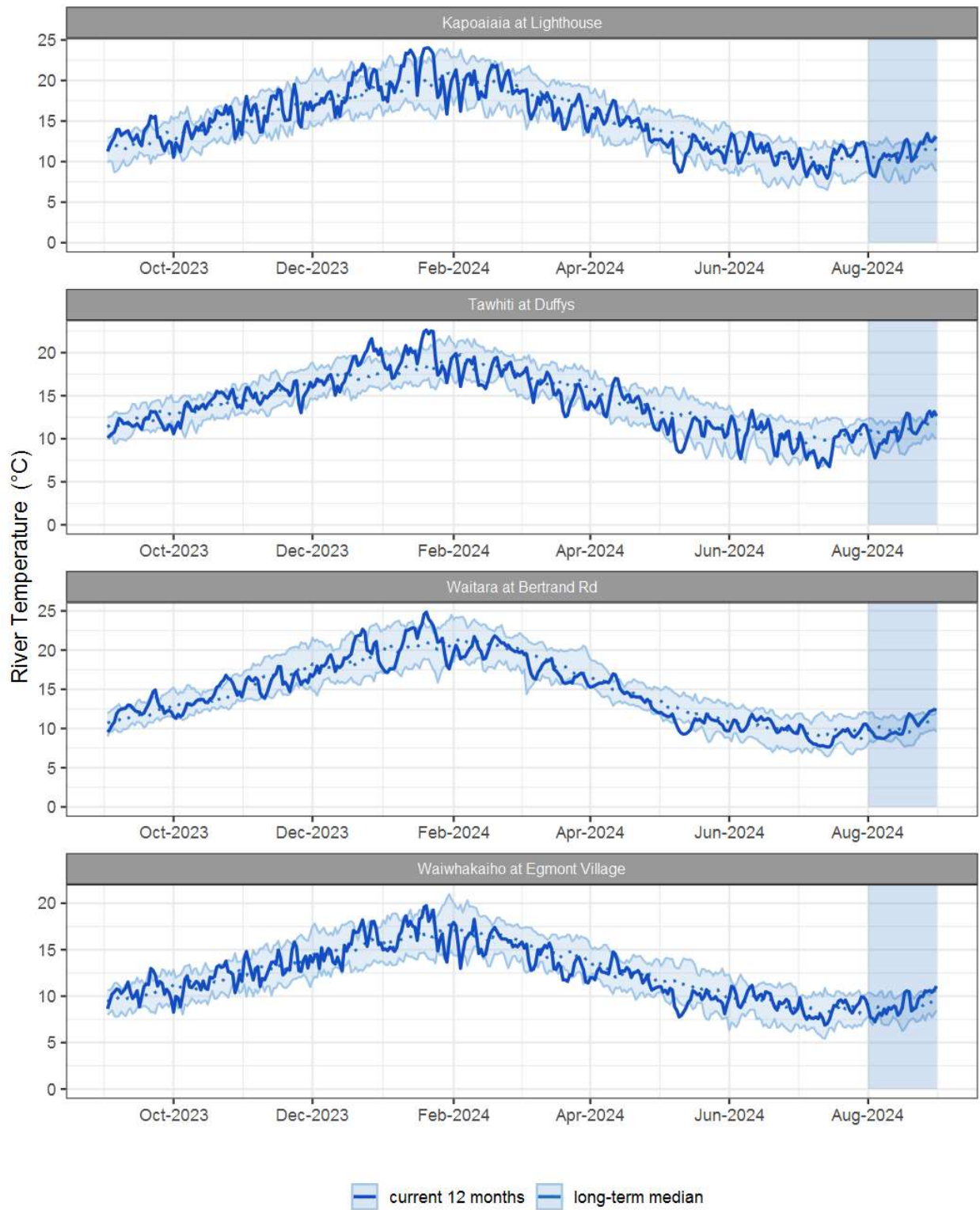


Figure 3.1: Running average river temperature for selected sites, set in context of the historic record.

3.3 Monthly Bar Charts

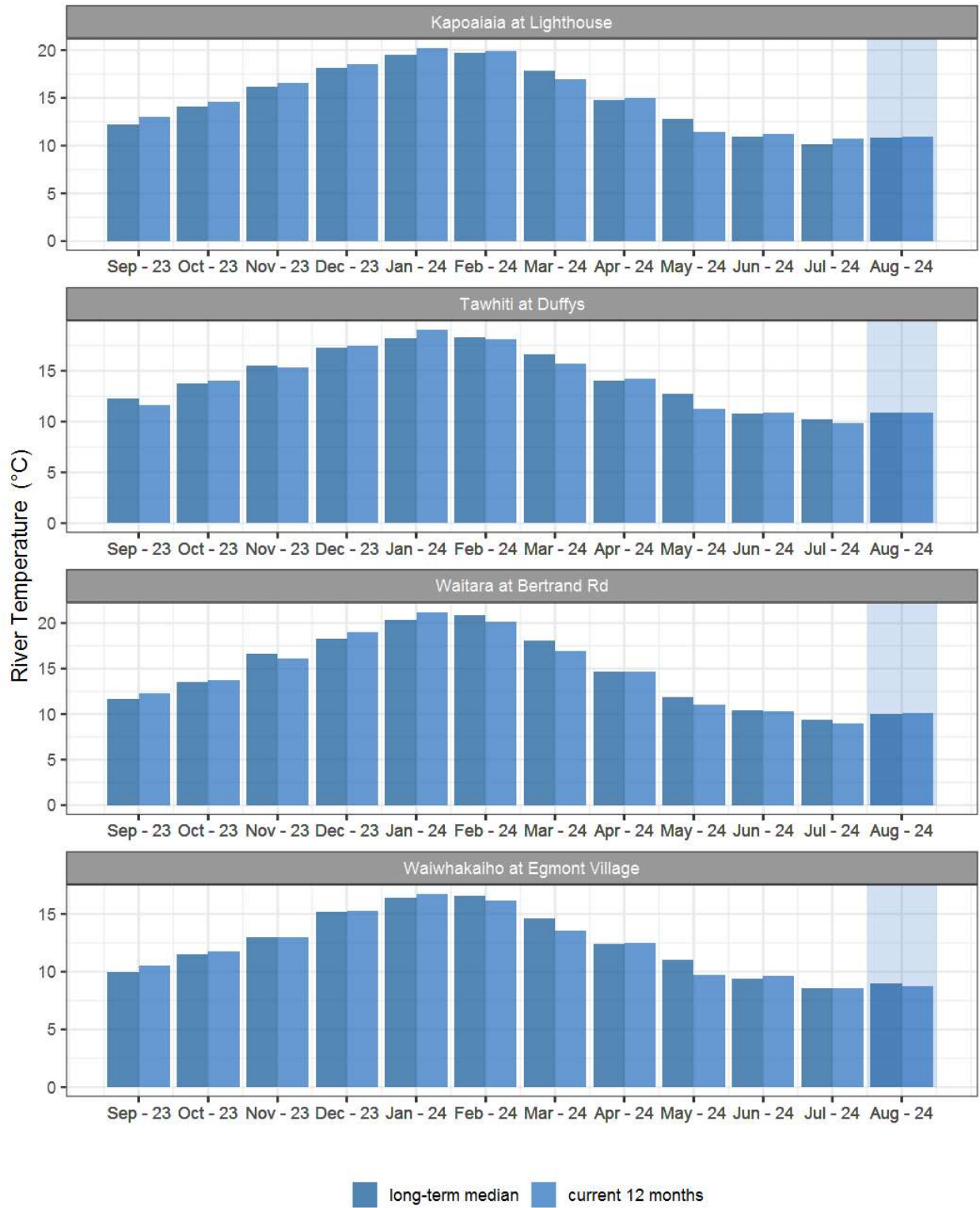


Figure 3.2: Monthly mean river temperature for this month and the mean of all previously recorded months.

4. Air Temperature

Map 4: August mean air temperature with difference to long-term mean (°C).

