

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

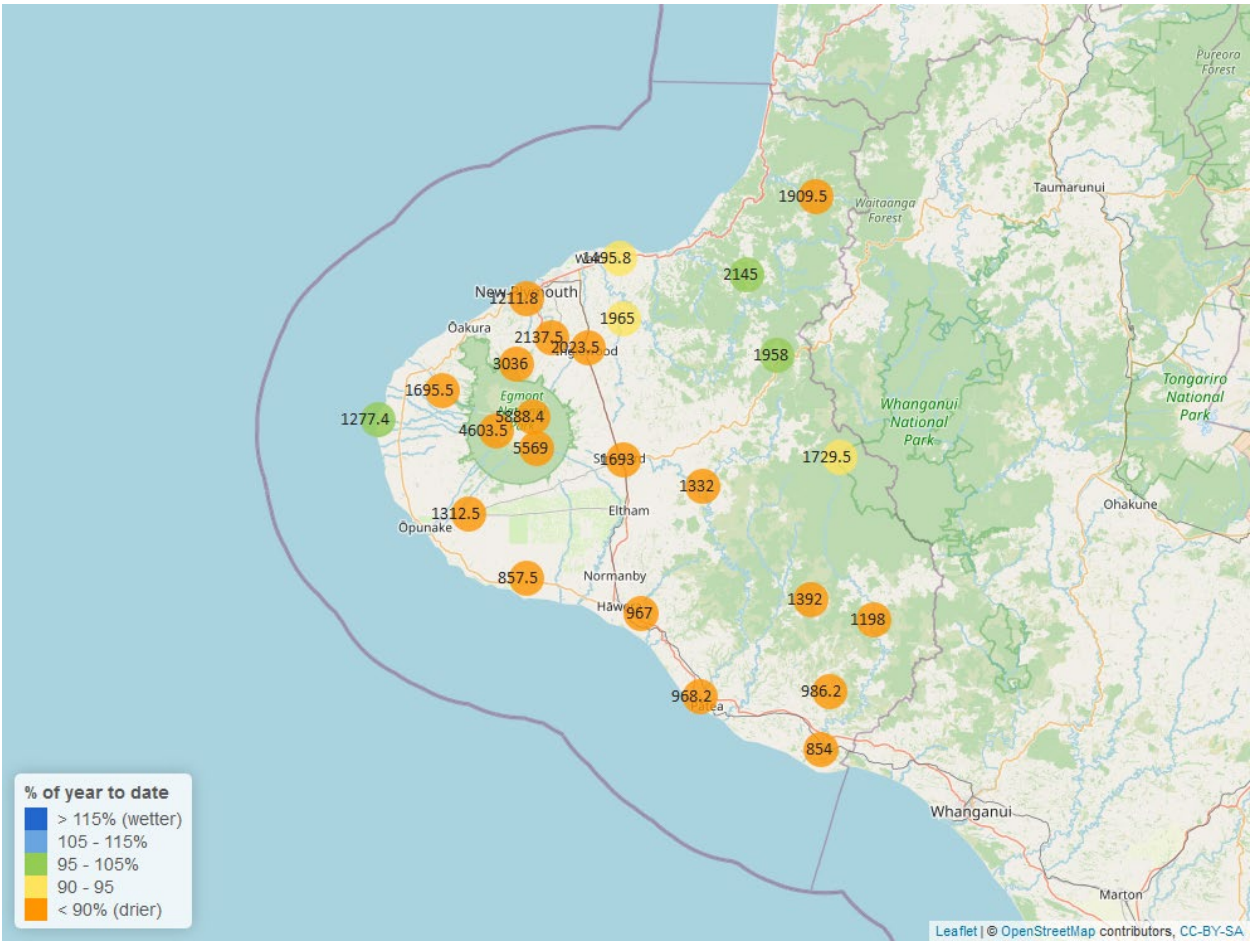


Table 1: Rainfall December and year to date totals for rain gauge sites in Taranaki.

