

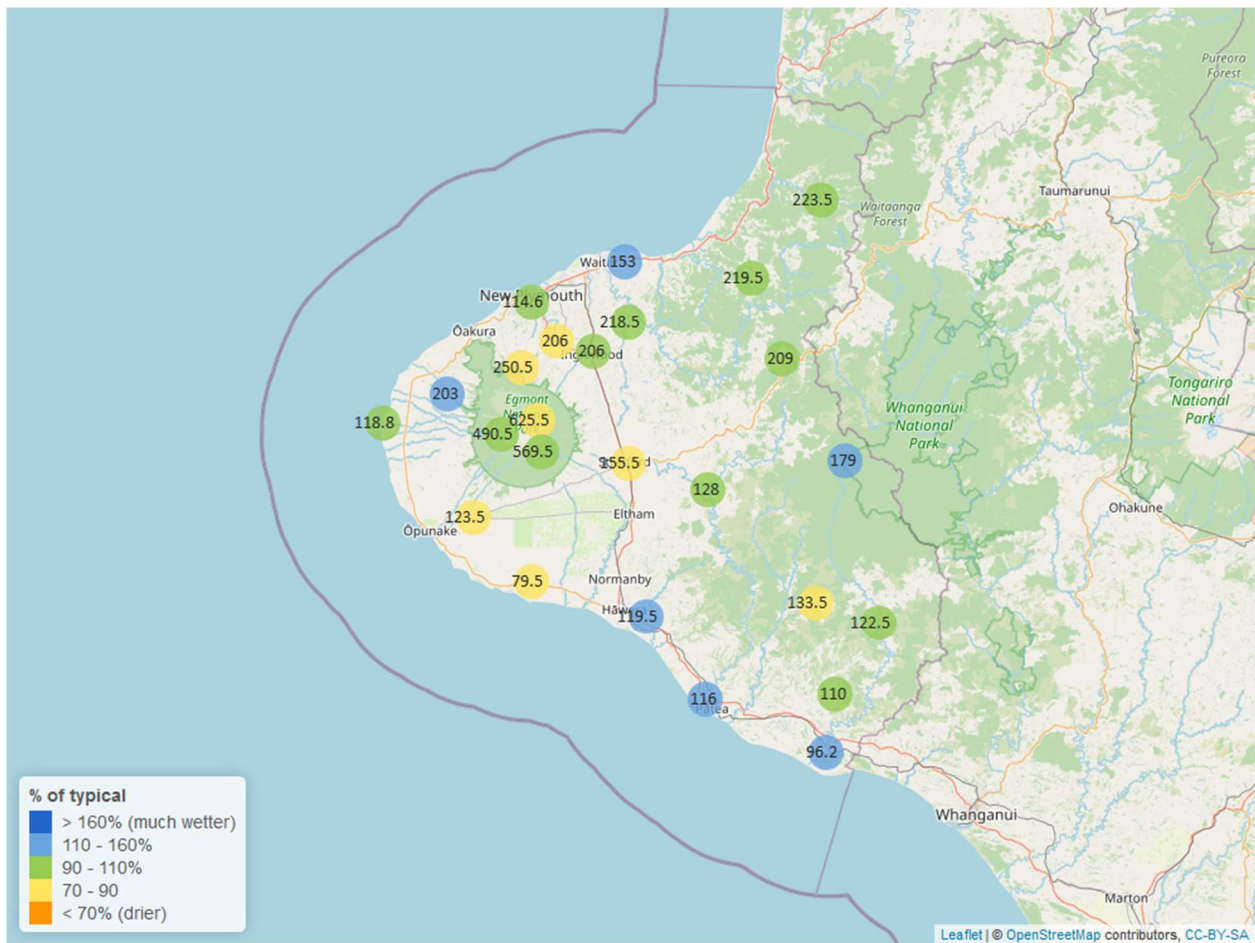
Taranaki Regional Council Monthly Climate Report:

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



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

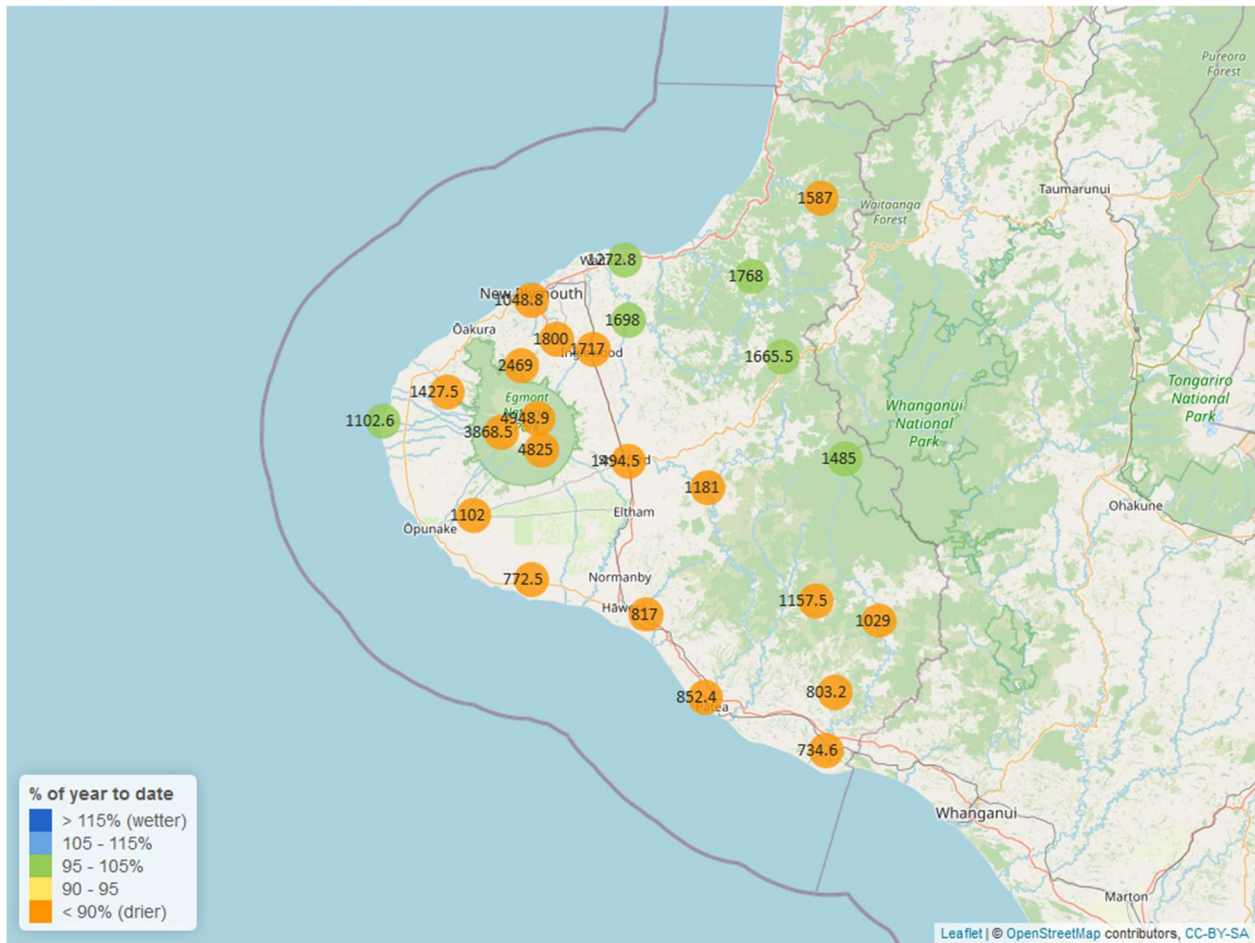


Table 1: Rainfall October and year-to-date totals for rain gauge sites in Taranaki.

Rain gauge	October			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	625.5	85.4	4948.9	84.7	71.6	1995
Dawson Falls	17	569.5	100.4	4825.0	88.1	75.4	1999
Kapoiaiaia at Kahui Hut	21	490.5	102.4	3868.5	87.0	73.6	2006
Mangorei Upper at Forest Hill	18	250.5	80.6	2469.0	80.8	65.8	2018
Waiwhakaiho at Hillsborough	15	153.5	113.5	1280.0	83.0	69.9	2013
Brooklands Zoo at New Plymouth	13	114.6	99.1	1048.8	76.4	65.0	2012

Rain gauge	October			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	
Motunui M39 at Weston W3	13	153.0	116.0	1272.8	96.2	80.7	1999
Waiwhakaiho at Egmont Village	18	206.0	85.1	1800.0	89.5	74.2	1995
Manganui at Everett Park	15	218.5	106.6	1698.0	97.7	80.8	1995
Inglewood at Oxidation Ponds	16	206.0	92.5	1717.0	88.1	72.9	2000
Stony at Mangatete Bridge	17	203.0	115.6	1427.5	85.3	71.2	2004
Kapoiaiaia at Lighthouse	15	118.8	102.1	1102.6	97.4	82.2	1999
Taungatara at Eltham Rd	13	123.5	89.2	1102.0	83.3	69.8	2005
Kaupokonui at Glenn Rd	13	79.5	73.5	772.5	78.7	66.1	1998
Patea at Stratford	15	155.5	87.0	1494.5	88.4	75.2	1999
Mangaehu at Bridge	14	128.0	91.7	1181.0	88.5	74.2	1999
Kotare at OSullivans	15	223.5	101.6	1587.0	89.8	73.6	1998
Uruti at Kaka Rd	16	219.5	96.0	1768.0	97.7	79.5	1995
Pohokura Saddle	15	209.0	103.4	1665.5	101.3	83.6	1995
Omaru at Charlies	16	179.0	110.1	1485.0	96.2	81.2	2006
Omahine at Moana Trig	14	133.5	83.8	1157.5	80.8	68.5	2007
Waitotara at Rimunui Station	13	122.5	93.0	1029.0	89.9	74.8	1995
Waitotara at Ngutuwera	13	110.0	91.7	803.2	75.4	62.3	1999
Tawhiti at Duffys	13	119.5	118.4	817.0	89.6	73.7	1995
Patea at Bore 3	13	116.0	111.5	852.4	86.6	72.1	2006
Waitotara at Hawken Rd	13	96.2	121.5	734.6	74.1	62.0	2016

Notes: Low and high values in tables refer to the upper and lower 5th percentiles of the historic record for each site (except for wind gust and soil moisture which are the upper and lower 1st percentiles). Percentile values give a better indication of the general upper and lower range of the historic data against which to compare the current month. Start year (records began) shows the length of data used to compute historic highs, lows, and "typical values". Sites with a longer data record will generally provide a more reliable comparison to values in the current year.

1.2 Long-term data patterns

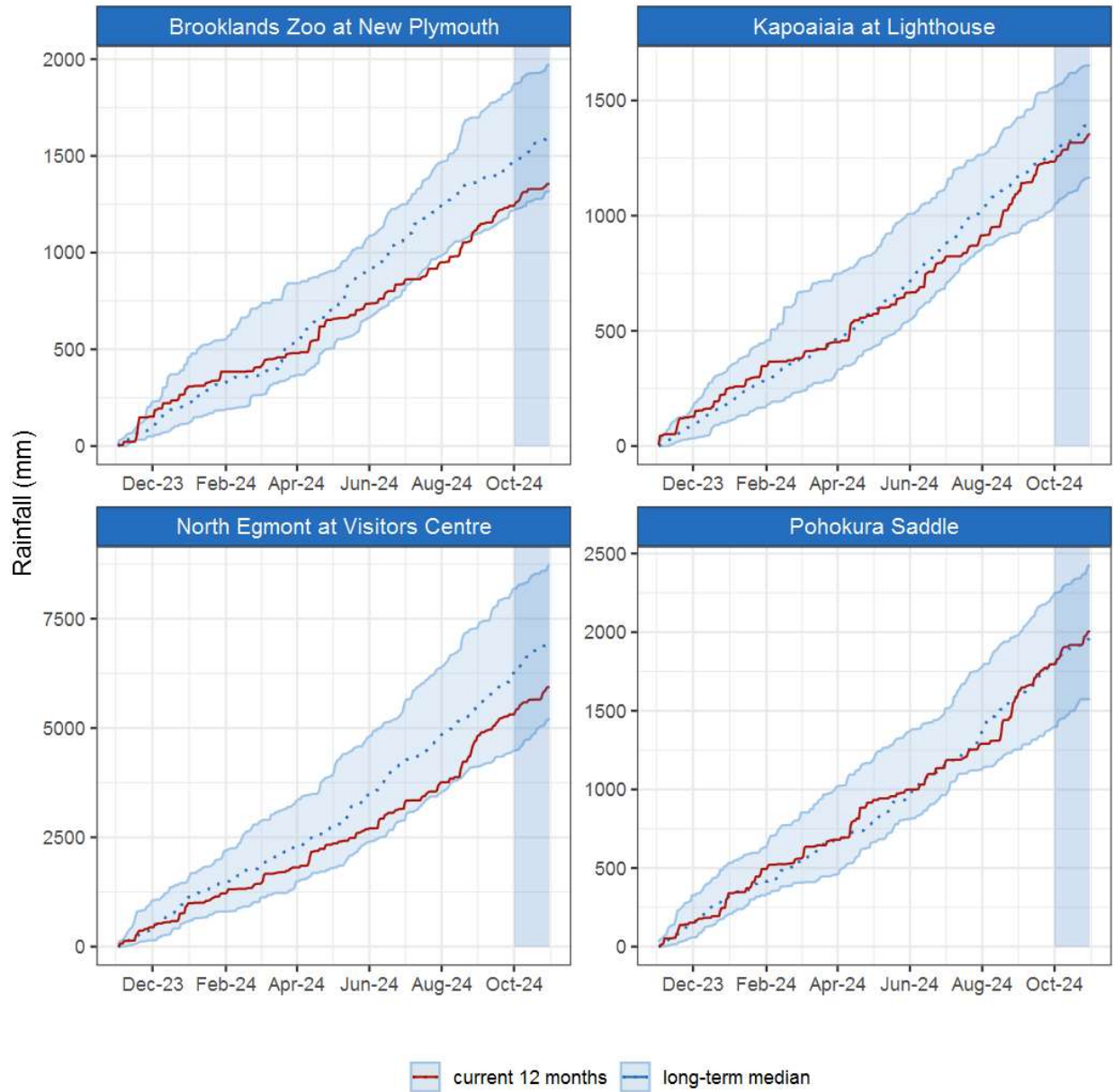


Figure 1.1: This year's and last year's data set in context of historic record at selected rain gauge sites in Taranaki.