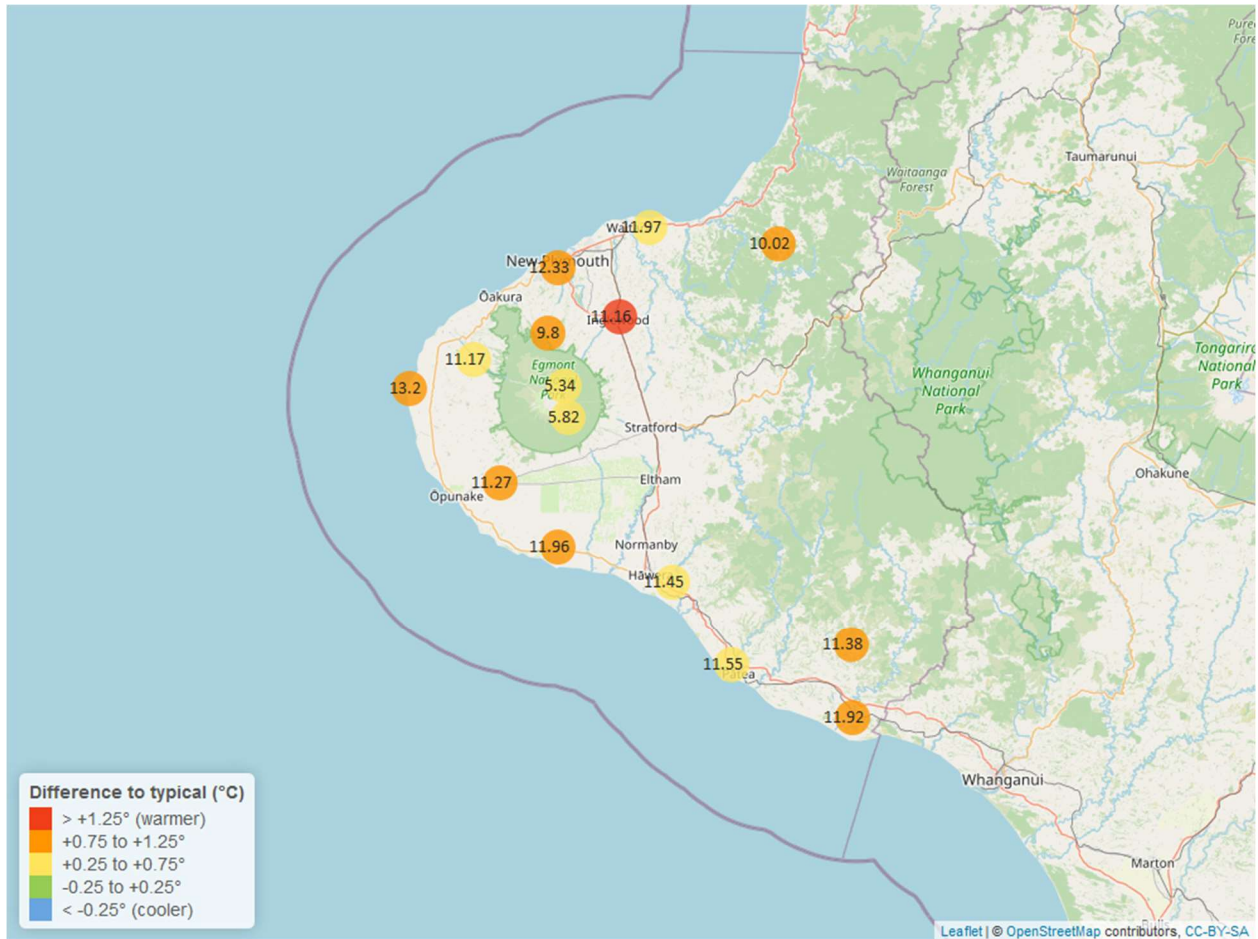


Table 4: Summary of high, low and mean air temperature for August and for August in all preceding years of record.

August 2024 - Air Temperature (°C)								
Site	Highs		Lows		Mean		August maximum	Data years
	current month	historic	current month	historic	current month	historic		
Brooklands Zoo at New Plymouth	15.71	16.03	5.18	5.48	12.33	11.21	17.65	12
Dawson Falls	10.96	9.59	1.75	0.42	5.82	5.25	12.99	9
Inglewood at Oxidation Ponds	14.77	14.30	2.80	2.95	11.16	9.64	15.77	12
Kapoaiaia at Lighthouse	15.37	14.96	7.64	6.35	13.20	12.19	16.51	12
Kaupokonui at Glenn Rd	15.97	15.34	5.20	4.38	11.96	11.18	19.47	9

August 2024 - Air Temperature (°C)								
	Highs		Lows		Mean			
Site	current month	historic	current month	historic	current month	historic	August maximum	Data years
Mangorei Upper at Forest Hill	12.80	12.04	5.00	4.43	9.80	8.81	14.09	7
Motunui M39 at Weston W3	14.89	14.70	4.73	4.99	11.97	11.26	15.65	7
North Egmont at Visitors Centre	9.41	9.05	0.83	0.31	5.34	5.00	10.87	9
Patea at Bore 3	15.80	14.81	6.03	4.97	11.55	10.91	18.85	12
Stony at Mangatete Bridge	14.03	14.33	5.66	5.43	11.17	10.57	14.97	8
Taungatara at Eltham Rd	14.61	14.34	5.12	4.52	11.27	10.43	16.73	9
Tawhiti at Duffys	15.97	15.03	2.18	1.73	11.45	10.76	19.15	11
Uruti at Kaka Rd	13.31	13.15	4.95	4.37	10.02	9.22	14.62	6
Waitotara at Hawken Rd	16.27	15.50	5.55	4.71	11.92	11.02	19.66	8
Weraweraonga at Mangawhio Rd	16.79	15.83	2.00	2.10	11.38	10.48	20.46	7

4.2 Long-term data patterns

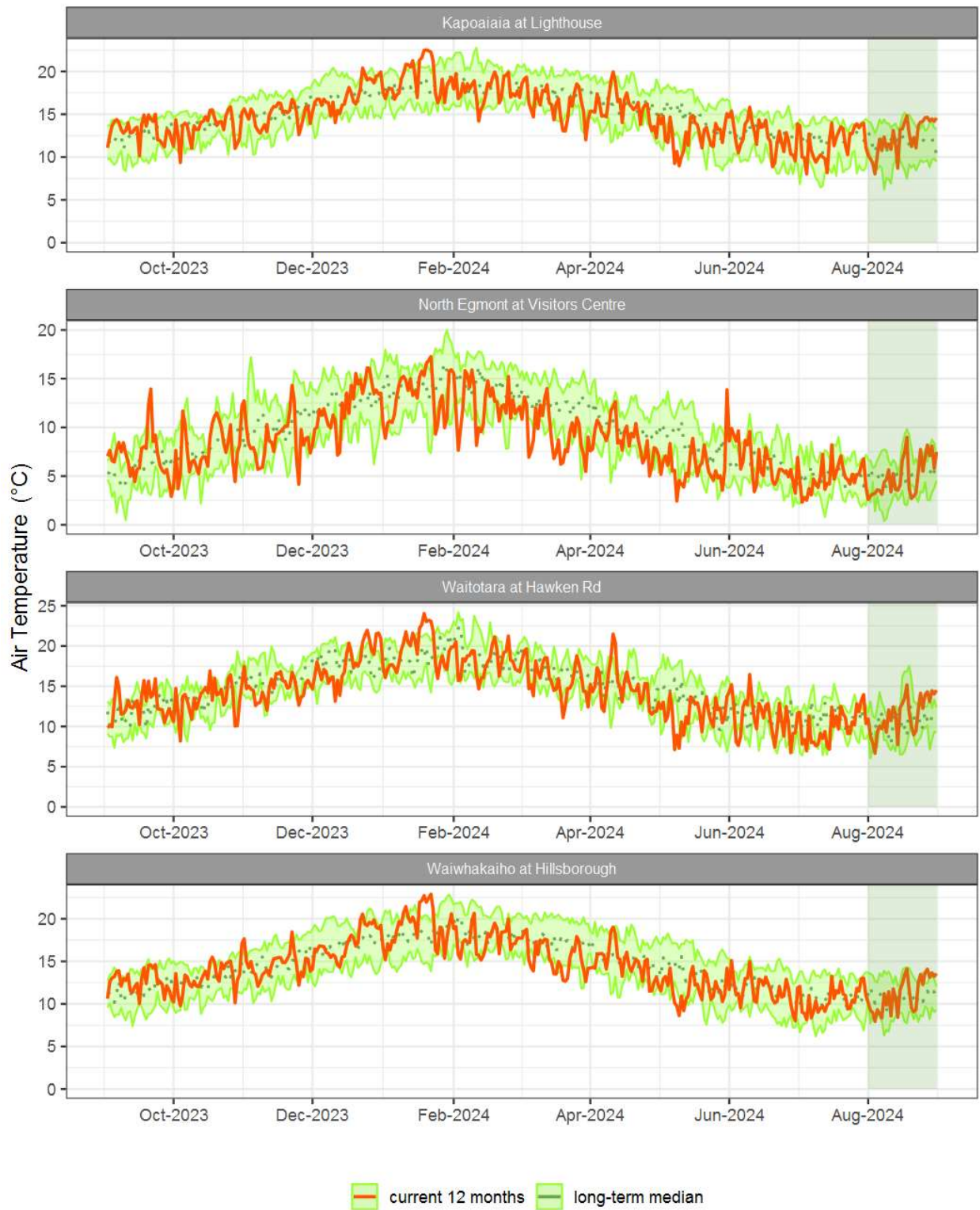


Figure 4.1: Running average air temperature for selected sites, set in context of the historic record.