	December			Year to Date			
Rain gauge	# days with rain	Total rain (mm)	% of typical month	Total to date (mm)	% of typical year to date	% of typical full year	Records Began
North Egmont at Visitors Centre	15	366.5	61.6	5888.4	85.1	85.1	1995
Dawson Falls	14	282.5	58.5	5569.0	87.0	87.0	1999
Kapoaiaia at Kahui Hut	15	340.0	86.5	4603.5	87.5	87.5	2006
Mangorei Upper at Forest Hill	14	258.0	67.9	3036.0	81.5	81.5	2018
Waiwhakaiho at Hillsborough	10	105.5	75.6	1506.0	82.3	82.3	2013
Brooklands Zoo at New Plymouth	11	79.6	64.5	1211.8	75.1	75.1	2012

	December			Year to Date			
Rain gauge	# days with rain	Total rain (mm)	% of typical month	Total to date (mm)	% of typical year to date	% of typical full year	Records Began
Motunui M39 at Weston W3	10	127.2	88.8	1495.8	94.8	94.8	1999
Waiwhakaiho at Egmont Village	10	156.5	71.1	2137.5	88.1	88.1	1995
Manganui at Everett Park	13	127.0	66.5	1965.0	93.5	93.5	1995
Inglewood at Oxidation Ponds	10	137.0	63.5	2023.5	85.9	85.9	2000
Stony at Mangatete Bridge	11	97.0	53.3	1695.5	84.6	84.6	2004
Kapoaiaia at Lighthouse	10	72.4	62.0	1277.4	95.3	95.3	1999
Taungatara at Eltham Rd	10	104.5	76.8	1312.5	83.1	83.1	2005
Kaupokonui at Glenn Rd	8	36.5	36.6	857.5	73.3	73.3	1998
Patea at Stratford	11	98.0	61.2	1693.0	85.2	85.2	1999
Mangaehu at Bridge	10	71.0	52.4	1332.0	83.6	83.6	1999
Kotare at OSullivans	14	162.0	81.0	1909.5	88.5	88.5	1998
Uruti at Kaka Rd	12	180.5	80.4	2145.0	96.5	96.5	1995
Pohokura Saddle	10	119.5	64.5	1958.0	98.2	98.2	1995
Omaru at Charlies	14	116.0	78.8	1729.5	94.5	94.5	2006
Omahine at Moana Trig	16	113.0	85.0	1392.0	82.3	82.3	2007
Waitotara at Rimunui Station	12	76.5	63.7	1198.0	87.2	87.2	1995
Waitotara at Ngutuweru	10	82.5	68.8	986.2	76.5	76.5	1999
Tawhiti at Duffys	10	64.5	60.4	967.0	87.3	87.3	1995
Patea at Bore 3	9	48.4	44.8	968.2	81.9	81.9	2006
Waitotara at Hawken Rd	10	57.8	60.5	854.0	72.0	72.0	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