1.3 Monthly Bar Charts

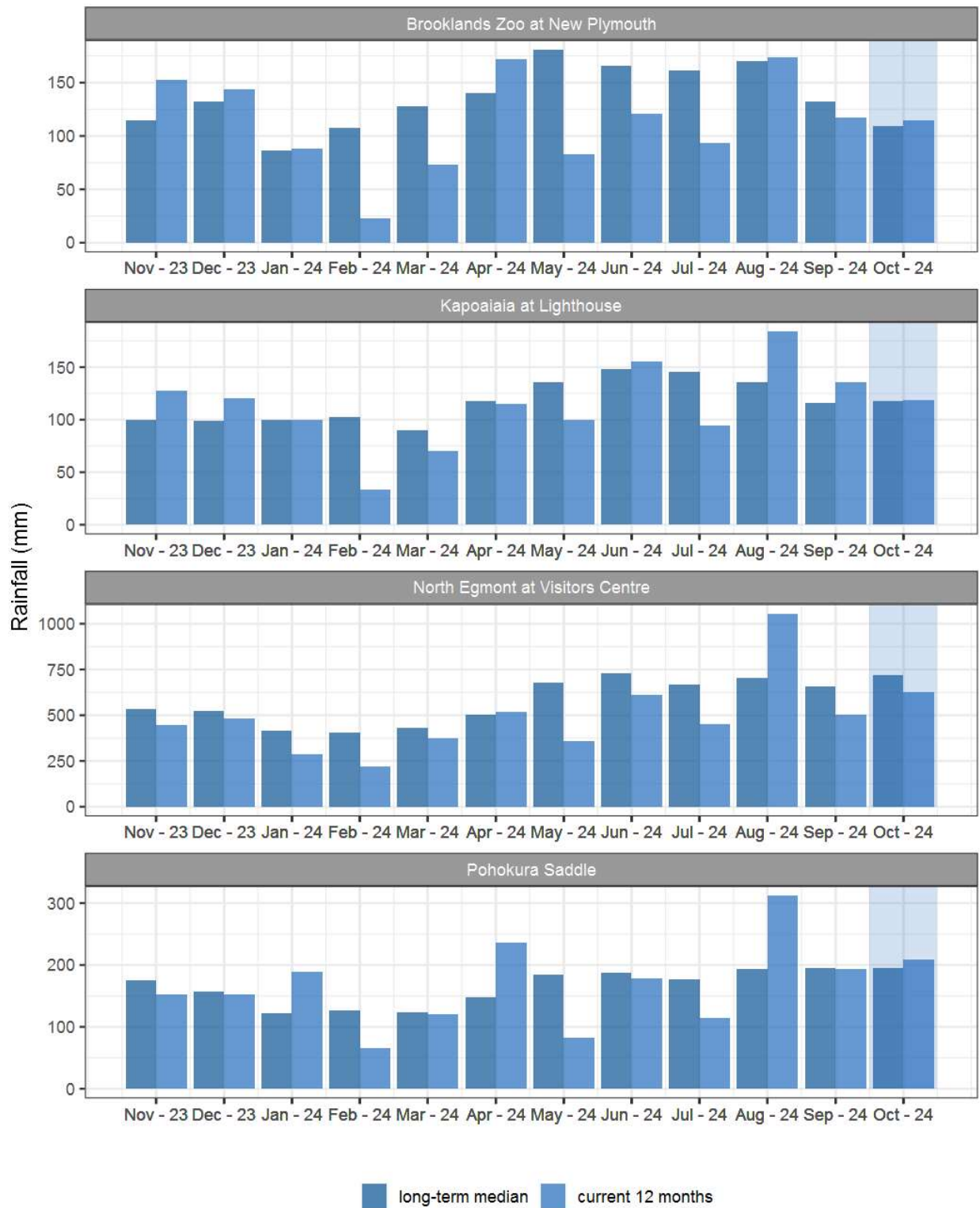


Figure 1.2: Monthly rainfall totals for this month and the mean of all previously recorded months.

2. River Flow

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

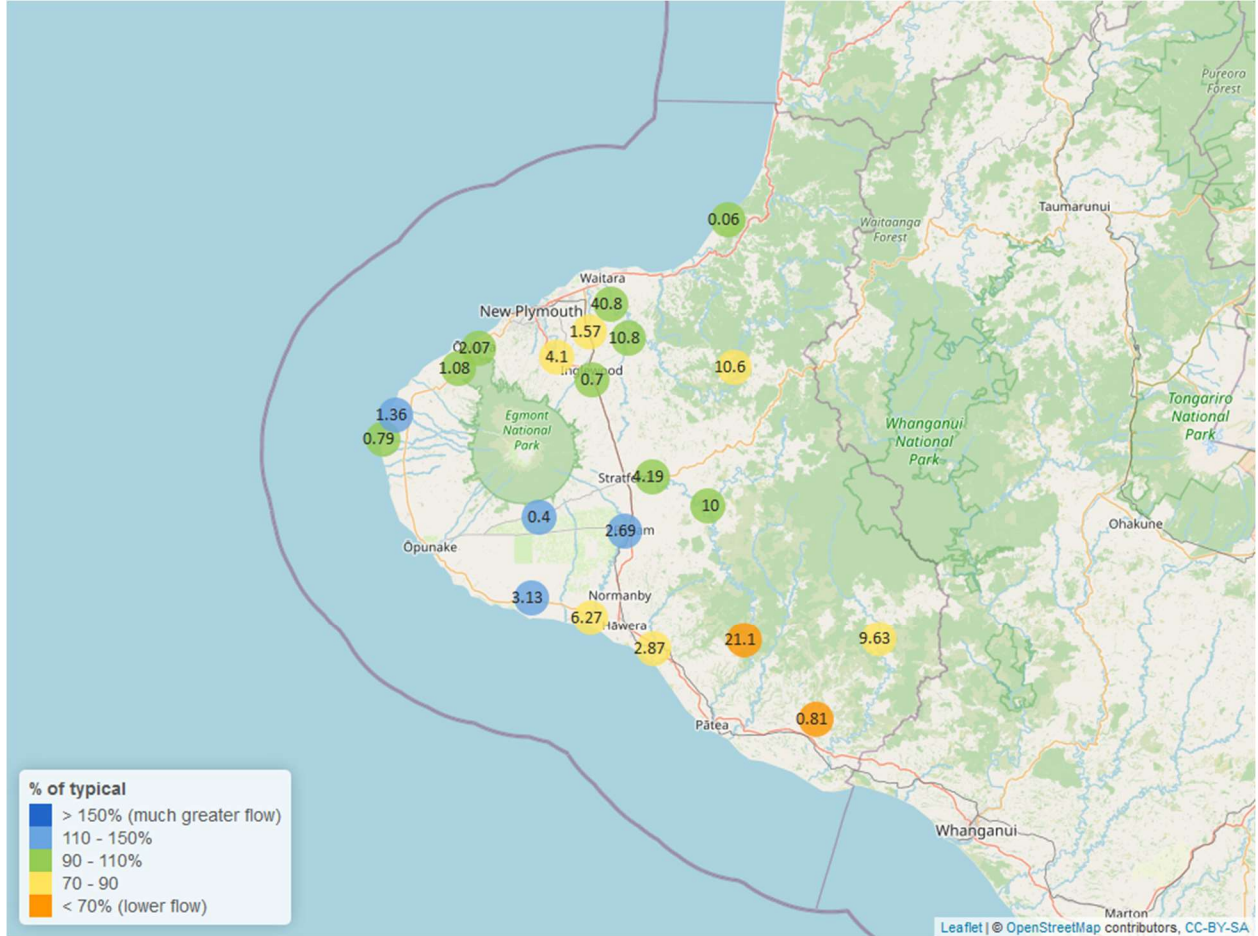


Table 2: Summary of high, low and mean flow for October and for October in all preceding years of record.

October 2024 - Recorded flows (m3/sec)								
River and Site	Highs		Lows		Mean		October maximum	Data years
	current month	historic	current month	historic	current month	historic		
Kapoaiaia at Lighthouse	2.17	4.21	0.54	0.46	0.79	0.87	11.17	38
Kaupokonui at Glenn Rd	6.11	9.96	2.11	1.42	3.13	2.70	36.51	46
Mangaehu at Bridge	35.03	48.54	4.04	4.10	10.00	9.72	71.41	46
Manganui at Everett Park	50.74	79.70	6.72	5.64	10.80	11.49	243.75	33
Mangawheroiti Above Intake W.W	0.80	0.81	0.29	0.22	0.40	0.34	5.13	12
Moumahaki at Johnston Rd	2.60	5.75	0.50	0.80	0.81	1.57	5.60	7
Ngatoro at SH3	2.99	4.58	0.45	0.39	0.70	0.68	18.55	36
Oakura at Victoria Rd	8.11	9.24	1.10	1.07	2.07	1.95	41.59	5
Patea at McColls Bridge	62.55	71.92	3.55	2.64	21.10	31.08	65.46	34
Patea at Skinner Rd	11.59	17.22	2.55	1.57	4.19	4.17	46.50	46
Tangahoe below Railway Bridge	6.42	12.01	2.01	2.29	2.87	3.81	22.94	6
Timaru at Tataraimaka	3.26	4.54	0.60	0.53	1.08	1.09	24.61	11
Waikaramarama at Bridge	0.41	0.40	0.02	0.02	0.06	0.06	9.81	7
Waingongoro at Eltham Rd	5.44	9.25	1.96	0.96	2.69	2.37	23.98	49
Waingongoro at SH45	10.52	21.81	4.60	3.43	6.27	7.47	33.69	43
Waiongana at SH3a	7.11	10.44	0.95	0.76	1.57	1.94	40.08	44
Waitara at Bertrand Rd	137.73	236.92	16.39	14.88	40.80	42.20	285.17	44
Waitara at Purangi Bridge	66.95	99.95	2.20	2.17	10.60	12.07	123.52	25
Waitotara at Rimunui Station	28.19	47.50	5.48	5.66	9.63	11.99	90.93	19
Waiwhakaiho at Egmont Village	15.13	31.84	2.48	2.64	4.10	4.88	80.36	44
Warea at Coast	4.01	3.50	0.72	0.58	1.36	1.03	14.81	8