4.3 Monthly Bar Charts

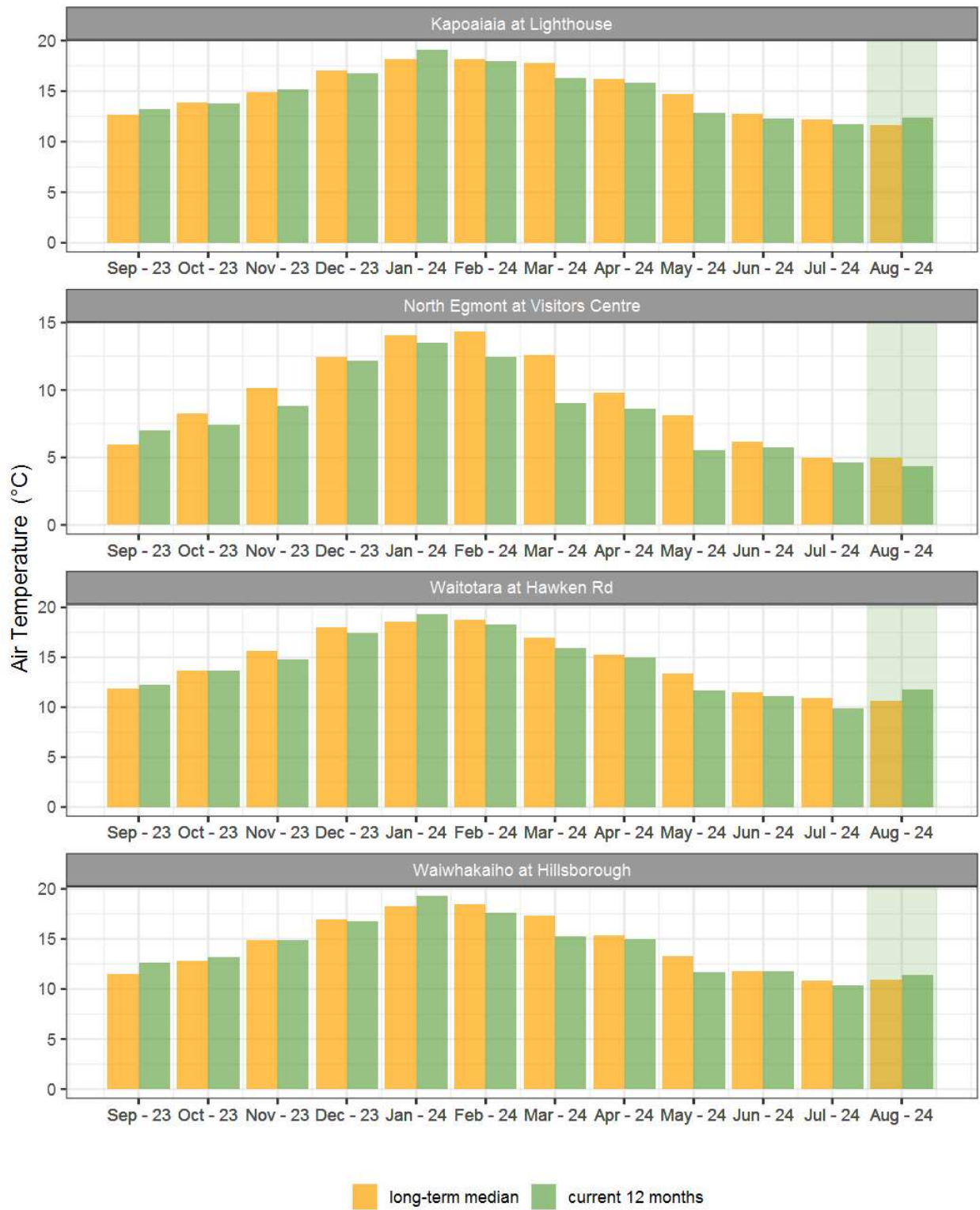


Figure 4.2: Monthly mean air temperature for August and the mean of all previously recorded months.

5. Soil Moisture

Map 5: August mean soil moisture content (%).

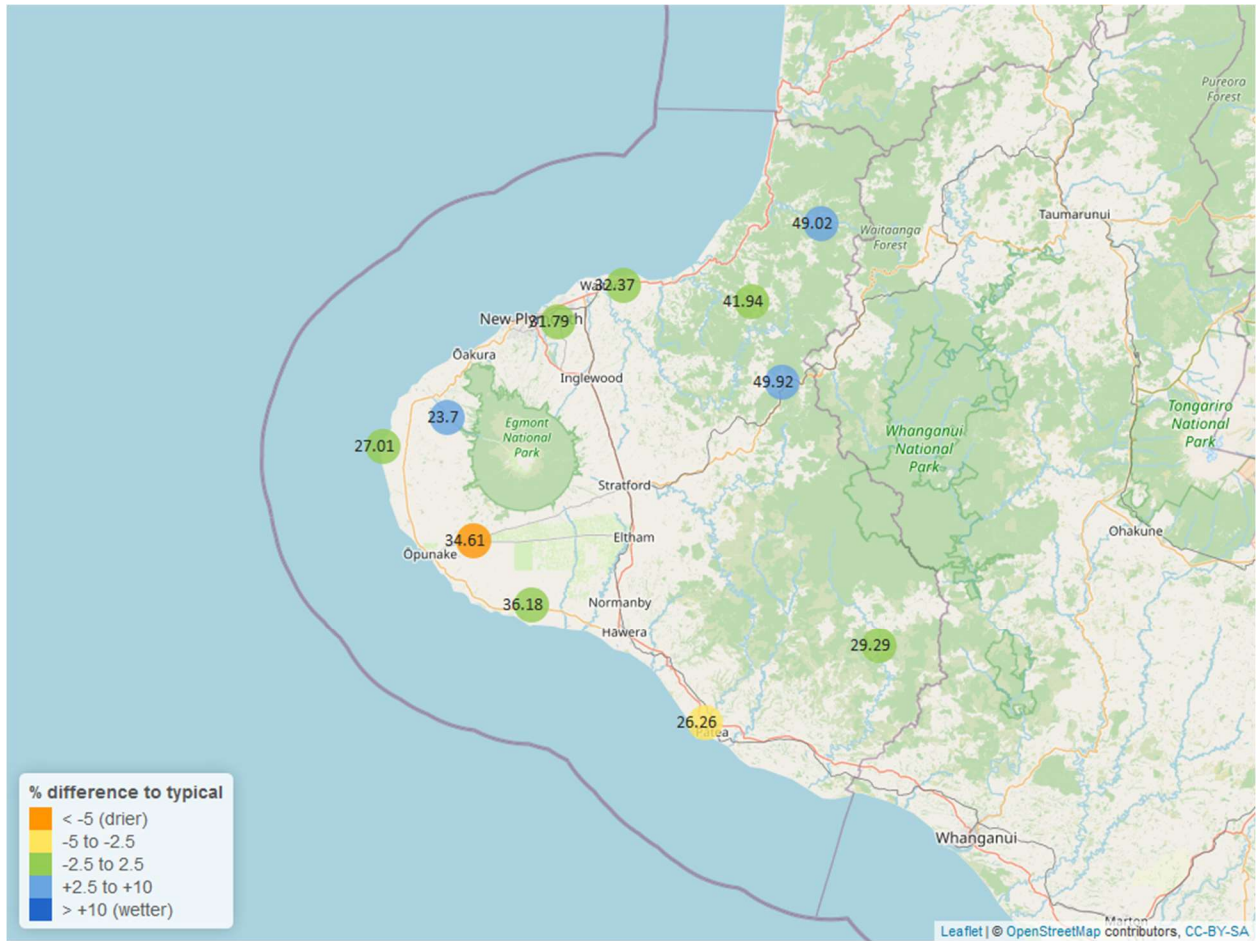


Table 5: Summary of high, low and mean soil moisture for August and for August in all preceding years of record.

August 2024 - Soil Moisture (%)								
Site	Highs		Lows		Mean		August maximum	Data years
	current month	historic	current month	historic	current month	historic		
Kapoaiaia at Lighthouse	28.01	38.39	26.07	23.68	27.01	28.59	28.90	17
Kaupokonui at Glenn Rd	38.26	46.20	34.99	32.67	36.18	37.79	40.30	13
Kotare at OSullivans	54.14	52.14	46.32	37.62	49.02	44.31	55.64	12
Motunui M39 at Weston W3	33.82	36.05	31.32	29.08	32.37	31.95	34.61	16
Patea at Bore 3	29.42	34.91	25.03	26.85	26.26	30.09	31.68	8
Pohokura Saddle	52.86	54.75	47.48	37.66	49.92	46.79	53.18	17
Stony at Mangatete Bridge	28.47	25.71	21.34	15.61	23.70	20.29	31.95	8
Taungatara at Eltham Rd	38.92	46.71	32.50	29.59	34.61	40.06	42.04	11
Uruti at Kaka Rd	43.24	47.64	41.06	39.86	41.94	42.84	43.34	13
Waitotara at Rimunui Station	31.79	31.52	28.23	26.40	29.29	29.19	33.34	7
Waiwhakaiho at Hillsborough	34.22	35.72	29.96	25.90	31.79	31.30	36.15	12