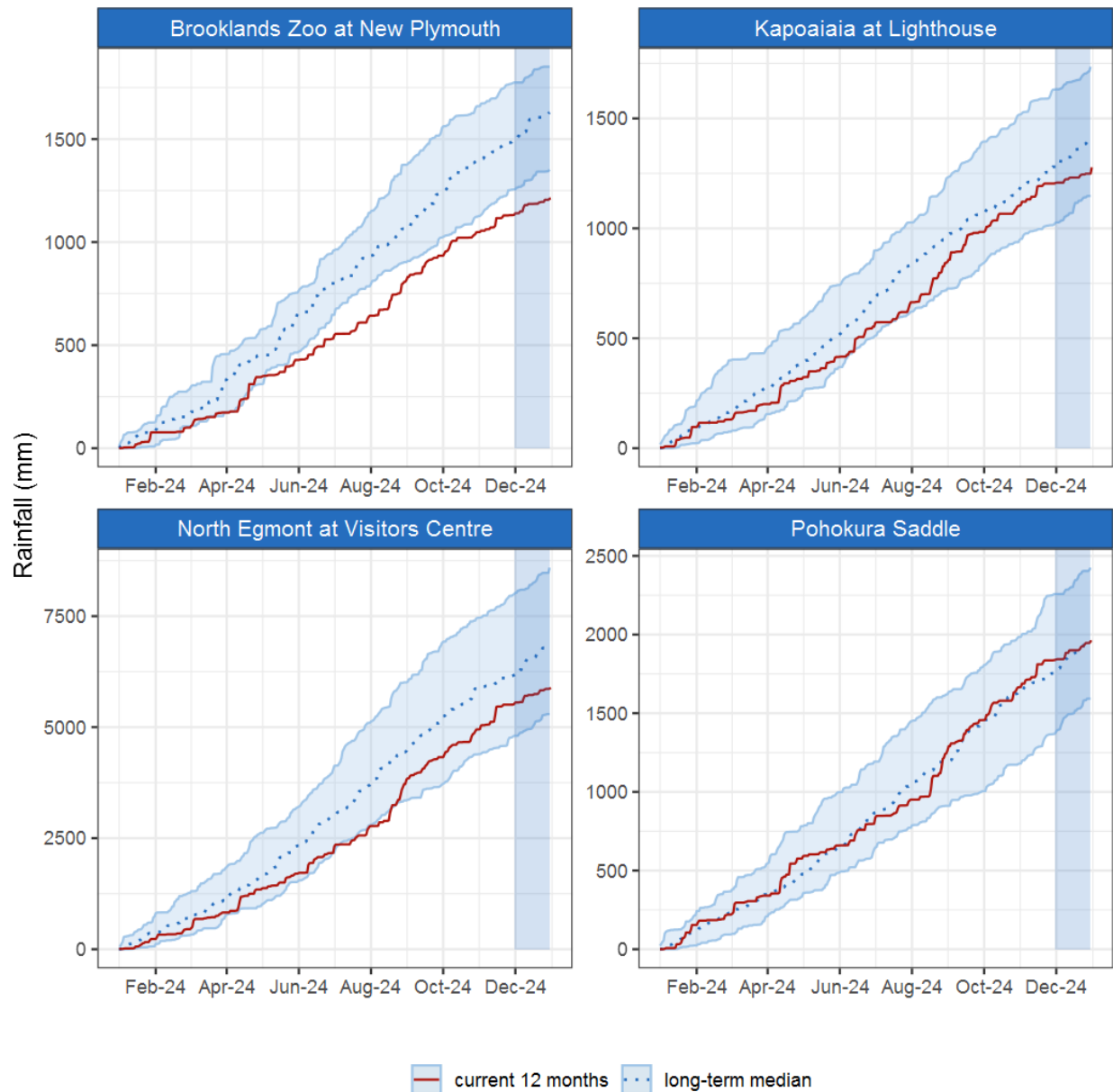


Figure 1.1: This year's and last year's data set in context of historic record at selected rain gauge sites in Taranaki.