2.2 Long-term data patterns

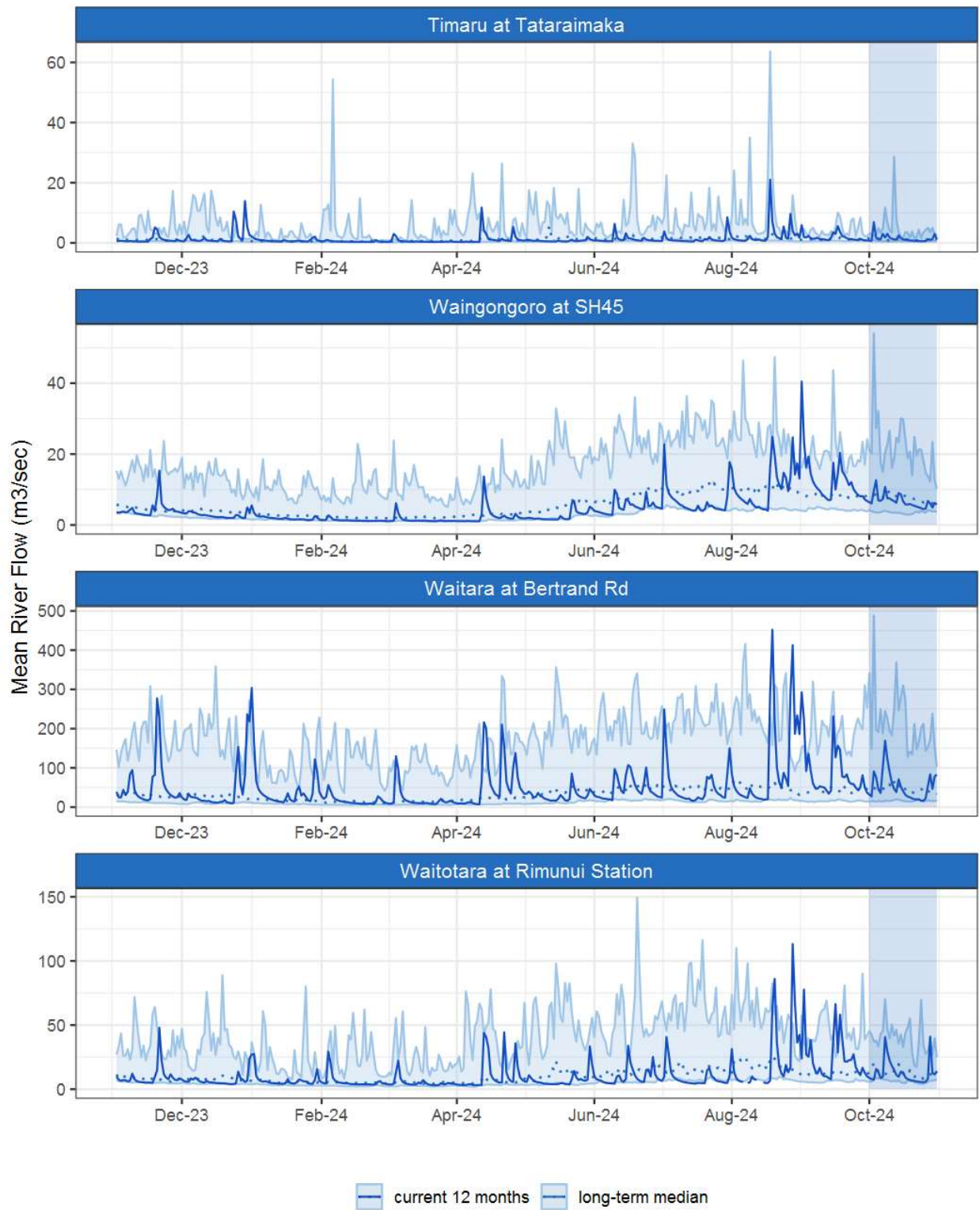


Figure 2.1: Running average river flows for selected sites, set in context of the historic record.

2.3 Monthly Bar Charts

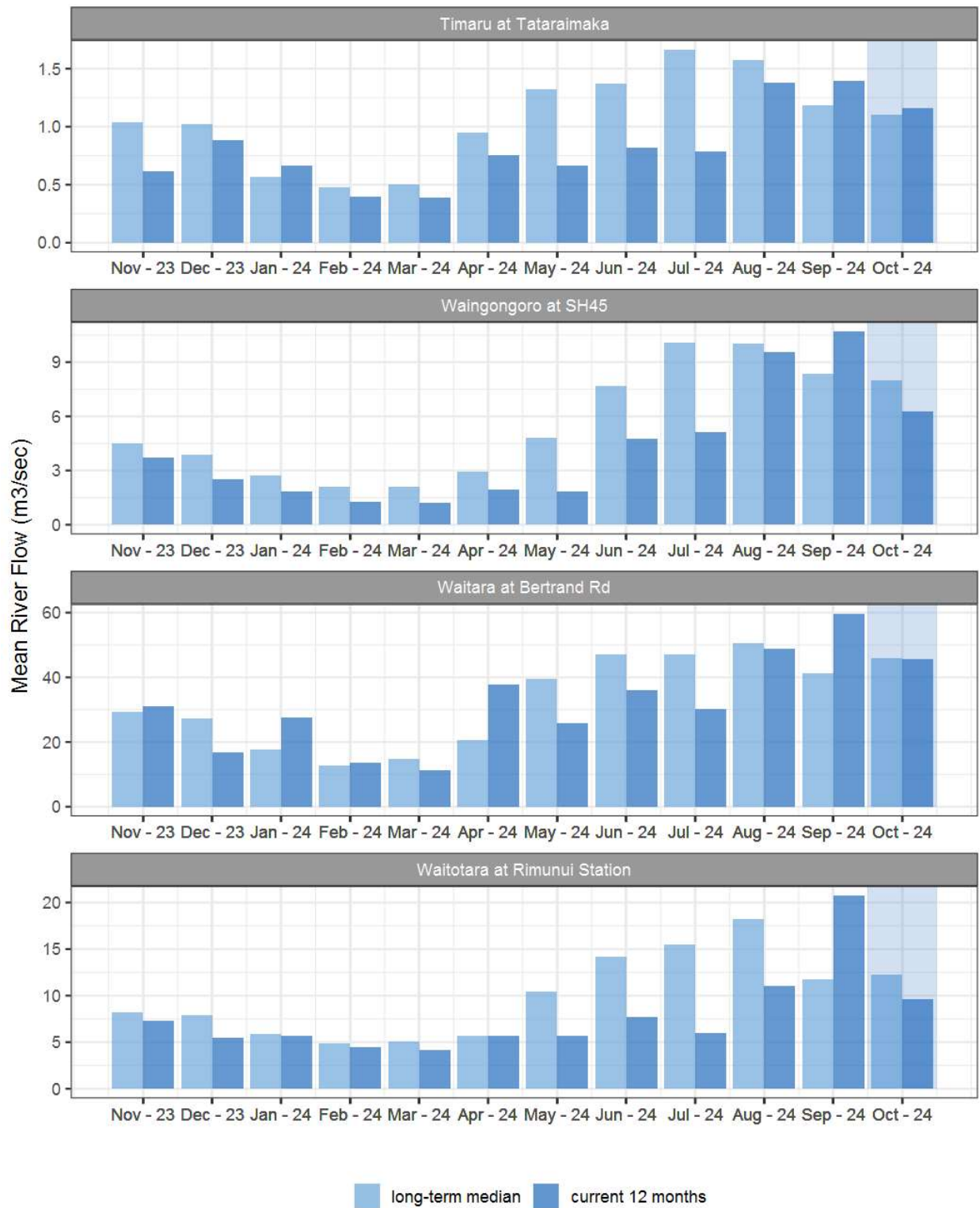


Figure 2.2: Monthly mean river flow for this month and the mean of all previously recorded months.

3. River Temperature

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

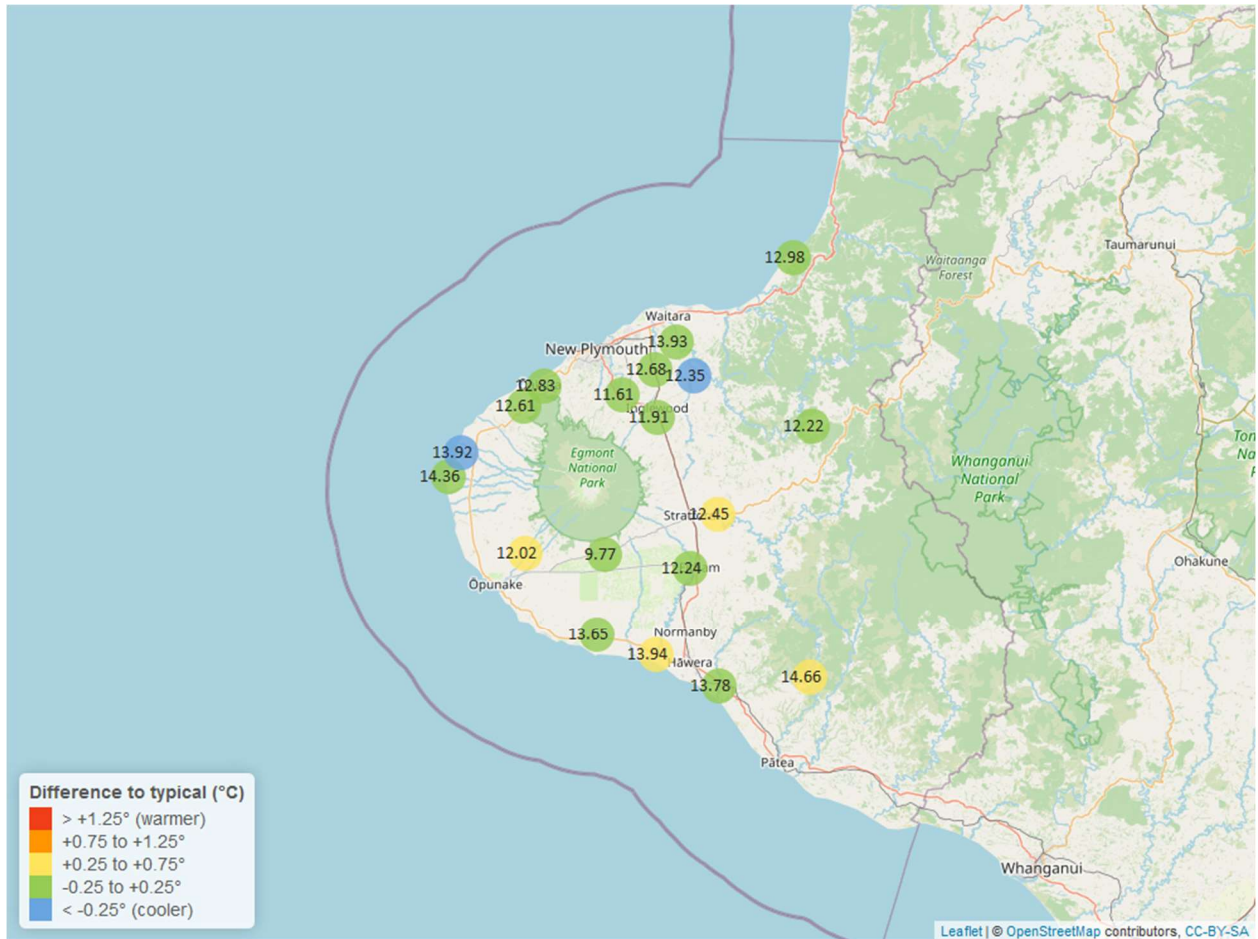


Table 3: Summary of high, low and mean river temperature for October and for October in all preceding years of record.

October 2024 - River Temperature (°C)								
River and Site	Highs		Lows		Mean		October maximum	Data years
	current month	historic	current month	historic	current month	historic		
Kapoaiaia at Lighthouse	17.30	17.58	11.56	10.99	14.36	14.13	19.22	25
Kaupokonui at Glenn Rd	17.83	17.33	11.19	10.06	13.65	13.55	21.63	34
Manganui at Everett Park	14.99	15.53	10.55	10.58	12.35	12.98	15.65	16
Mangawheroiti Above Intake W.W	11.97	11.67	8.38	7.69	9.77	9.61	13.29	12
Matau at Woolshed	14.59	15.30	9.92	9.77	12.22	12.32	15.58	7
Ngatoro at SH3	14.19	14.70	9.50	9.22	11.91	11.96	15.25	25
Oakura at Victoria Rd	15.62	15.27	10.71	10.03	12.83	12.82	16.88	5
Patea at McColls Bridge	17.02	16.73	13.15	12.32	15.50	14.25	17.65	10
Patea at Skinner Rd	14.52	14.66	10.72	9.84	12.45	12.20	15.19	20
Tangahoe below Railway Bridge	16.81	16.46	12.05	10.95	13.78	13.54	19.03	6
Timaru at Tataraimaka	15.00	14.78	10.73	10.30	12.61	12.46	15.87	11
Waiaua 2 at Barraclough Opua	16.09	15.98	9.04	8.29	12.02	11.57	18.30	6
Waikaramarama at Bridge	14.80	15.01	10.80	10.82	12.98	13.18	15.65	7
Waingongoro at Eltham Rd	14.86	15.05	10.49	9.99	12.24	12.40	16.09	19
Waingongoro at SH45	17.01	16.05	12.29	11.34	13.97	13.59	17.98	19
Waiongana at SH3a	14.96	15.10	10.49	10.37	12.68	12.79	16.02	13
Waitara at Bertrand Rd	16.97	16.48	12.69	11.66	13.93	13.76	18.04	34
Waiwhakaiho at Egmont Village	14.49	14.25	9.36	8.76	11.61	11.51	15.73	33
Warea at Coast	16.99	17.99	11.10	10.88	13.92	14.19	19.22	6