5.2 Long-term data patterns

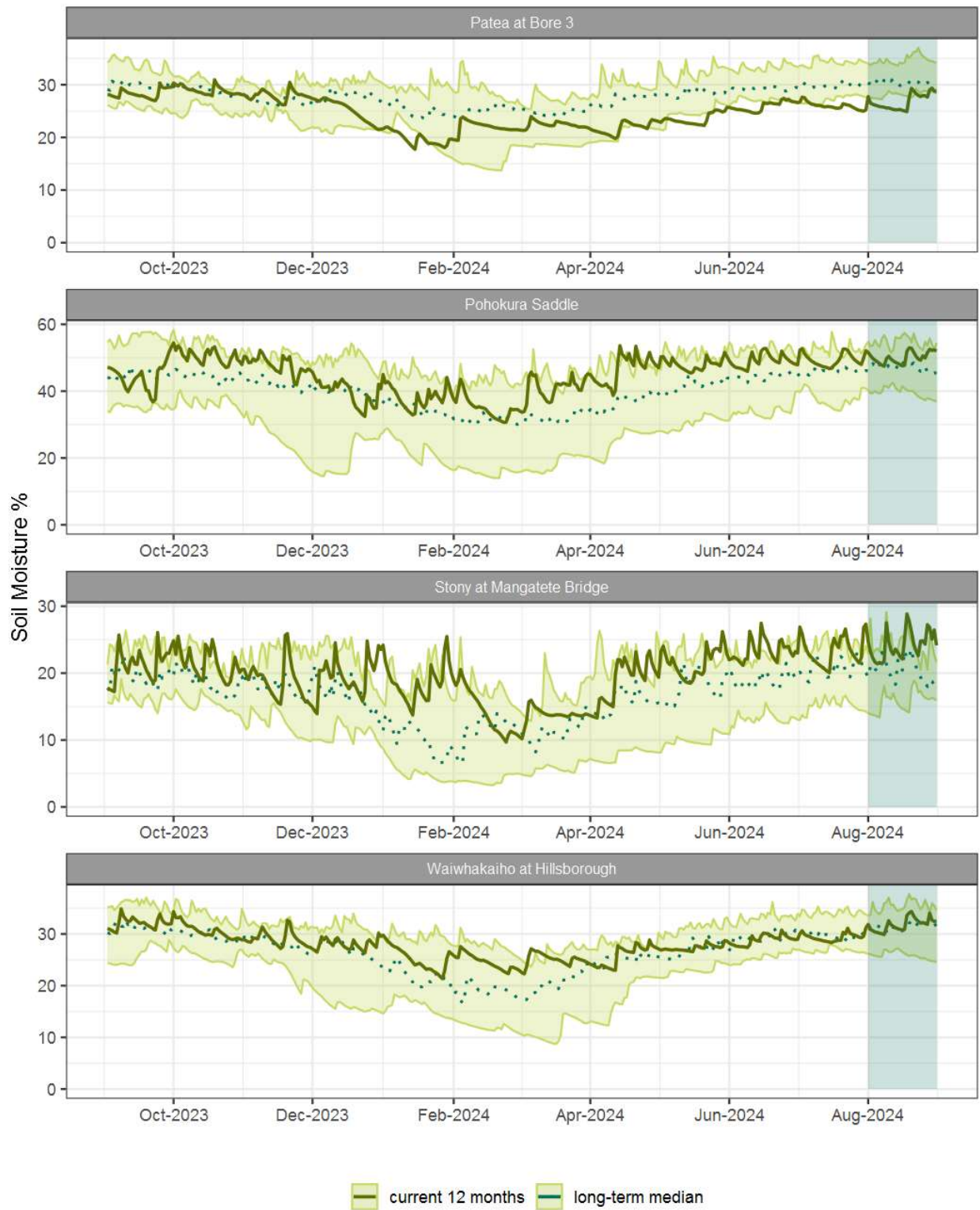


Figure 5.1: Running average soil moisture for selected sites, set in context of the historic record.

5.3 Monthly Bar Charts

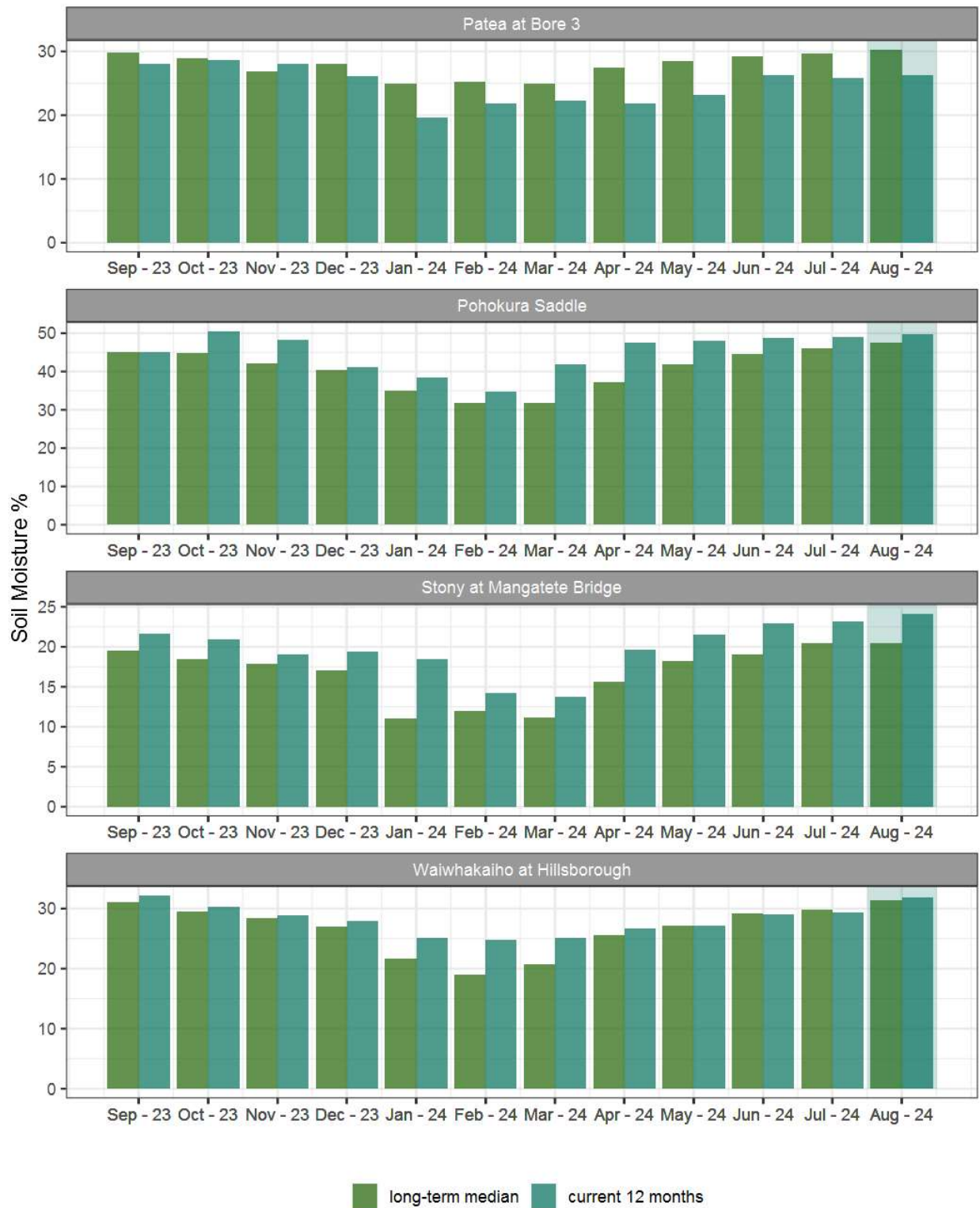


Figure 5.2: Monthly mean soil moisture for this month and the mean of all previously recorded months.

6. Soil Temperature

Map 6: August mean soil temperatures with difference to long-term mean (°C).