1.3 Monthly Bar Charts

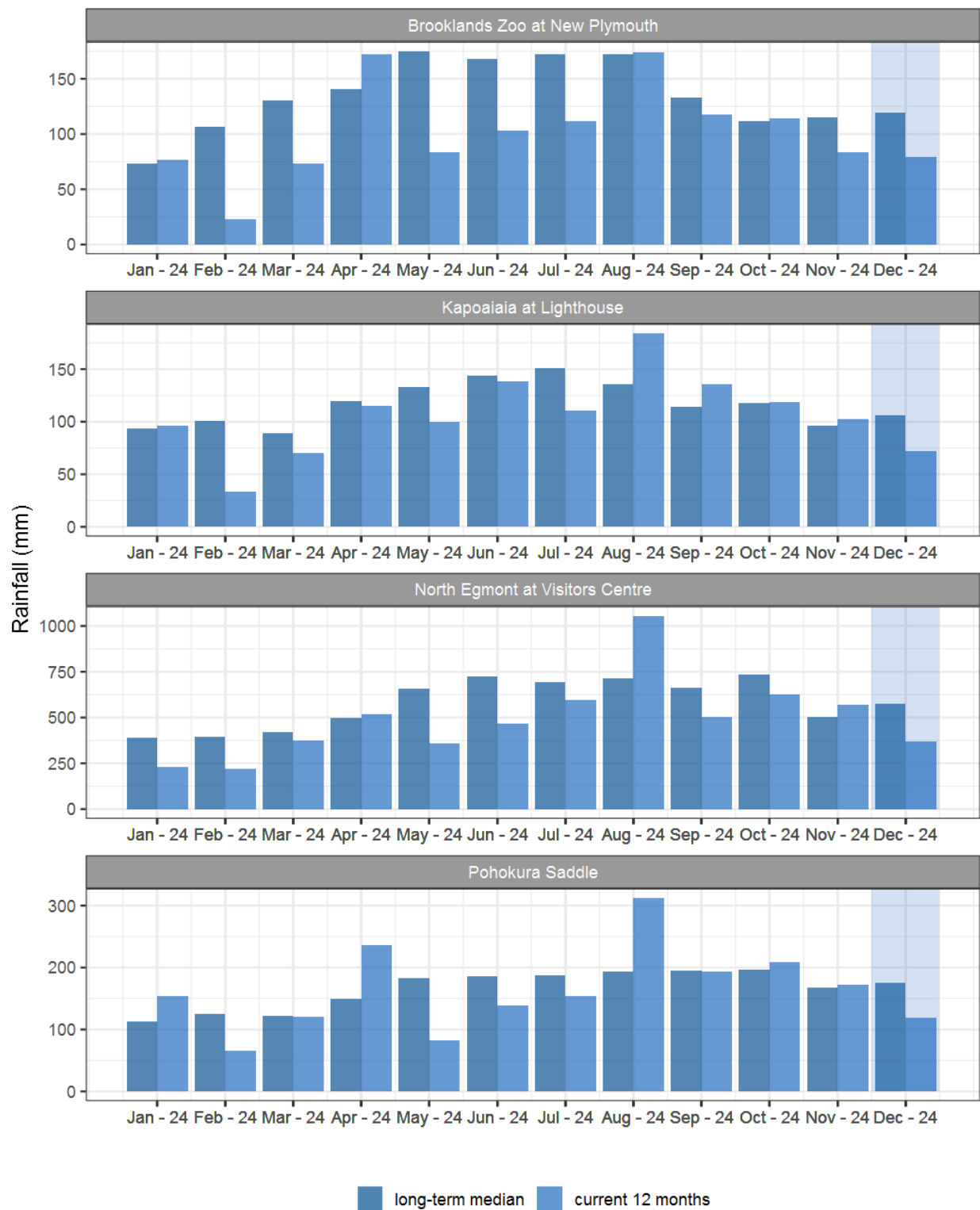


Figure 1.2: Monthly rainfall totals for this month and the mean of all previously recorded months.