3.2 Long-term data patterns

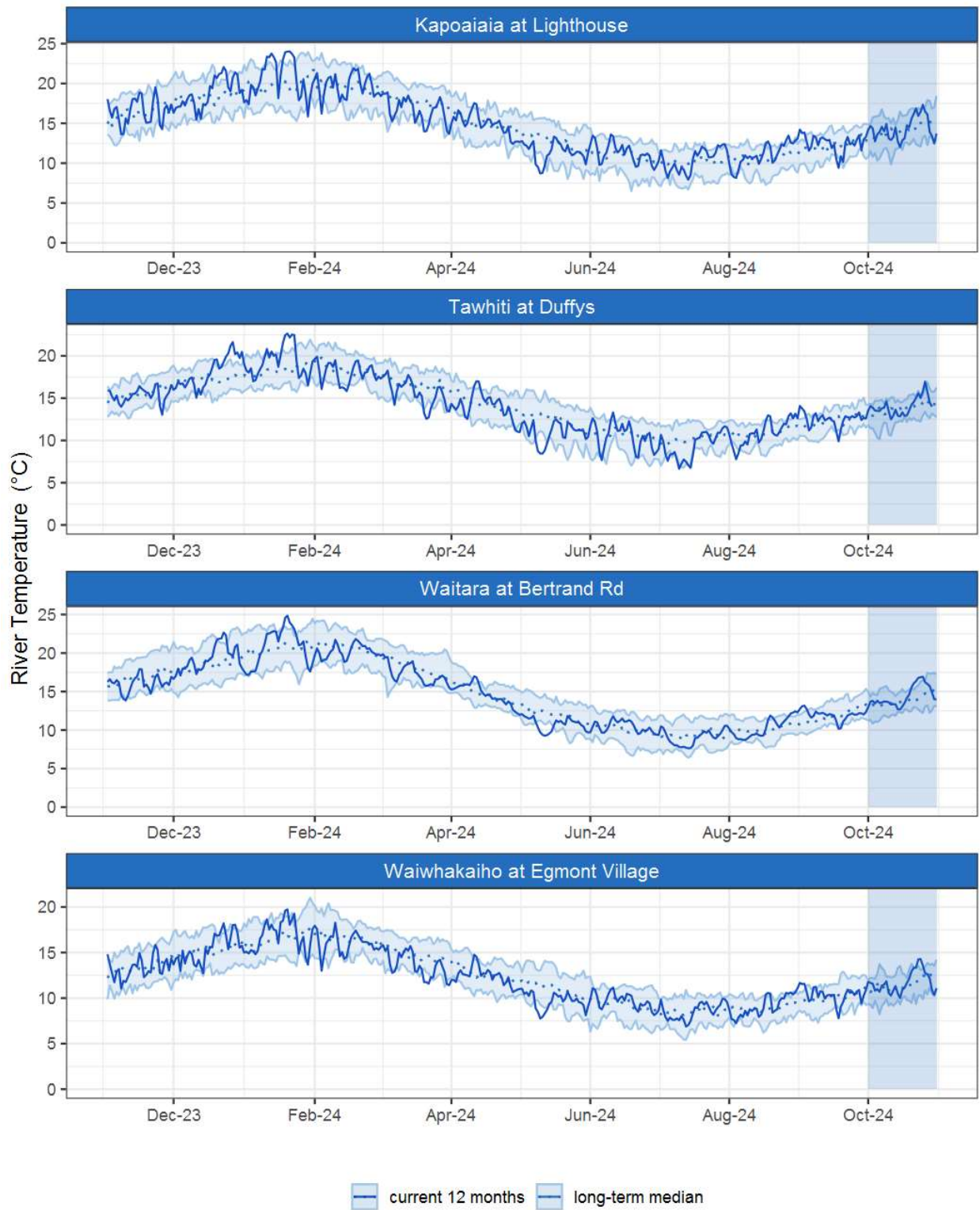


Figure 3.1: Running average river temperature for selected sites, set in context of the historic record.

3.3 Monthly Bar Charts

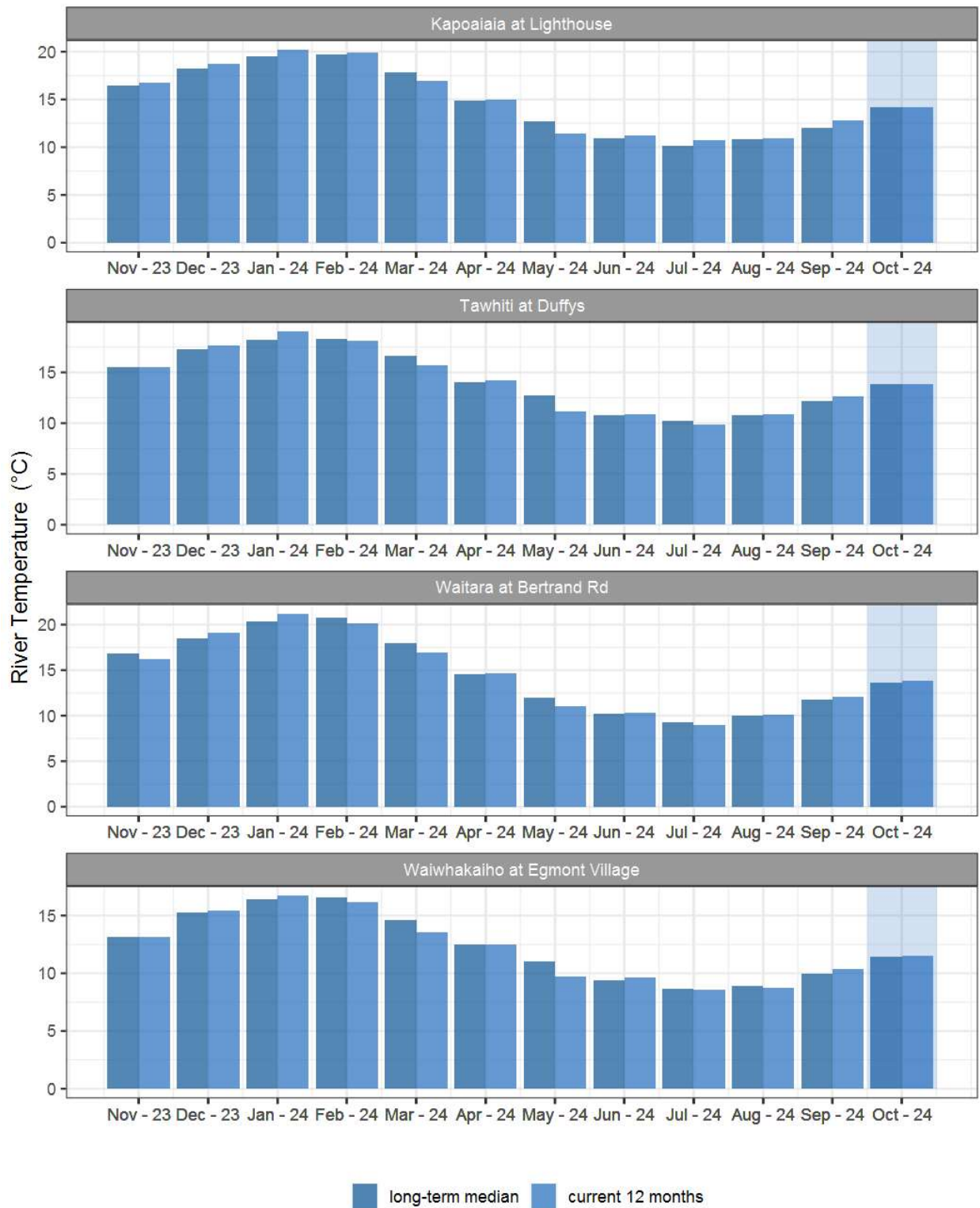


Figure 3.2: Monthly mean river temperature for this month and the mean of all previously recorded months.

4. Air Temperature

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

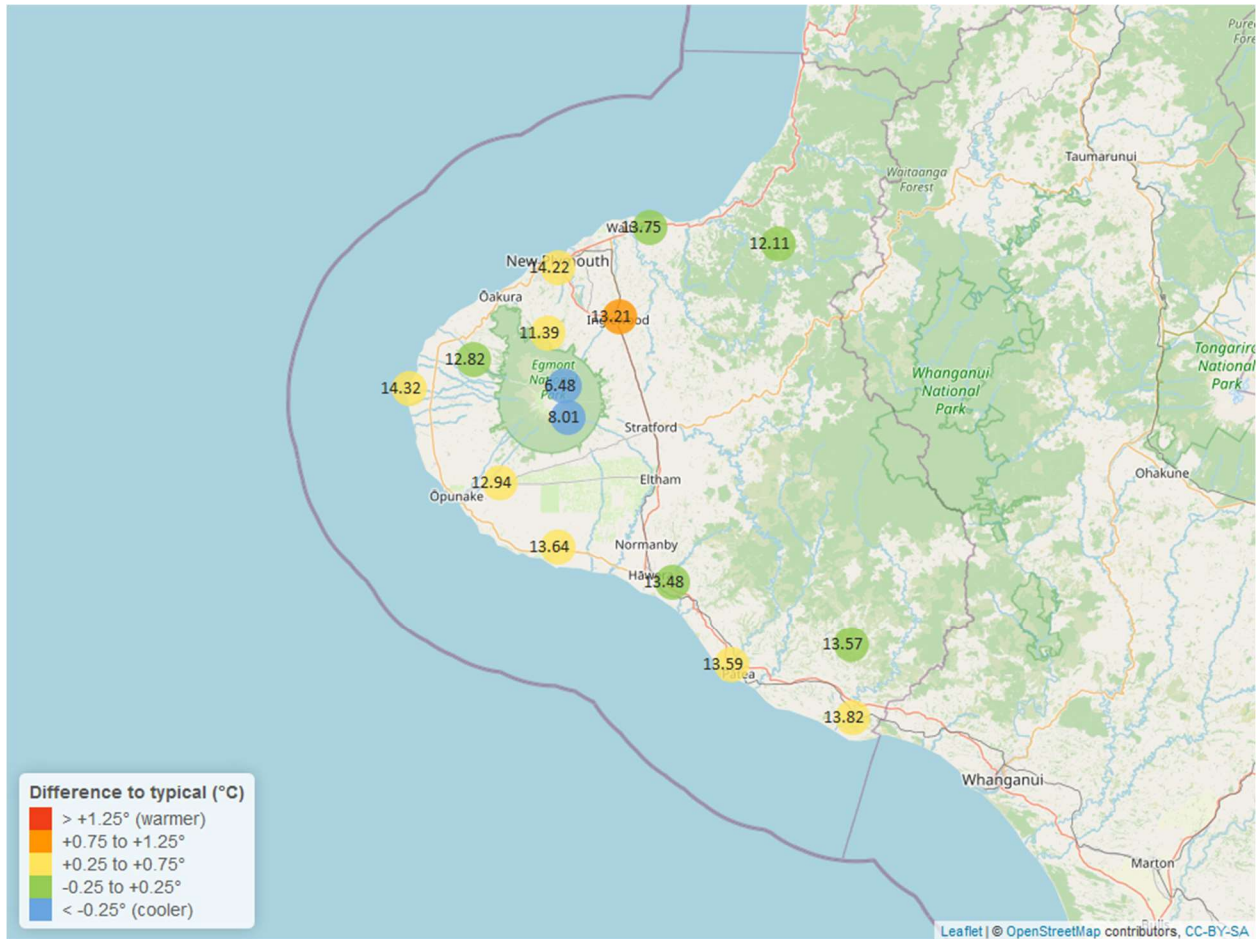


Table 4: Summary of high, low and mean air temperature for October and for October in all preceding years of record.

October 2024 - Air Temperature (°C)								
Site	Highs		Lows		Mean		October maximum	Data years
	current month	historic	current month	historic	current month	historic		
Brooklands Zoo at New Plymouth	19.08	18.85	8.56	8.19	14.22	13.84	21.40	12
Dawson Falls	12.97	13.96	4.02	2.85	8.01	8.29	19.37	9
Inglewood at Oxidation Ponds	18.46	17.99	7.00	5.99	13.21	12.40	22.64	13
Kapoaiaia at Lighthouse	17.09	16.82	9.43	9.59	14.32	13.96	18.23	12
Kaupokonui at Glenn Rd	17.96	18.00	8.28	8.02	13.64	13.39	20.54	10
Mangorei Upper at Forest Hill	14.92	15.10	7.15	6.37	11.39	11.07	17.72	7
Motunui M39 at Weston W3	17.21	17.09	7.90	7.61	13.75	13.61	18.77	8
North Egmont at Visitors Centre	11.08	13.16	2.47	2.45	6.48	7.91	14.38	10
Patea at Bore 3	17.86	17.16	8.77	8.27	13.59	13.23	20.72	13
Stony at Mangatete Bridge	16.24	16.79	8.15	8.19	12.82	12.86	18.30	8
Taungatara at Eltham Rd	16.90	16.77	8.07	7.73	12.94	12.62	19.07	9
Tawhiti at Duffys	17.92	17.68	6.26	5.96	13.48	13.30	20.42	11
Uruti at Kaka Rd	16.06	16.37	7.69	6.71	12.11	11.88	18.63	6
Waitotara at Hawken Rd	18.79	18.20	8.14	7.66	13.82	13.47	21.82	9
Weraweraonga at Mangawhio Rd	19.23	19.11	6.62	6.20	13.57	13.39	21.35	7