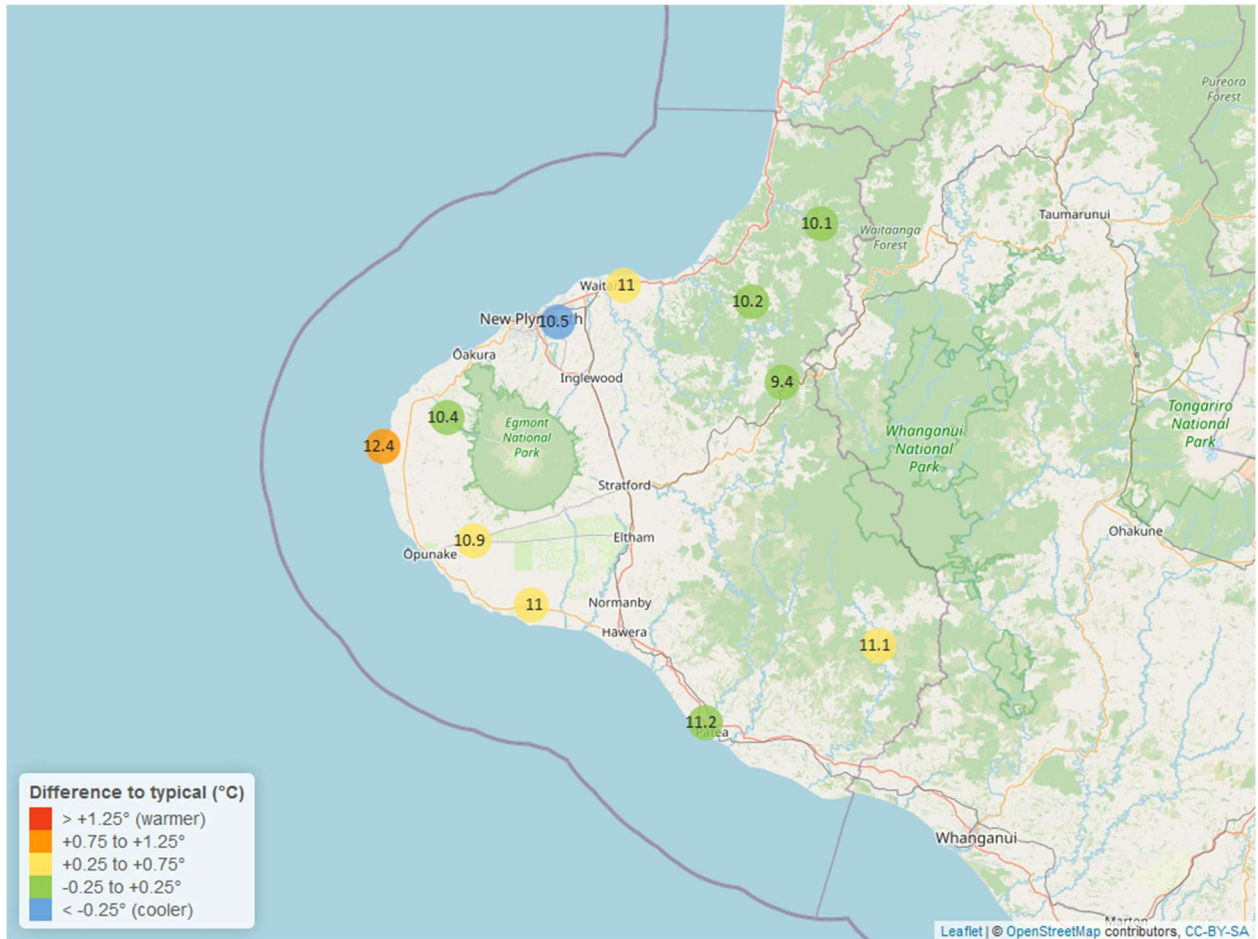


Table 6: Summary of high, low and mean soil temperature for August and for August in all preceding years of record.

August 2024 - Soil Temperatures (°C)								
Site	Highs		Lows		Mean		August maximum	Data years
	current month	historic	current month	historic	current month	historic		
Kapoaiaia at Lighthouse	15.71	13.21	9.24	9.08	12.4	11.40	16.84	19
Kaupokonui at Glenn Rd	13.37	12.50	9.37	8.90	11.0	10.70	13.96	13
Kotare at OSullivans	12.16	11.82	8.93	7.56	10.1	9.85	12.40	12
Motunui M39 at Weston W3	13.50	12.09	9.94	8.22	11.0	10.40	13.93	16
Patea at Bore 3	13.53	12.78	9.42	8.80	11.2	10.92	14.22	8
Pohokura Saddle	11.72	11.17	7.89	7.50	9.4	9.52	12.07	17
Stony at Mangatete Bridge	12.89	12.50	8.44	8.53	10.4	10.46	13.10	7
Taungatara at Eltham Rd	13.34	12.06	9.18	8.60	10.9	10.48	14.09	11
Uruti at Kaka Rd	11.99	11.98	9.50	8.06	10.2	10.21	12.21	13
Waitotara at Rimunui Station	13.67	13.17	8.57	8.50	11.1	10.78	14.41	7
Waiwhakaiho at Hillsborough	13.26	12.65	9.59	8.92	10.5	10.81	13.40	12

6.2 Long-term data patterns

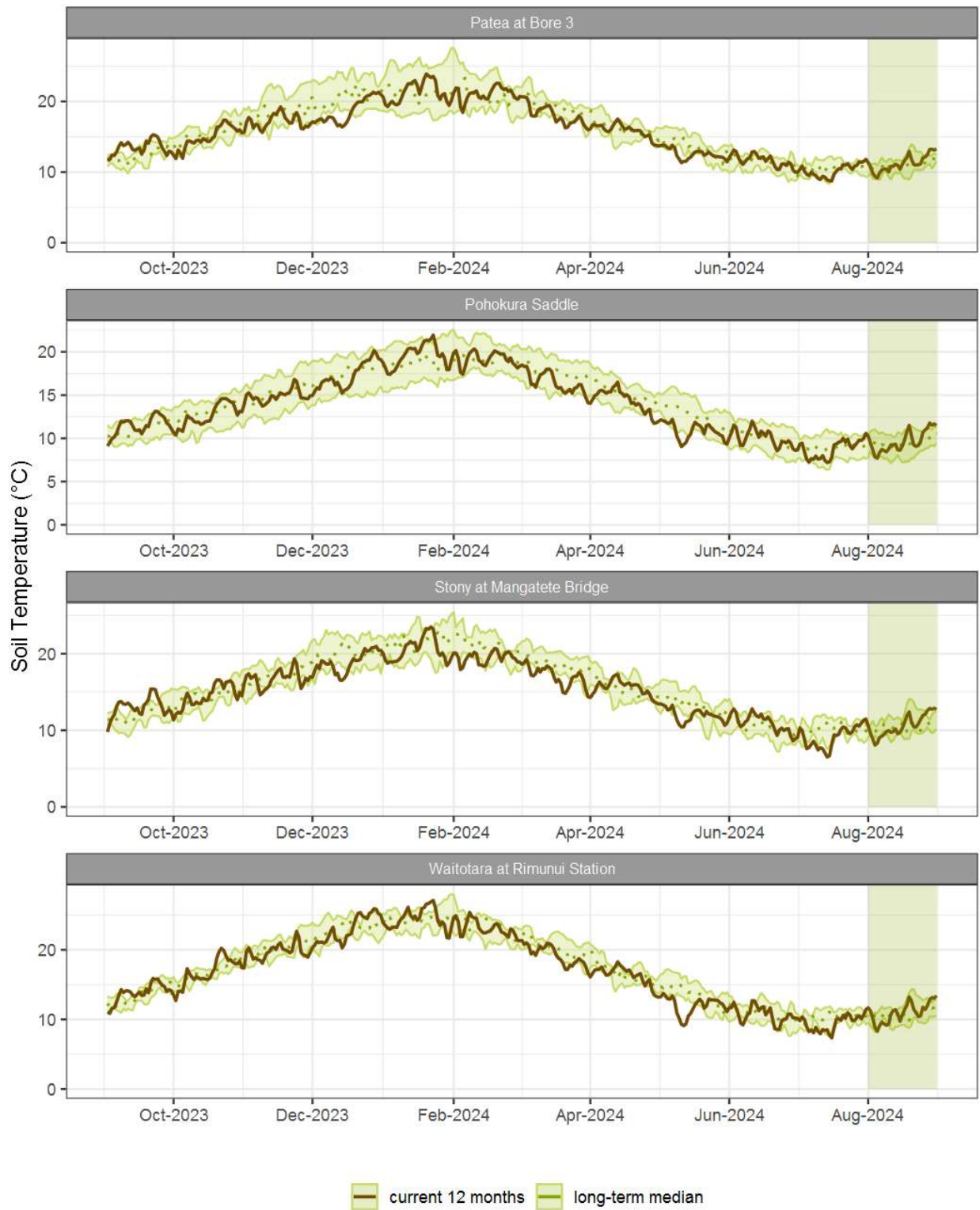


Figure 6.1: Running average soil temperature for selected sites, set in context of the historic record.