2. River Flow

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

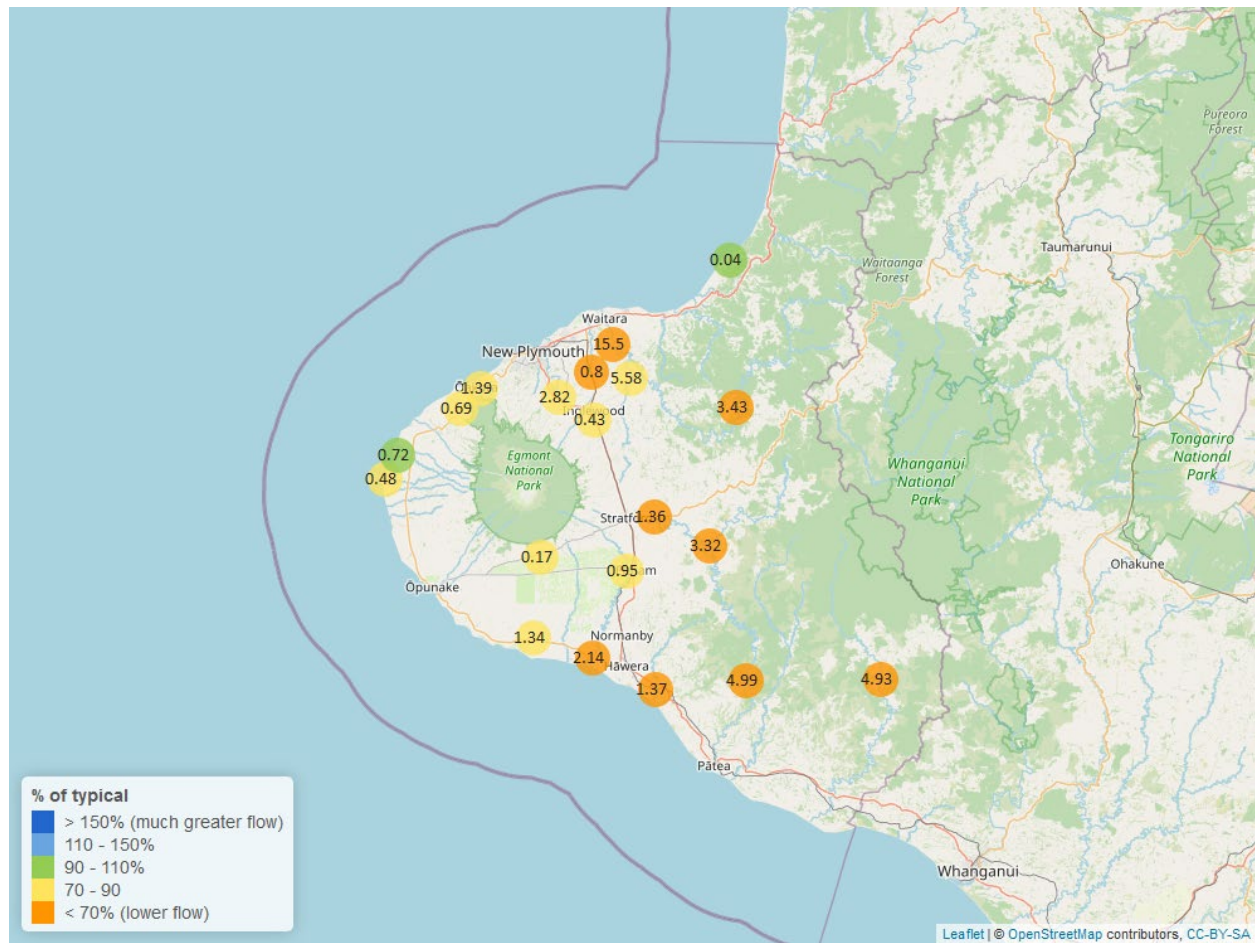


Table 2: Summary of high, low and mean flow for December and for December in all preceding years of record.

December 2024 - Recorded flows (m3/sec)								
	Highs		Lows		Mean			
River and Site	current month	historic	current month	historic	current month	historic	December maximum	Data years
Kapoaiaia at Lighthouse	0.88	2.87	0.44	0.29	0.48	0.59	9.46	38
Kaupokonui at Glenn Rd	1.72	5.29	1.17	0.92	1.34	1.68	4.80	46
Mangaehu at Bridge	8.73	38.48	2.49	2.76	3.32	6.24	17.39	46
Manganui at Everett Park	13.71	56.22	4.71	3.82	5.58	7.78	131.96	33
Mangawheroiti Above Intake W.W	0.21	0.58	0.16	0.17	0.17	0.23	0.56	12
Ngatoro at SH3	1.09	3.82	0.38	0.31	0.43	0.53	20.41	36
Oakura at Victoria Rd	7.64	18.72	0.80	0.74	1.39	1.75	67.83	6
Patea at McColls Bridge	23.68	67.38	4.48	2.14	4.99	11.70	53.87	37
Patea at Skinner Rd	2.91	11.06	1.04	0.84	1.36	2.47	7.41	46
Tangahoe below Railway Bridge	1.98	21.86	1.08	1.41	1.37	2.99	2.58	7
Timaru at Tataraimaka	2.74	7.22	0.43	0.43	0.69	0.87	28.05	11
Waikaramarama at Bridge	0.28	1.08	0.03	0.02	0.04	0.04	2.74	7
Waingongoro at Eltham Rd	1.53	5.33	0.80	0.52	0.95	1.30	4.71	49
Waingongoro at SH45	2.88	13.17	1.72	1.82	2.14	3.72	5.55	44
Waiongana at SH3a	2.04	8.24	0.61	0.48	0.80	1.25	39.43	43
Waitara at Bertrand Rd	79.17	199.22	10.56	9.56	15.50	26.02	137.76	43
Waitara at Purangi Bridge	30.46	103.54	1.85	0.73	3.43	6.78	103.35	25
Waitotara at Rimunui Station	9.21	35.81	3.84	4.04	4.93	7.39	15.35	19
Waiwhakaiho at Egmont Village	6.99	25.61	2.37	2.16	2.82	3.70	141.82	44
Warea at Coast	1.70	6.42	0.51	0.50	0.72	0.75	12.53	8