4.2 Long-term data patterns

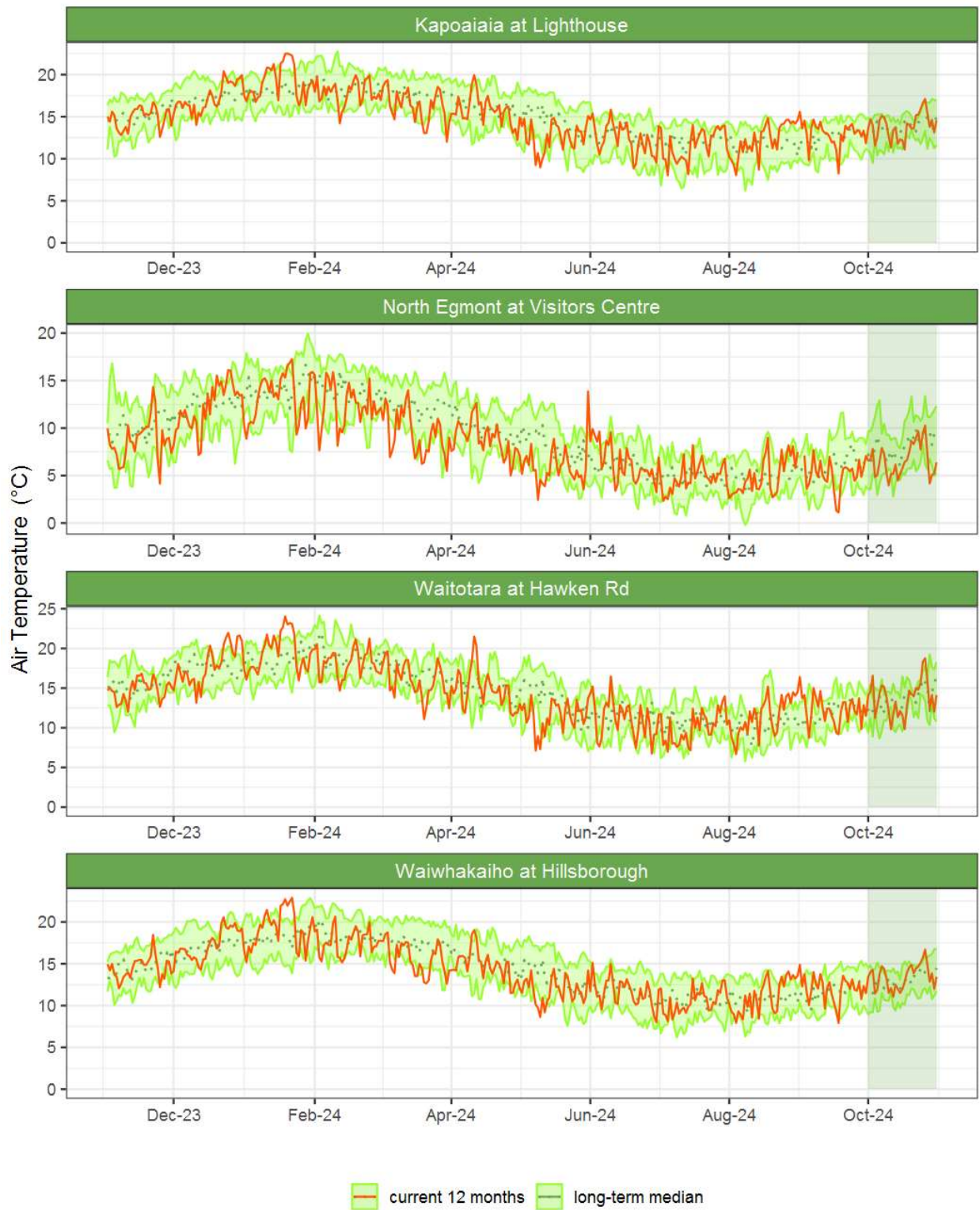


Figure 4.1: Running average air temperature for selected sites, set in context of the historic record.

4.3 Monthly Bar Charts

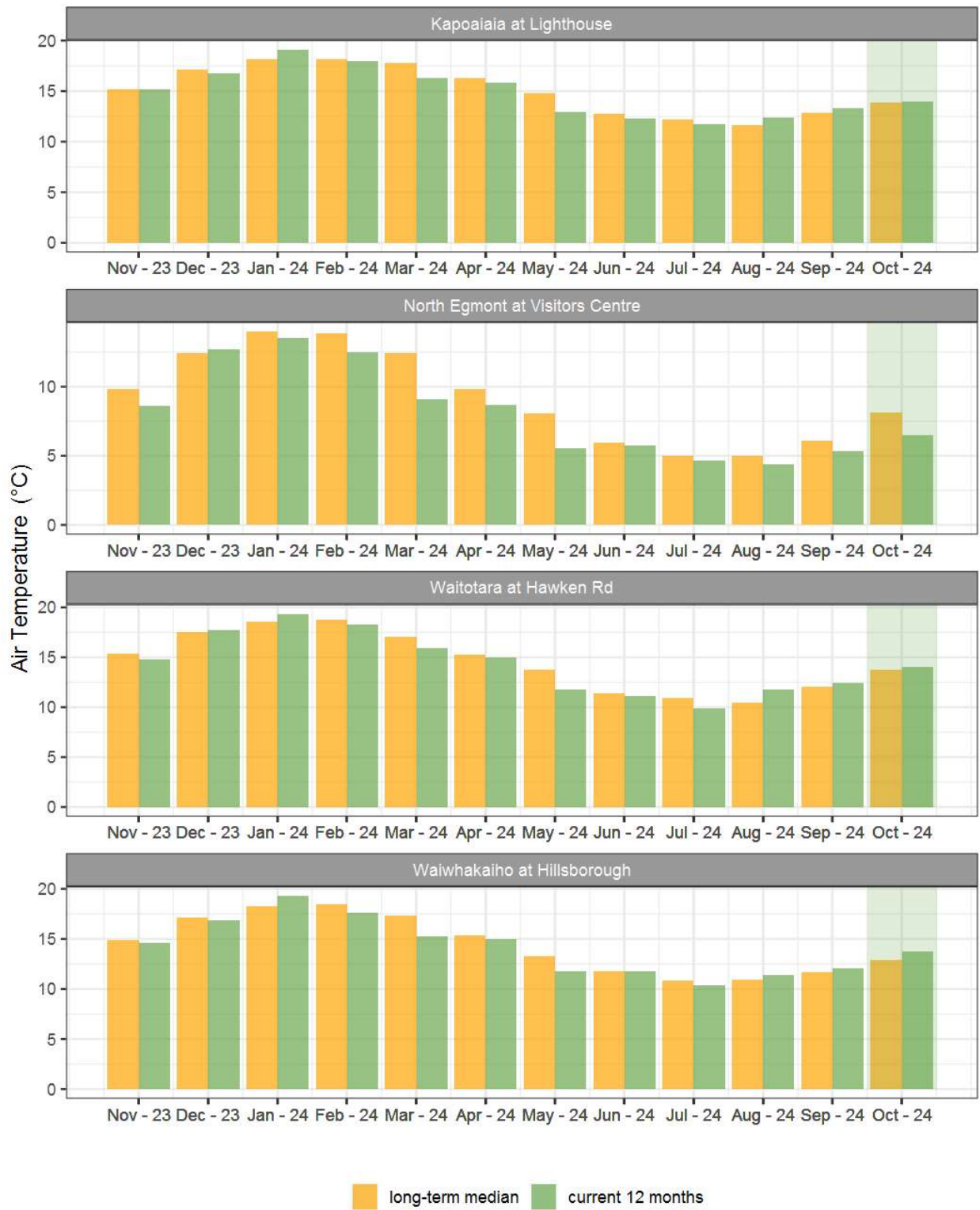


Figure 4.2: Monthly mean air temperature for October and the mean of all previously recorded months.

5. Soil Moisture

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

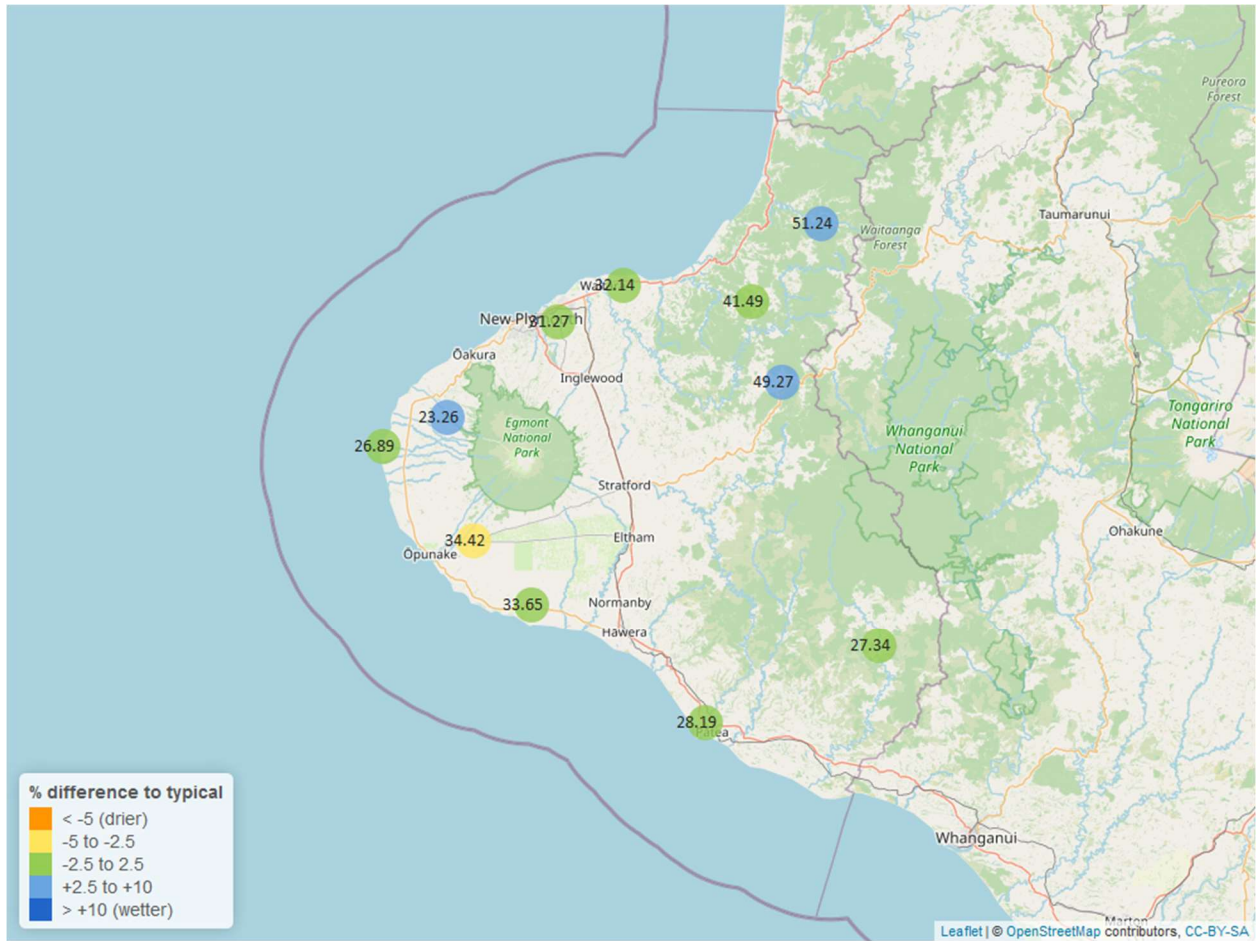


Table 5: Summary of high, low and mean soil moisture for October and for October in all preceding years of record.

October 2024 - Soil Moisture (%)								
Site	Highs		Lows		Mean		October maximum	Data years
	current month	historic	current month	historic	current month	historic		
Kapoaiaia at Lighthouse	27.85	38.33	25.95	20.17	26.89	26.61	28.22	15
Kaupokonui at Glenn Rd	36.06	37.32	30.08	28.40	33.65	34.35	36.36	13
Kotare at OSullivans	55.78	50.94	44.45	35.73	51.24	41.85	58.60	12
Motunui M39 at Weston W3	33.69	35.40	29.71	27.84	32.14	30.90	34.05	16
Patea at Bore 3	30.76	31.33	26.27	24.29	28.19	28.70	33.82	8
Pohokura Saddle	53.02	53.74	44.35	37.61	49.27	44.96	54.71	17
Stony at Mangatete Bridge	27.87	24.39	17.34	14.65	23.26	18.78	31.32	8
Taungatara at Eltham Rd	37.76	44.00	31.69	28.54	34.42	37.72	40.28	11
Uruti at Kaka Rd	42.80	46.67	38.11	37.57	41.49	41.94	43.02	13
Waitotara at Rimunui Station	30.04	29.74	25.57	24.86	27.34	27.11	33.01	7
Waiwhakaiho at Hillsborough	33.91	33.96	28.80	25.75	31.27	29.70	35.93	12