6.3 Monthly Bar Charts

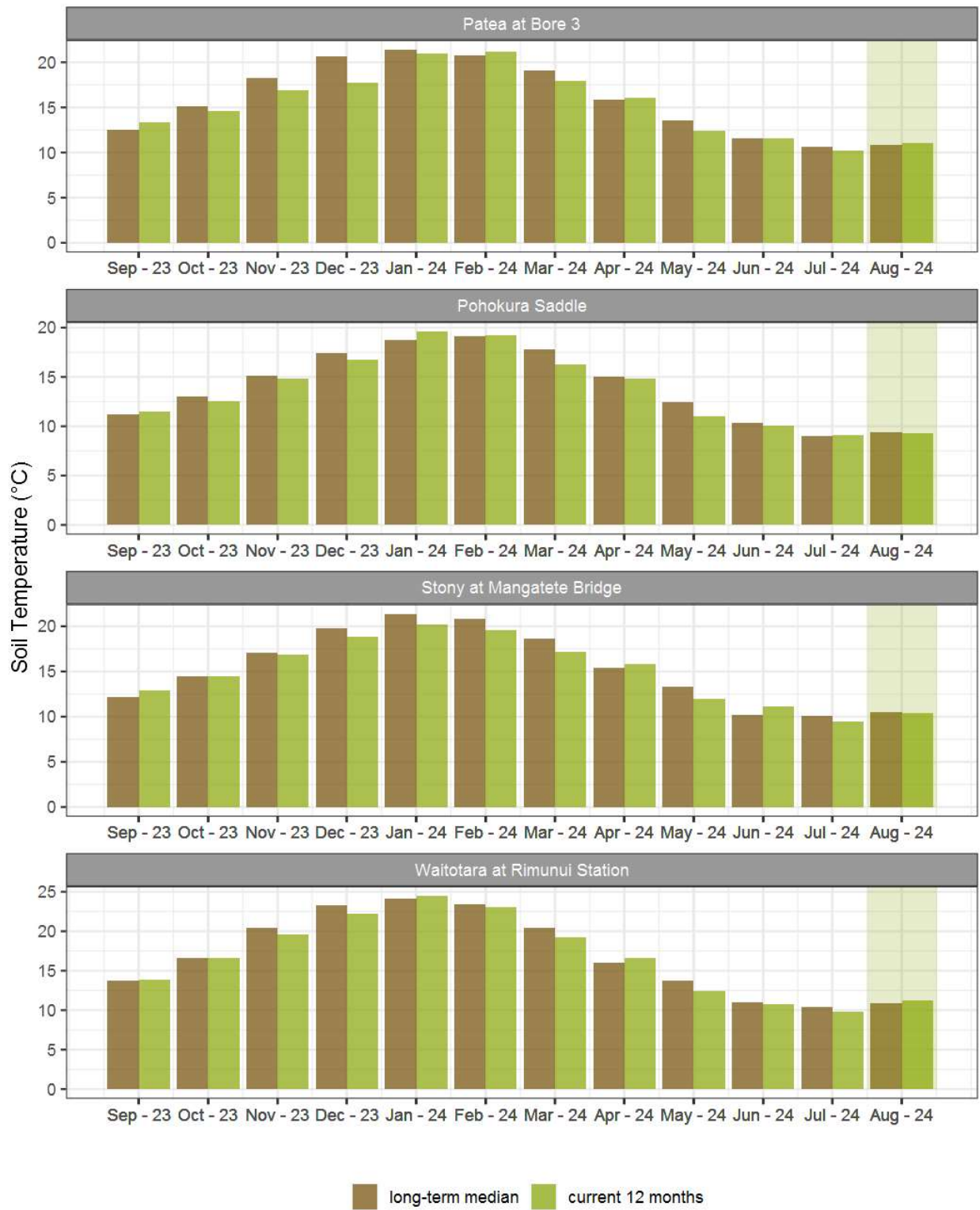


Figure 6.2: Monthly mean soil temperature for this month and the mean of all previously recorded months.

7. Wind Speed and Maximum Gusts

Map 7: August mean of wind speed with difference to long-term values (km/hr).

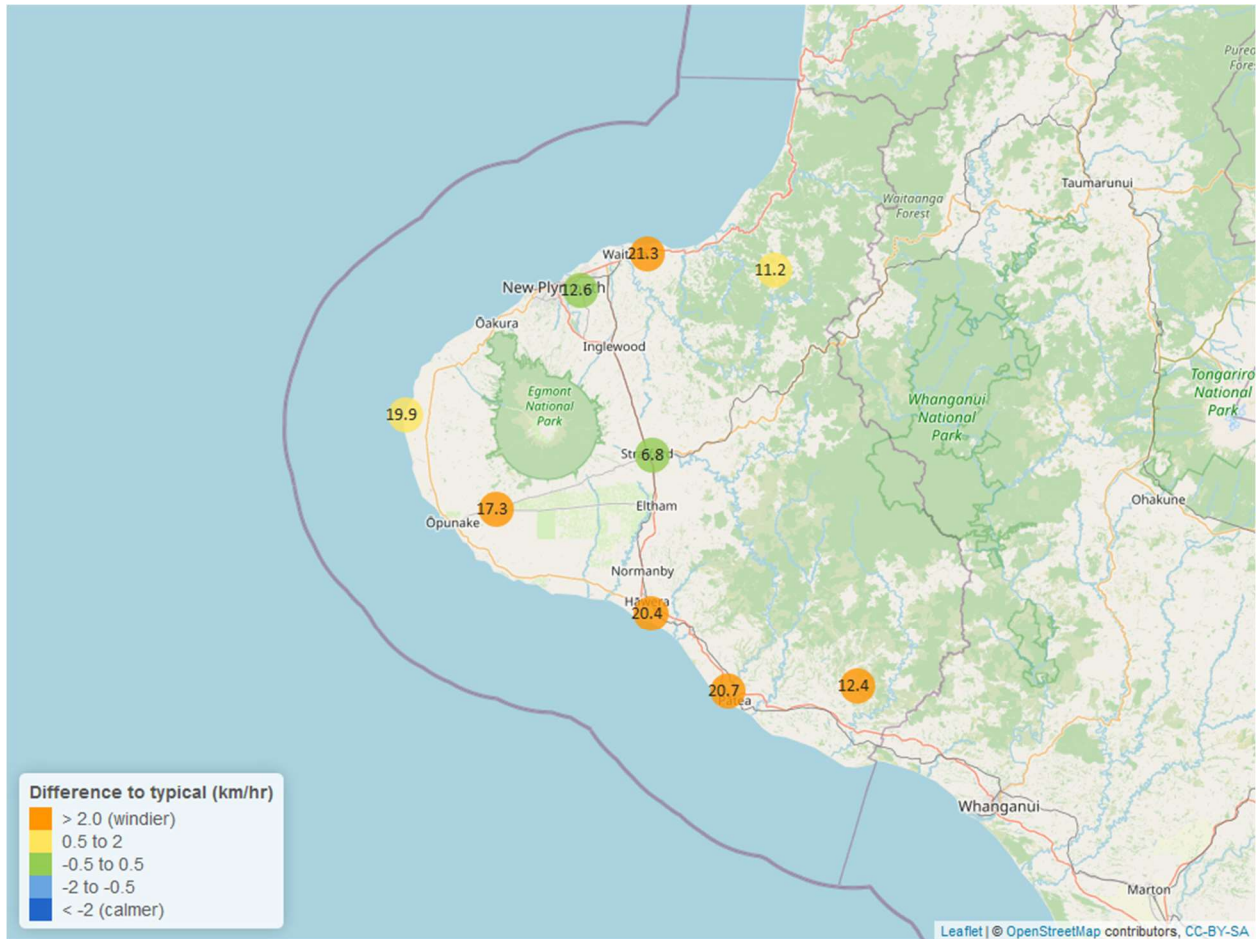


Table 7: Summary of high, low and mean wind speed for August and for August in all preceding years of record.

August 2024 - Wind Speed (average) - (km/hr)								
Site	Highs		Lows		Mean		August maximum	Data years
	current month	historic	current month	historic	current month	historic		
Hawera AWS	38.89	36.11	8.33	5.56	20.4	15.74	52.78	19
Kapoaiaia at Lighthouse	41.50	40.58	7.29	6.59	19.9	19.30	60.58	26
New Plymouth AWS	39.68	37.97	7.41	5.56	21.3	16.07	54.63	16
Patea at Bore 3	38.06	38.65	8.30	6.37	20.7	16.77	54.03	8
Patea at Stratford	20.73	18.67	2.74	2.50	6.8	6.84	29.78	18
Taungatara at Eltham Rd	35.38	32.34	7.72	6.30	17.3	14.83	51.53	9
Uruti at Kaka Rd	27.50	24.93	3.57	3.18	11.2	10.12	50.13	26
Waitotara at Ngutuwera	25.15	22.28	5.43	2.17	12.4	9.42	36.21	26
Waiwhakaiho at Hillsborough	28.66	28.70	4.82	4.03	12.6	12.32	43.14	7

Table 8: Summary of high, low and maximum wind gusts for August and for August in all preceding years of record.

August 2024 - Wind Gusts (Maximum) - (km/hr)								
Site	Highs		Lows		Mean		August maximum	Data years
	current month	historic	current month	historic	current month	historic		
Hawera AWS	81.49	74.08	29.63	20.37	48.1	42.60	92.60	19
Kapoaiaia at Lighthouse	78.48	81.00	21.60	21.60	40.0	49.20	81.72	26
New Plymouth AWS	83.34	79.64	29.63	20.37	48.1	44.45	107.42	16
Patea at Bore 3	85.00	78.40	29.70	20.10	49.9	46.40	90.50	8
Patea at Stratford	75.60	63.30	18.36	18.72	36.7	35.20	77.40	18
Taungatara at Eltham Rd	86.40	77.90	25.20	21.60	49.6	43.50	115.70	9
Uruti at Kaka Rd	93.96	69.90	19.44	19.80	37.8	39.24	95.40	25
Waitotara at Ngutuwera	80.28	68.60	26.28	17.10	53.3	39.20	91.80	26
Waiwhakaiho at Hillsborough	70.40	69.80	25.30	19.40	43.1	43.80	85.40	7