5.2 Long-term data patterns

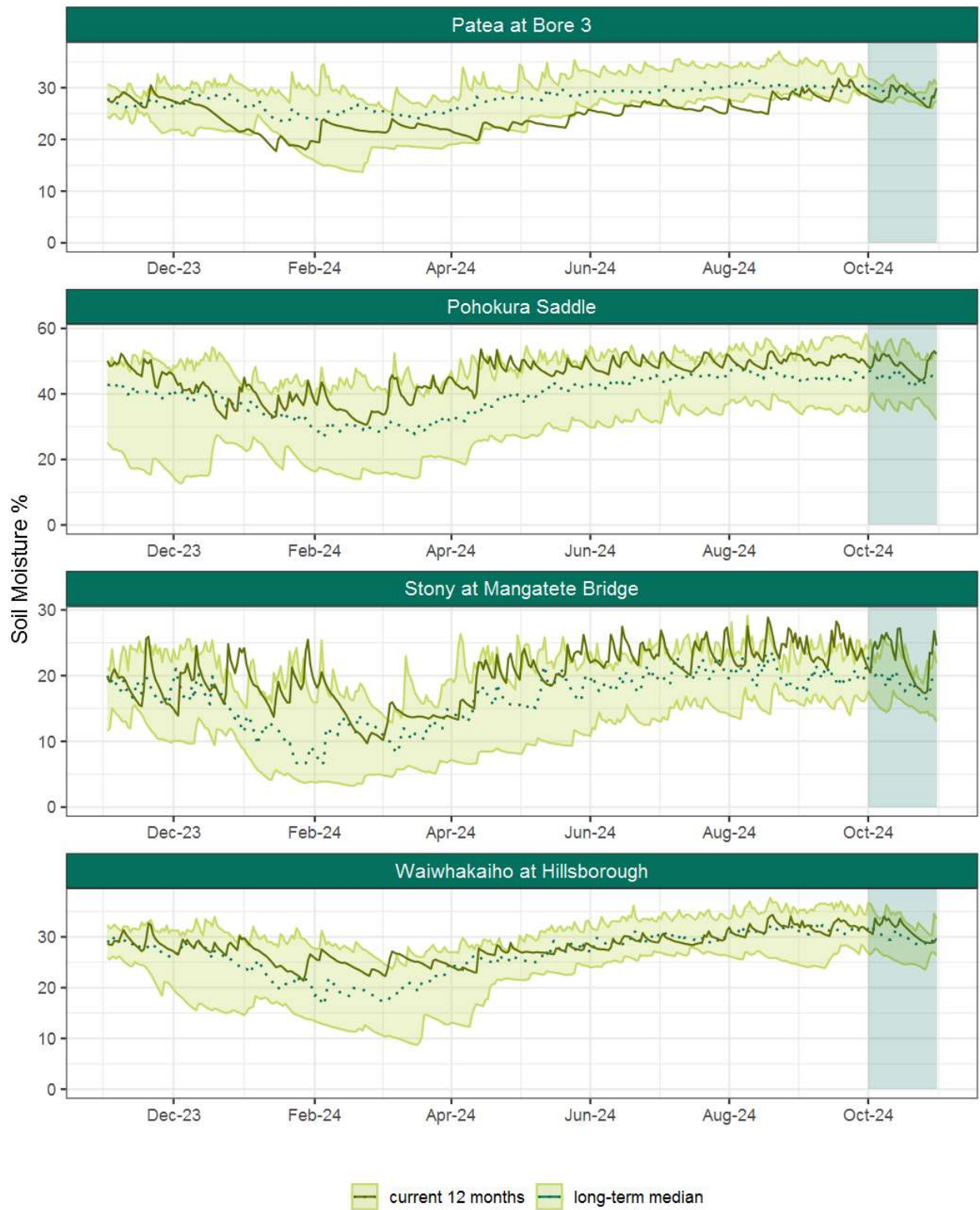


Figure 5.1: Running average soil moisture for selected sites, set in context of the historic record.

5.3 Monthly Bar Charts

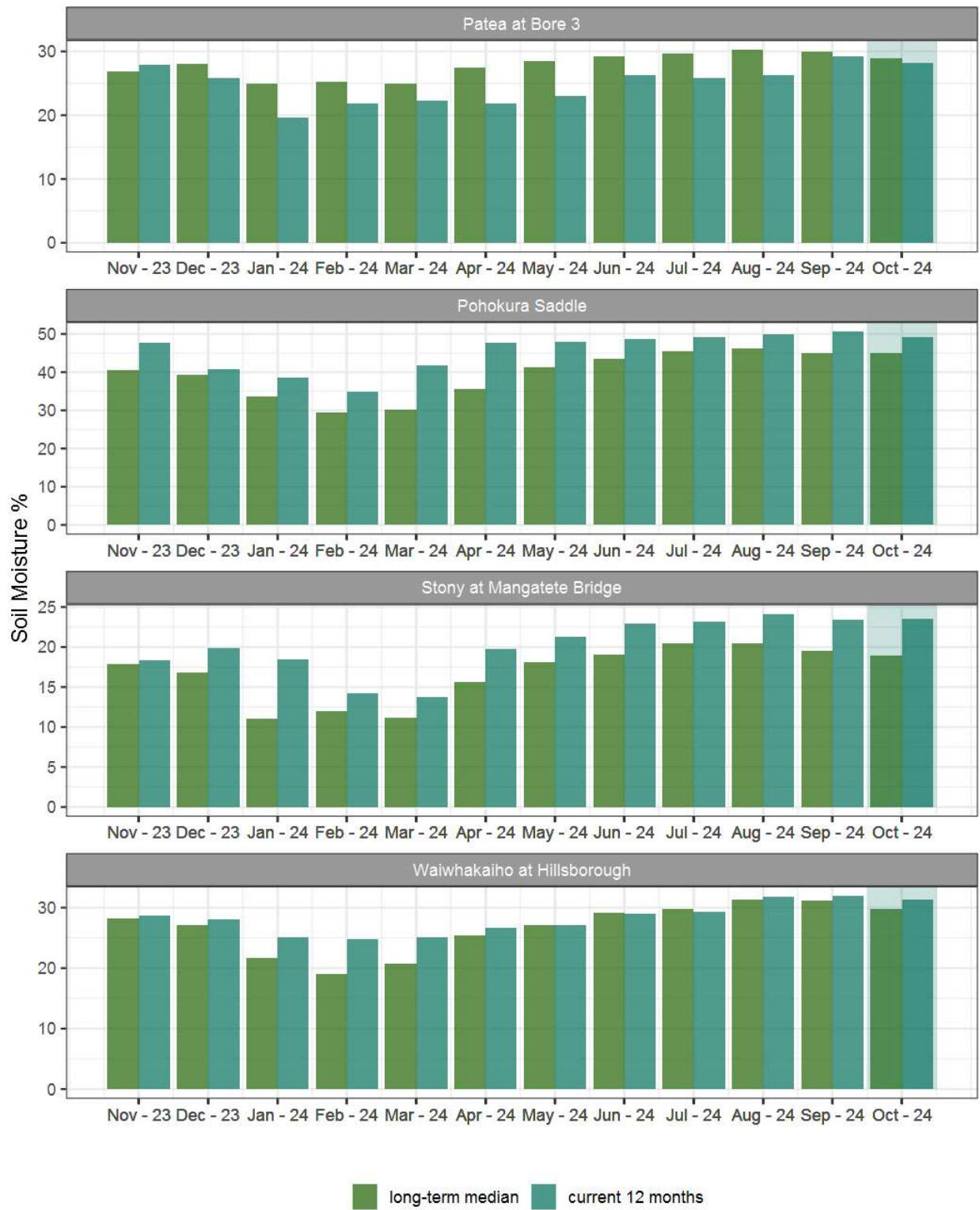


Figure 5.2: Monthly mean soil moisture for this month and the mean of all previously recorded months.

6. Soil Temperature

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

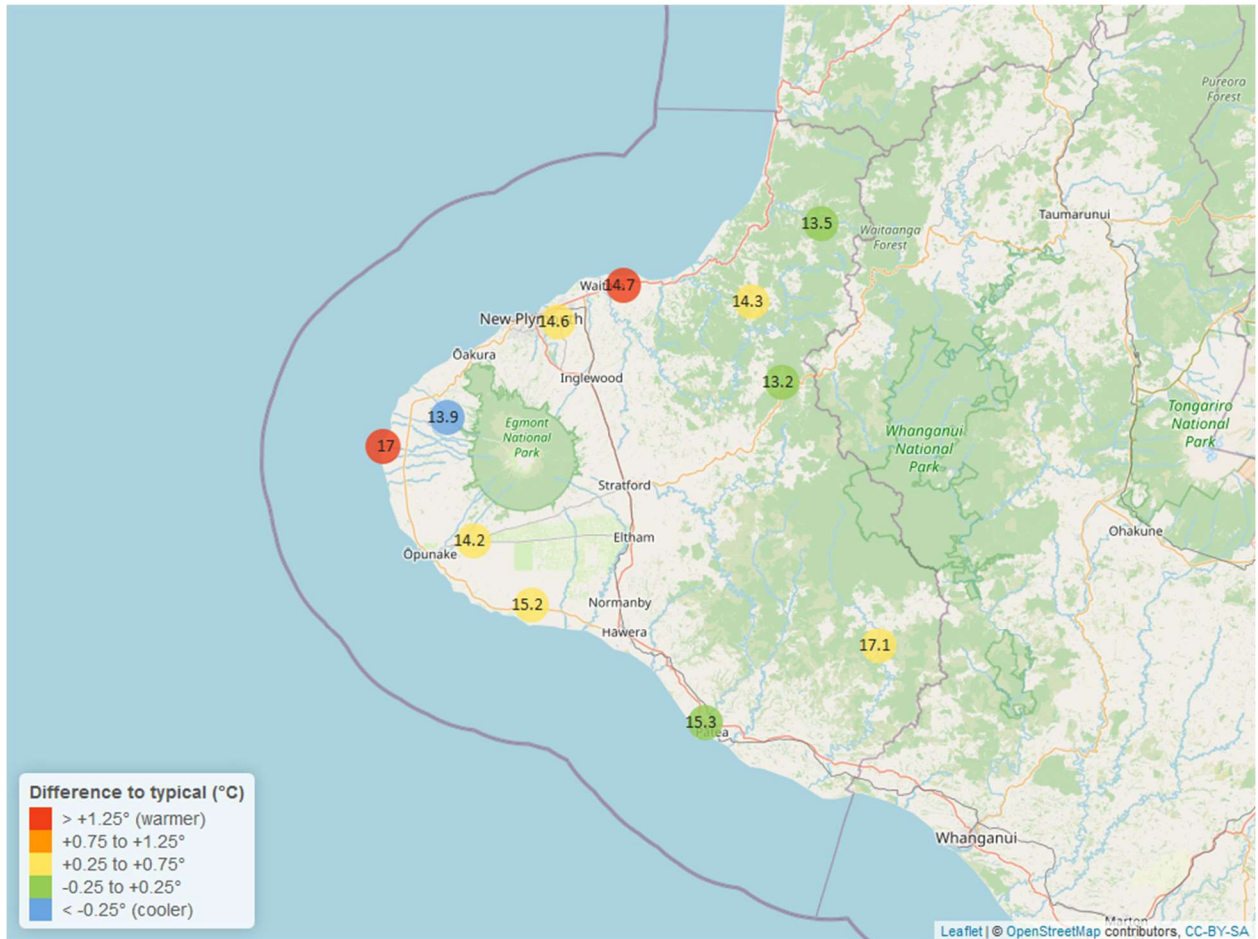


Table 6: Summary of high, low and mean soil temperature for October and for October in all preceding years of record.

October 2024 - Soil Temperatures (°C)								
Site	Highs		Lows		Mean		October maximum	Data years
	current month	historic	current month	historic	current month	historic		
Kapoaiaia at Lighthouse	22.50	18.18	12.80	11.92	17.0	14.53	25.98	17
Kaupokonui at Glenn Rd	17.66	17.34	13.84	12.60	15.2	14.70	18.50	13
Kotare at OSullivans	15.10	16.08	12.79	11.07	13.5	13.45	15.48	12
Motunui M39 at Weston W3	16.18	15.75	13.40	11.37	14.7	13.22	16.46	16
Patea at Bore 3	17.95	18.46	13.73	12.57	15.3	15.20	18.90	8
Pohokura Saddle	15.20	15.20	12.26	10.30	13.2	13.00	15.93	17
Stony at Mangatete Bridge	15.60	17.06	12.78	11.80	13.9	14.56	15.80	7
Taungatara at Eltham Rd	16.39	16.20	12.40	11.75	14.2	13.79	17.30	11
Uruti at Kaka Rd	15.98	16.26	13.57	12.12	14.3	13.98	16.20	13
Waitotara at Rimunui Station	19.49	19.95	15.45	14.23	17.1	16.78	20.64	7
Waiwhakaiho at Hillsborough	16.50	16.25	13.26	12.11	14.6	14.02	16.82	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