7.2 Long-term data patterns

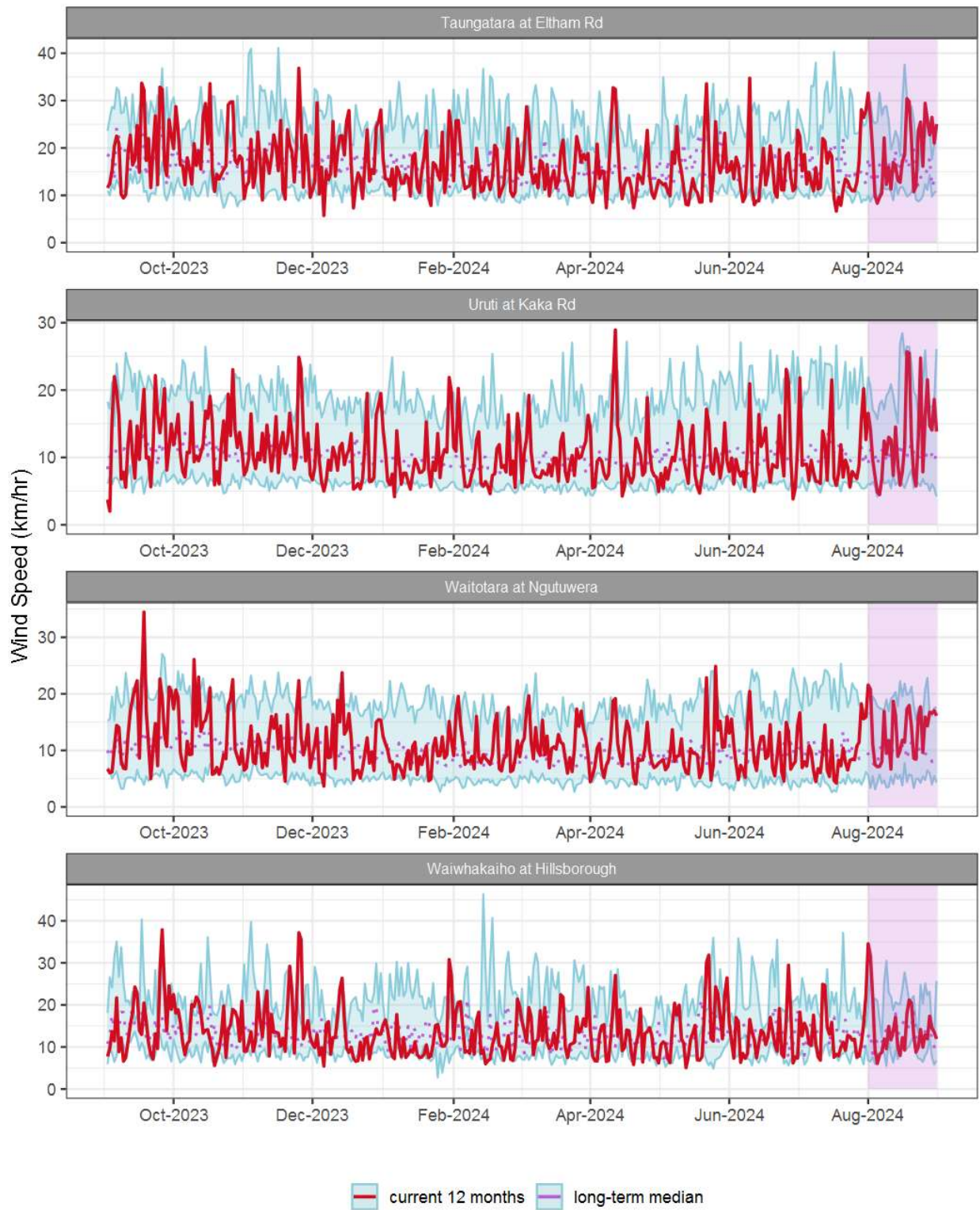


Figure 7.1: Running average wind speed (km/hr) for selected sites, set in context of the historic record.

7.3 Monthly Bar Charts

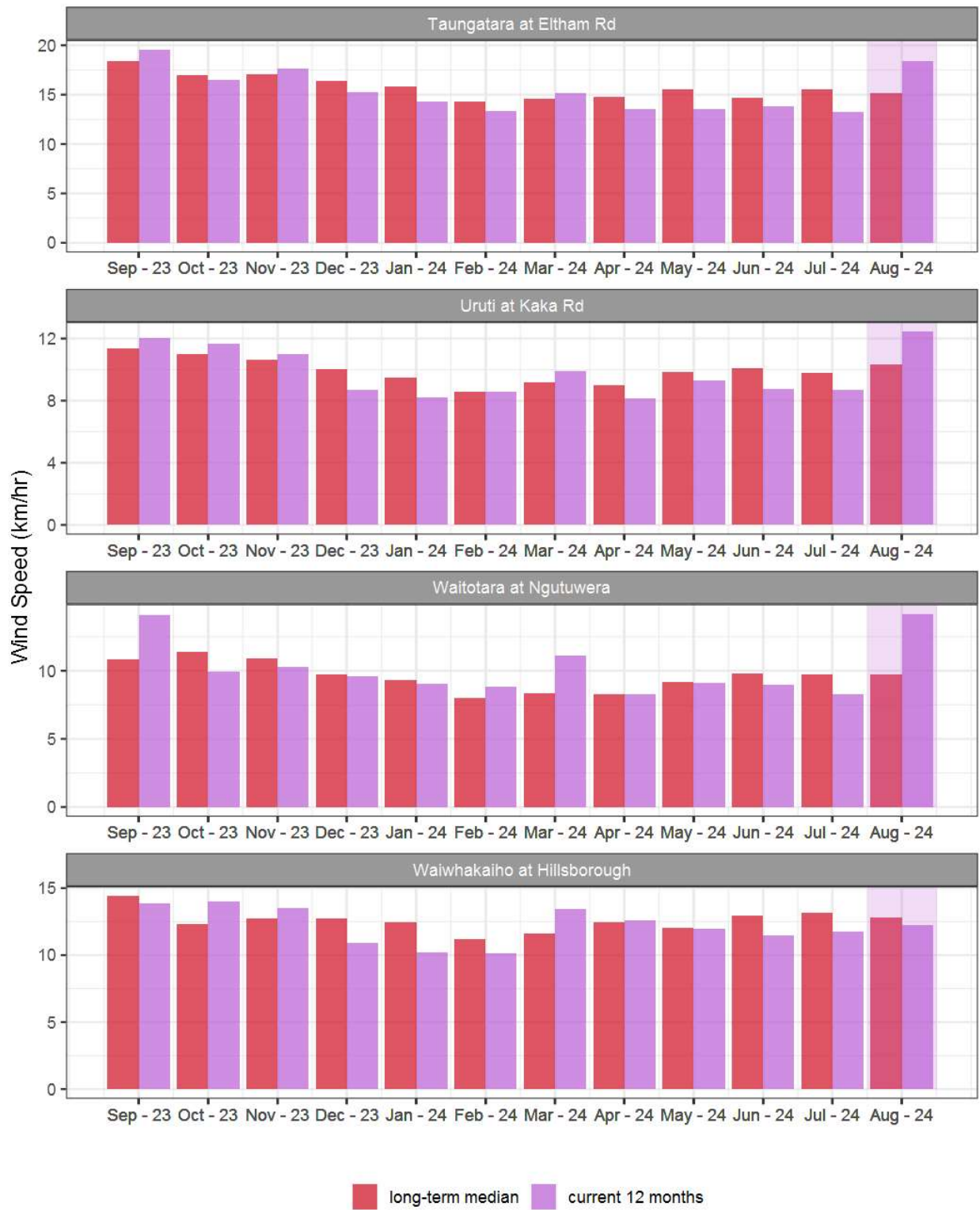


Figure 7.2: Monthly mean wind speed (km/hr) for selected sites, relative to the mean of all previously recorded months.