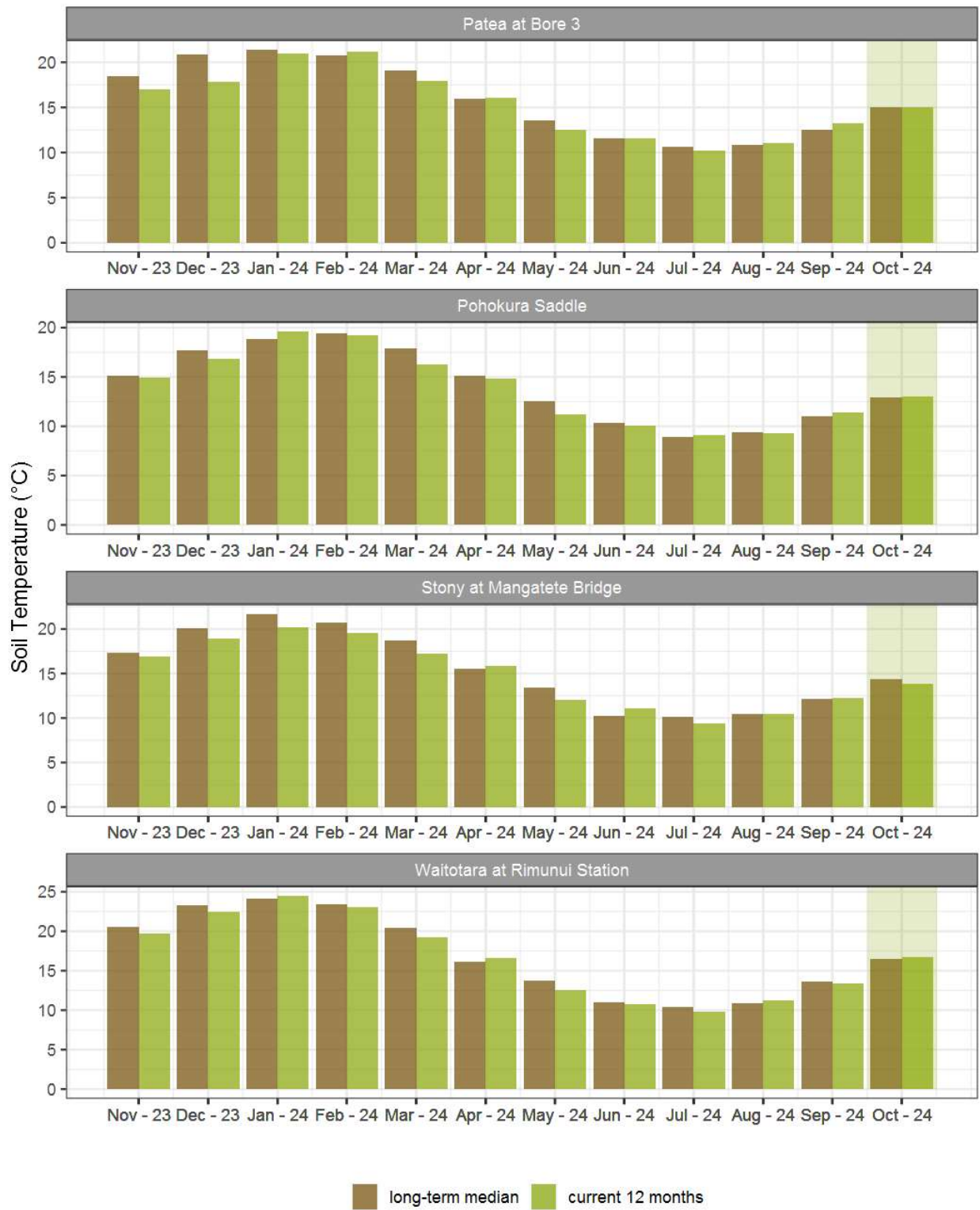


Figure 6.2: Monthly mean soil temperature for this month and the mean of all previously recorded months.

7. Wind Speed and Maximum Gusts

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

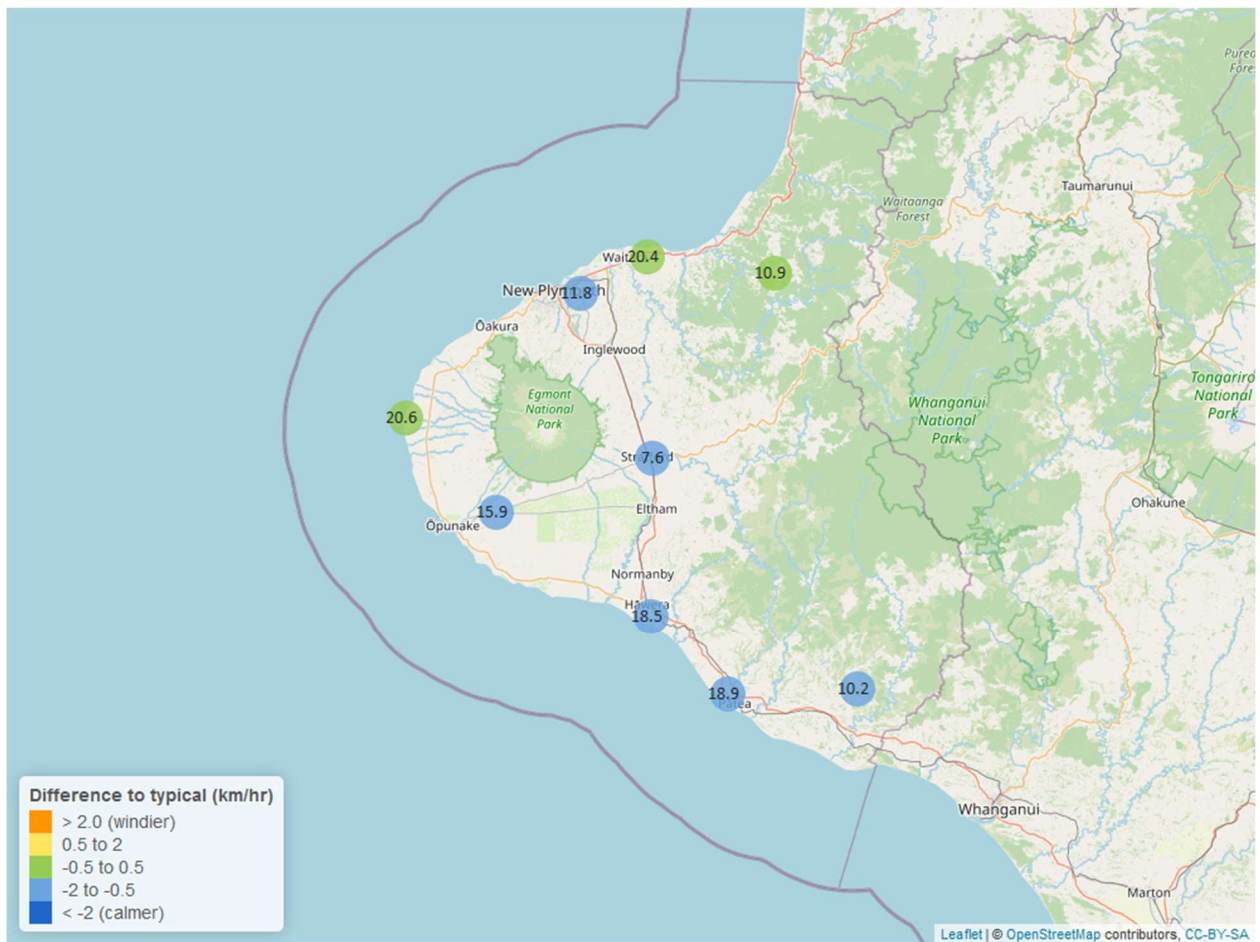


Table 7: Summary of high, low and mean wind speed for October and for October in all preceding years of record.

October 2024 - Wind Speed (average) - (km/hr)								
Site	Highs		Lows		Mean		October maximum	Data years
	current month	historic	current month	historic	current month	historic		
Hawera AWS	37.04	38.89	7.41	6.48	18.5	20.37	46.30	19
Kapoaiaia at Lighthouse	37.57	41.83	7.45	6.66	20.6	20.74	50.31	25
New Plymouth AWS	34.26	40.74	5.56	5.56	20.4	20.37	48.15	17
Patea at Bore 3	37.30	40.88	6.82	6.41	18.9	20.45	46.05	9
Patea at Stratford	19.66	20.43	2.21	2.29	7.6	8.26	25.51	18
Taungatara at Eltham Rd	35.97	32.71	6.85	6.17	15.9	16.61	41.96	9
Uruti at Kaka Rd	25.20	25.34	4.19	3.81	10.9	10.68	37.72	27
Waitotara at Ngutuwera	22.33	24.86	3.10	2.55	10.2	11.53	30.20	26
Waiwhakaiho at Hillsborough	23.50	27.87	4.37	3.77	11.8	12.38	36.50	7

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

October 2024 - Wind Gusts (Maximum) - (km/hr)								
Site	Highs		Lows		Mean		October maximum	Data years
	current month	historic	current month	historic	current month	historic		
Hawera AWS	68.52	77.78	24.08	25.93	51.9	50.00	74.08	19
Kapoaiaia at Lighthouse	62.28	83.35	21.60	23.30	41.4	47.80	70.92	24
New Plymouth AWS	70.38	77.78	24.08	25.93	48.1	48.15	70.38	17
Patea at Bore 3	71.00	76.70	24.80	25.40	51.8	49.50	72.40	9
Patea at Stratford	55.08	66.90	21.24	21.60	39.2	41.40	66.60	18
Taungatara at Eltham Rd	74.50	75.40	24.10	26.50	46.2	45.90	85.70	9
Uruti at Kaka Rd	75.60	74.10	25.20	24.10	47.9	42.90	101.16	26
Waitotara at Ngutuwera	84.60	74.60	23.40	22.50	46.8	45.90	106.56	26
Waiwhakaiho at Hillsborough	60.80	69.50	24.10	22.90	42.5	40.70	61.80	7

7.2 Long-term data patterns

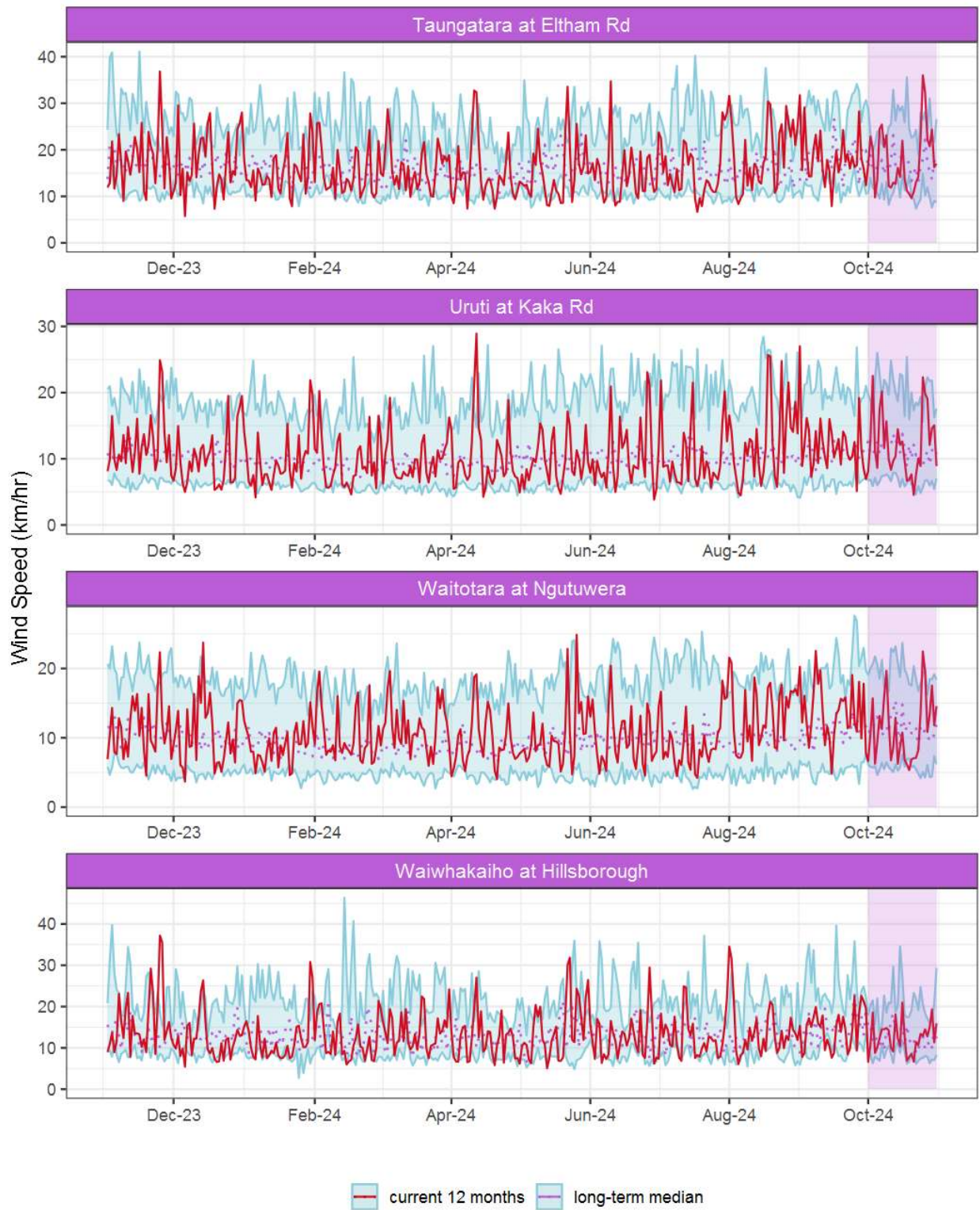


Figure 7.1: Running average wind speed (km/hr) for selected sites, set in context of the historic record.