7.4 Wind roses for August 2024

Average windspeed

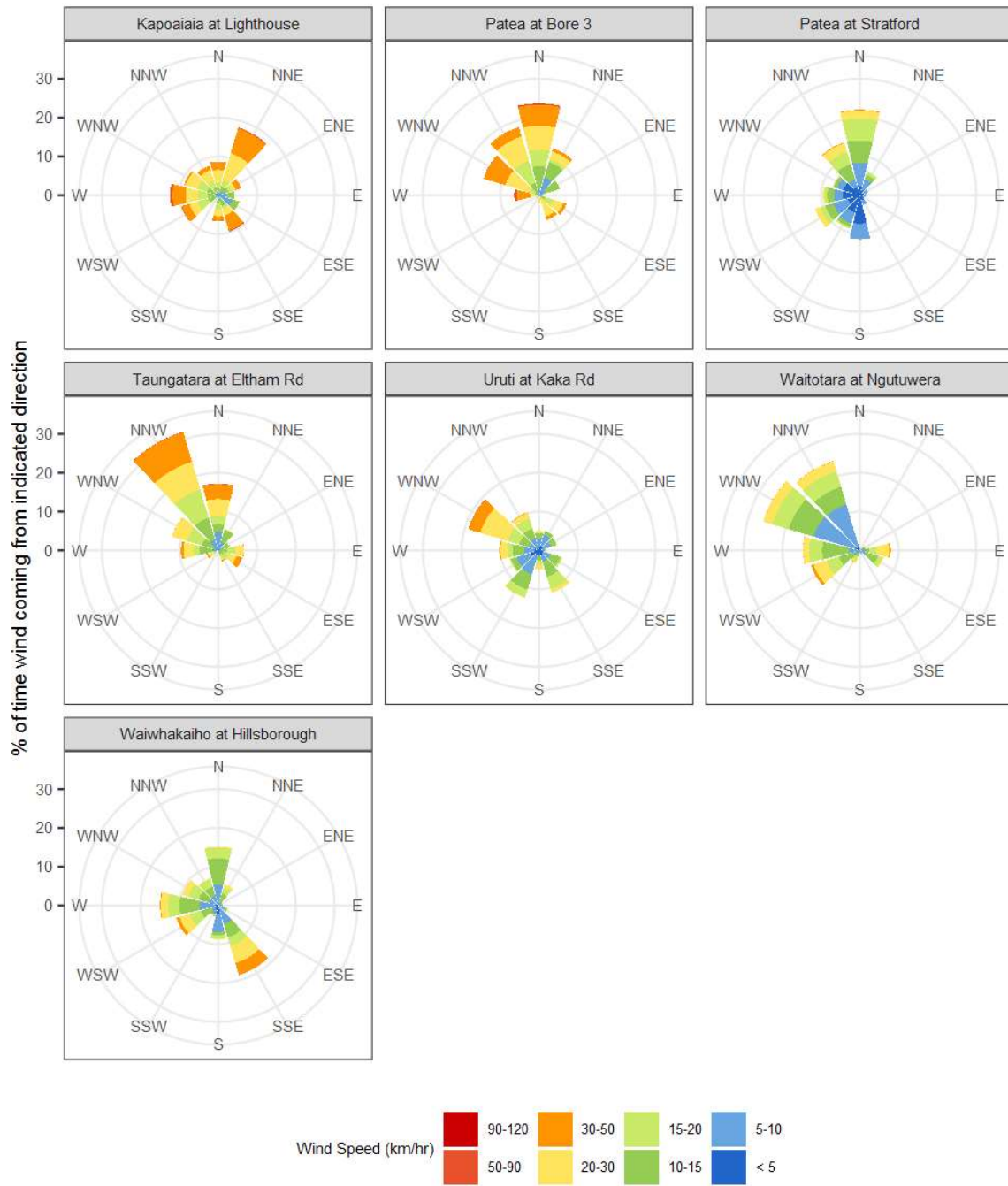


Figure 7.3: Wind roses for August for average wind speed (km/hr).

Maximum gust strength

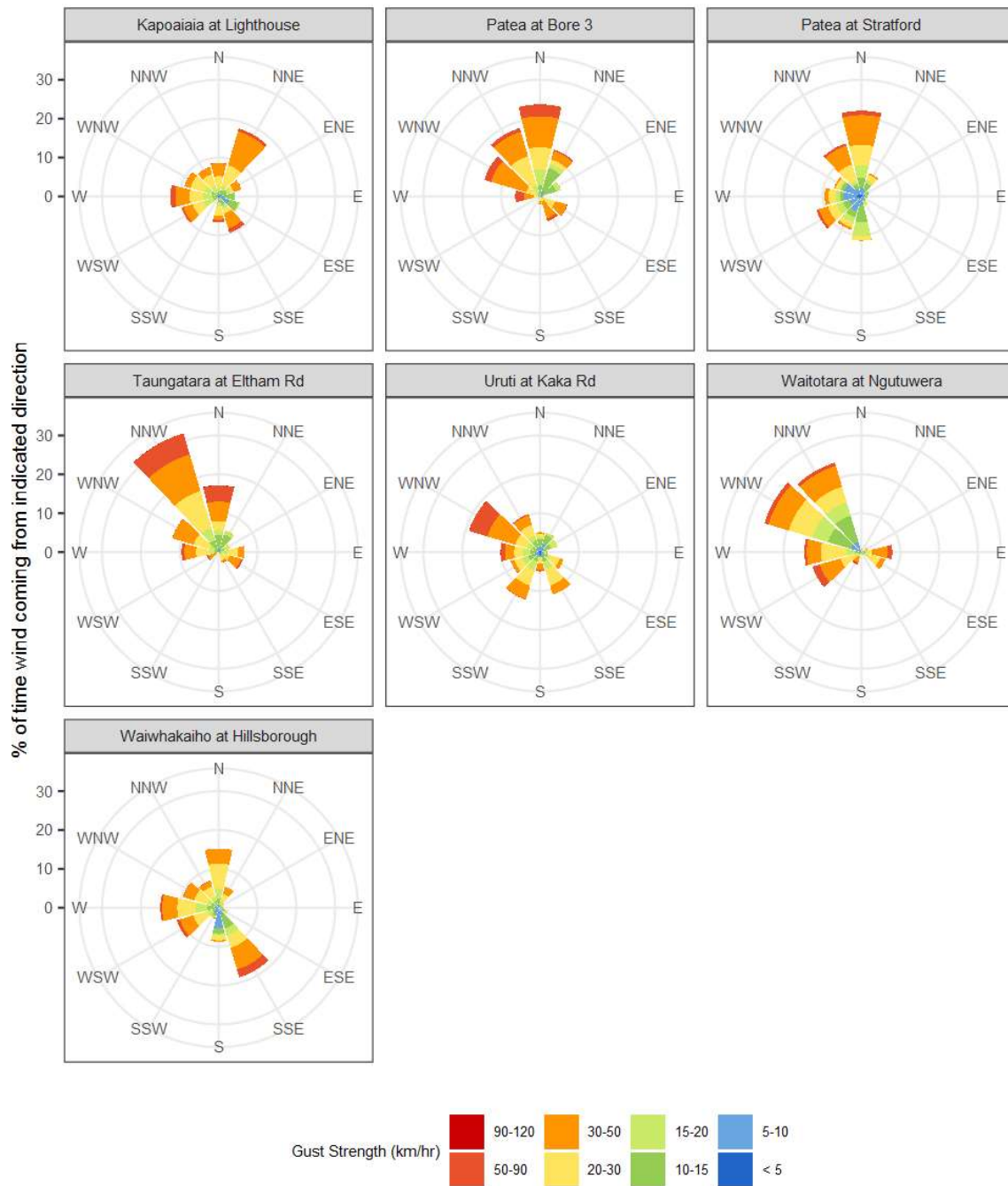


Figure 7.4: Wind roses for August for maximum wind gust (km/hr).

Summary of month's conditions

Rainfall

On average August rainfall was 210.8mm, 22% more than usual, ranging from 8% less rain at Waitotara at Hawken Rd, and 59% more than at Pohokura Saddle.

Year-to-date rainfall is lowest at Waitotara at Hawken Rd with 37% less rainfall than normal, Pohokura Saddle has had the highest year-to-date rainfall with 3% more than normal rainfall. On average there has been 15% less than normal across all rain gauges. Compared to typical full year totals, on average sites have already received 56% of a typical year's rainfall, with the highest value at Motunui M39 at Weston W3, 65% of normal, whereas Waitotara at Ngutuwera sits at 44% of the typical year's total.

River Flow

Mean river flows for August were 17.6% lower than typical values, low flows were 7.9% greater and high flows 27.5% greater than typical values. The maximum river flow recorded in August was 698.2m³/sec at Waitara at Bertrand Rd, on 27 August.

River Water Temperature

Mean river (non-mountain) water temperatures were 10°C, an average of 0.1°C cooler than long-term August values. Nighttime-low water temperatures were on average the same as historic lows, and day-time high temperatures were on average 0.3°C warmer than historic highs. The maximum river water temperature recorded in August was 14.7°C at Kaupokonui at Glenn Rd, on 31 August.

Air Temperature

The average air temperature for the region (excluding Te Maunga sites) was 10.8°C, which is 0.8°C warmer than long-term August averages. Low air temperatures for August were on average 0.5°C warmer than the August average for previous years. Day-time high temperatures were on average 0.5°C warmer than historic highs. The maximum air temperature recorded in August was 20.46°C at Weraweraonga at Mangawhio Rd, on 31 August.

Soil Moisture

The average soil moisture for August across sites in Taranaki region was 34.7%. Soil moistures were on average 0.1% drier than typical August values. On average, low soil moistures were 3.6% wetter than previous lows, and the highs were on average 3.3% drier than previous values for August.

Soil Temperature

August soil temperatures were generally 0.2°C warmer than long-term averages. Average nighttime low soil temperatures were 0.7°C warmer than recorded lows, and upper day-time soil temperatures were on average 0.8°C warmer than long-term August highs. The

maximum soil temperature recorded in August was 16.8°C at Kapoiaia at Lighthouse, on 27 August.

Wind Speed (average and 10 minute gust)

August average wind speeds were 15.8km/hr, with average gust strength of 45.2km/hr, these were 2.3km/hr stronger, and 2.6km/hr gustier than the long-term average. Average calm weather wind speeds were 1.5km/hr stronger than recorded lows, and windy conditions were on average 1.7km/hr stronger than long-term August highs. The maximum wind gust recorded in August was 115.7km/hr at Taungatara at Eltham Rd, on 31 August.

Notes: Maximum values mentioned in the summary of month's conditions (Section 8) are the actual recorded minimum or maximums. In the tables, low and high values represent the lower and upper 5th percentiles of the historical record for each site, except for wind gust and soil moisture, which use the lower and upper 1st percentiles. Percentile values in the tables provide a clearer indication of the general upper and lower range of the historical data for comparison with the current month. The start year (when records began) for each site and variable, listed in the respective tables, indicates the length of data used to compute historical highs, lows and "typical values." Sites with a longer data record generally offer a more reliable comparison to current year values.

Report date: 13 September 2024.

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