7.3 Monthly Bar Charts

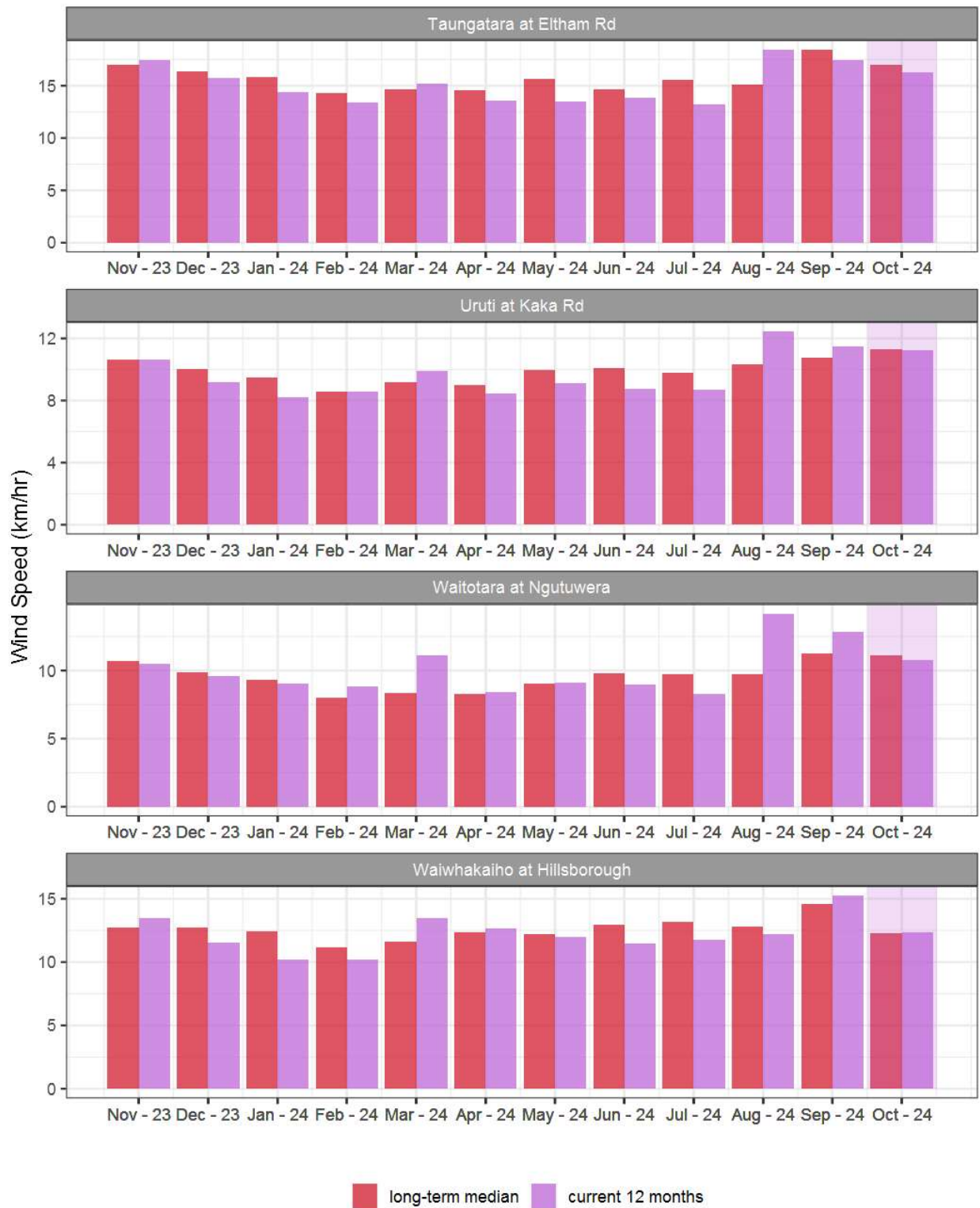


Figure 7.2: Monthly mean wind speed (km/hr) for selected sites, relative to the mean of all previously recorded months.

7.4 Wind roses for October 2024

Average windspeed

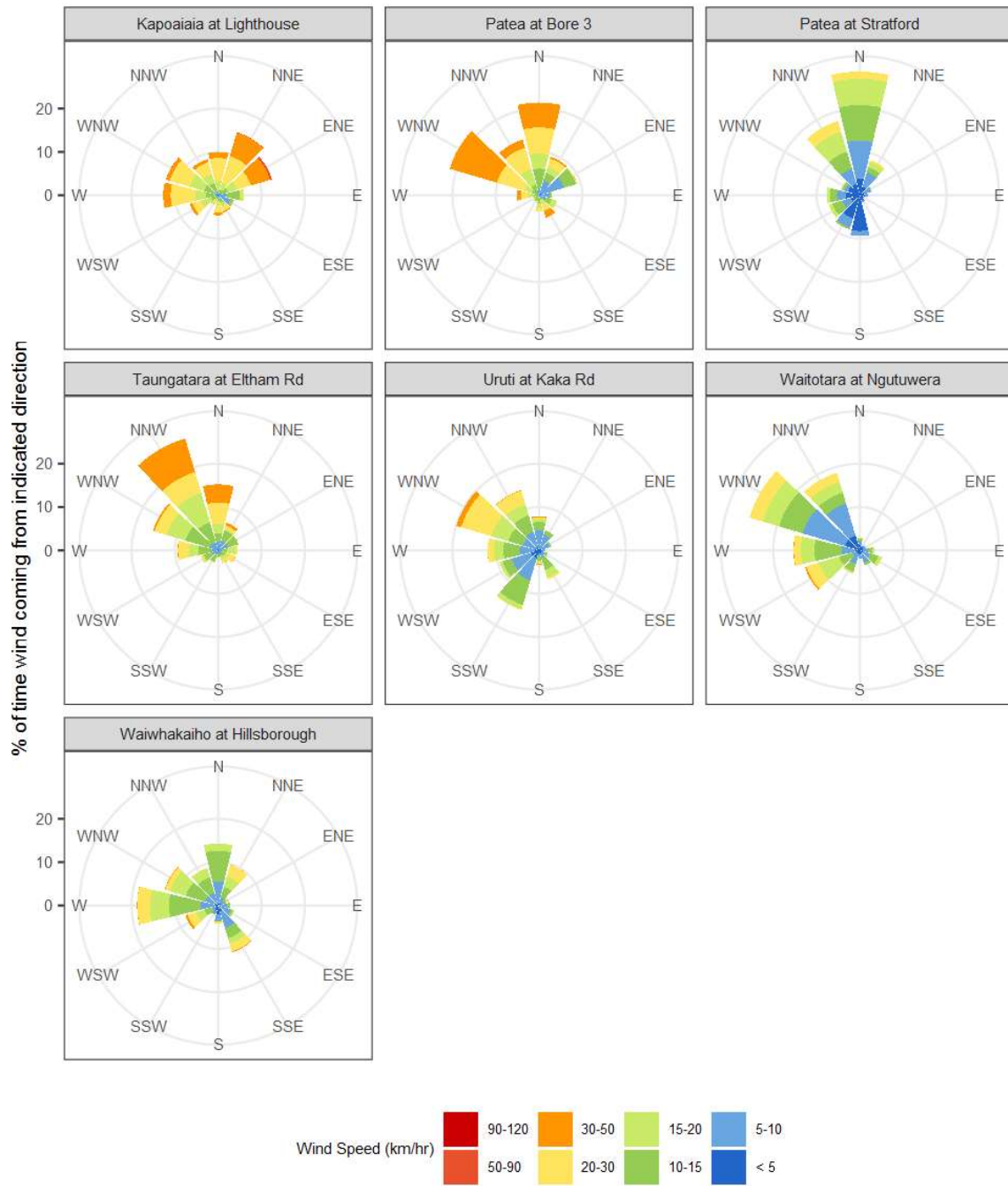


Figure 7.3: Wind roses for October for average wind speed (km/hr).

Maximum gust strength

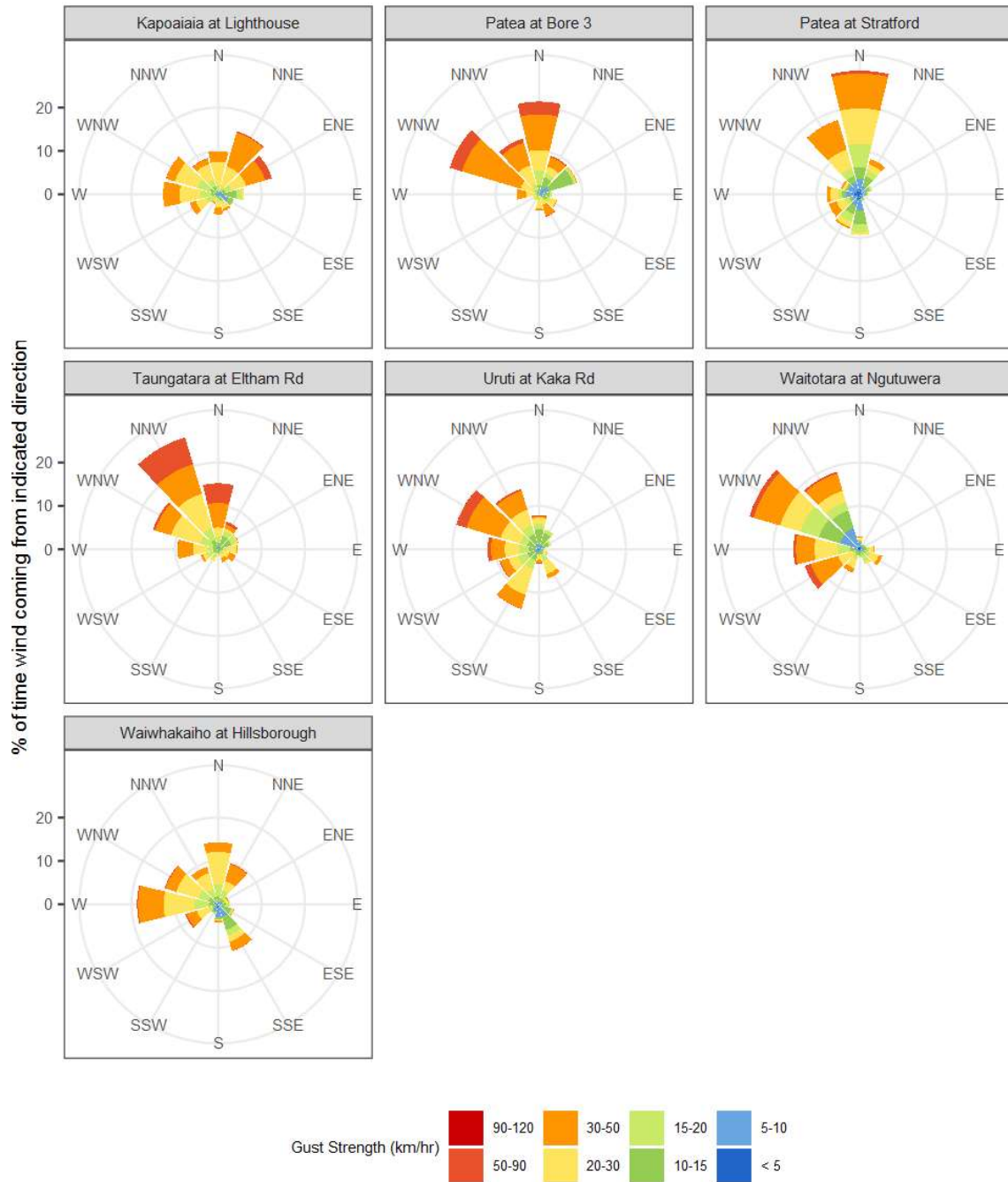


Figure 7.4: Wind roses for October for maximum wind gust (km/hr).

Summary of month's conditions

Rainfall

On average October rainfall was 158.2mm, 1% less than usual, ranging from 26% less rain at Kaupokonui at Glenn Rd, and 22% more at Waitotara at Hawken Rd.

Year-to-date rainfall is lowest at Waitotara at Hawken Rd with 26% less rainfall than normal, Pohokura Saddle has had the highest year-to-date rainfall with 1% more normal, on average there has been 12% less rain than normal across all rain gauges. Compared to typical full year totals, on average, sites have already received 73% of a typical year's rainfall, with the highest value at Pohokura Saddle, 84% of normal, whereas Waitotara at Hawken Rd sits at just 62% of the typical year's total.

River Flow

Mean river flows for October were 8.9% lower than typical values, low flows were 17.8% greater, and high flows 30.5% lower than typical values. The maximum river flow recorded in October was 285.2m³/sec at Waitara at Bertrand Rd on 3 October.

River Water Temperature

Mean river (non-mountain) water temperatures were 12.9°C, an average the same as long-term October values. Nighttime-low water temperatures were on average the same as historic lows, and day-time high temperatures were on average the same as historic highs. The maximum river water temperature recorded in October was 21.6°C at Kaupokonui at Glenn Rd on 25 October.

Air Temperature

The average air temperature for the region (excluding Te Maunga sites) was 12.6°C, which is 0.2°C warmer than long-term October averages. Low air temperatures for October were on average 0.5°C warmer than the October average for previous years. Day-time high temperatures were on average the same as historic highs. The maximum air temperature recorded in October was 22.6°C at Inglewood at Oxidation Ponds on 22 October.

Soil Moisture

The average soil moisture for October across sites in Taranaki region was 34.5%. Soil moistures were on average 1.5% wetter than typical October values. On average, low soil moistures were 3.4% wetter than previous lows, and the highs were on average 1.5% drier than previous values for October.

Soil Temperature

October soil temperatures were generally 0.5°C warmer than long-term averages. Average nighttime low soil temperatures were 1.3°C warmer than recorded lows, and upper day-time soil temperatures were on average 0.2°C warmer than long-term October highs. The maximum soil temperature recorded in October was 26.0°C at Kapoaiaia at Lighthouse on 21 October.

Wind Speed (average and 10 minute gust)

October average wind speeds were 15km/hr, with average gust strength of 46.2 km/hr, these were 0.7km/hr lighter, and 0.4km/hr gustier than the long-term average. Average calm weather wind speeds were 0.5km/hr stronger than recorded lows, and windy conditions were on average 2.3km/hr lighter than long-term October highs. The maximum wind gust recorded in October was 106.56km/hr at Waitotara at Ngutuweru on 25 October.

Report date: 1 November, 2024.

Supply of environmental data - General terms and conditions

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