2.2 Long-term data patterns

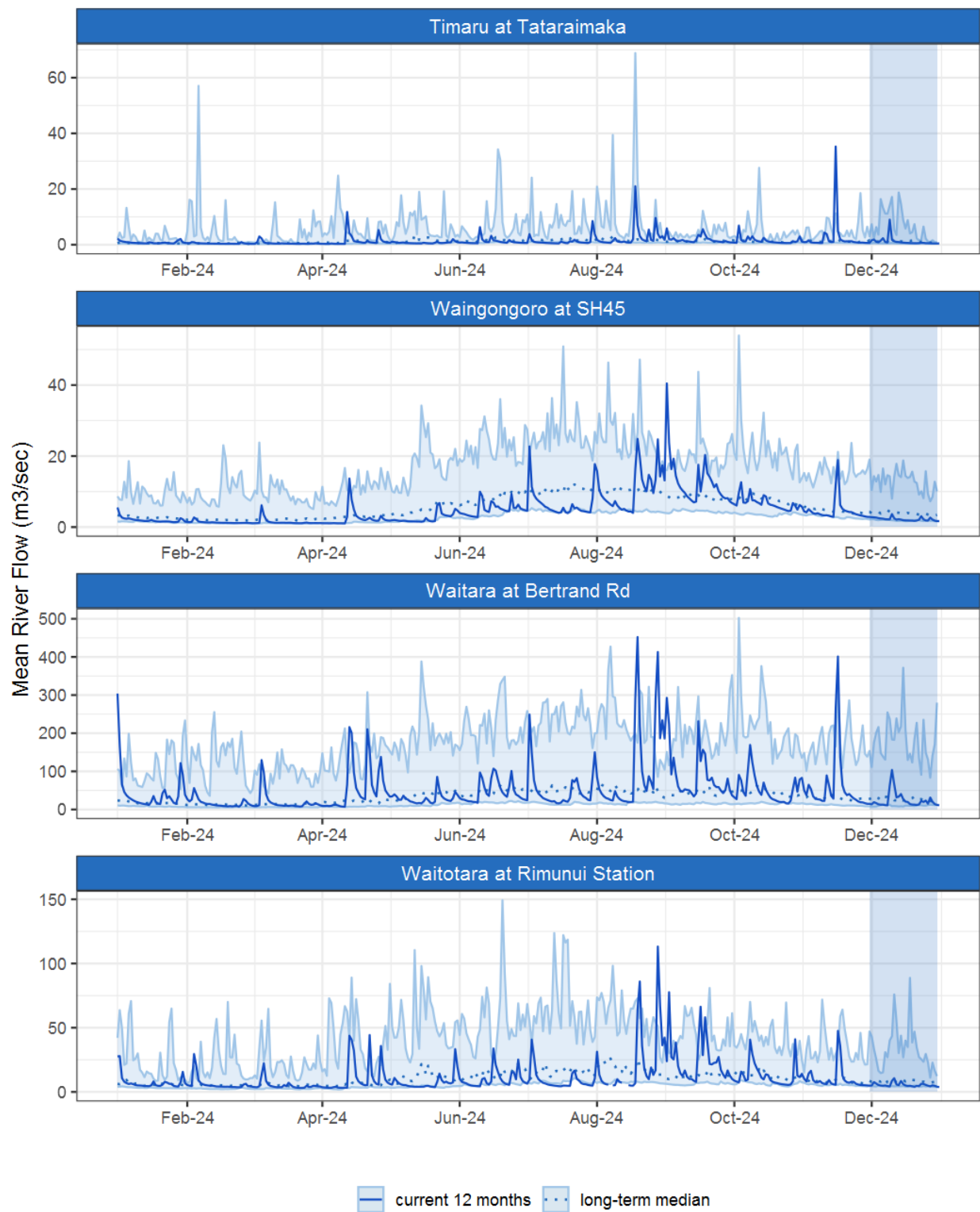


Figure 2.1: Running average river flows for selected sites, set in context of the historic record.

2.3 Monthly Bar Charts

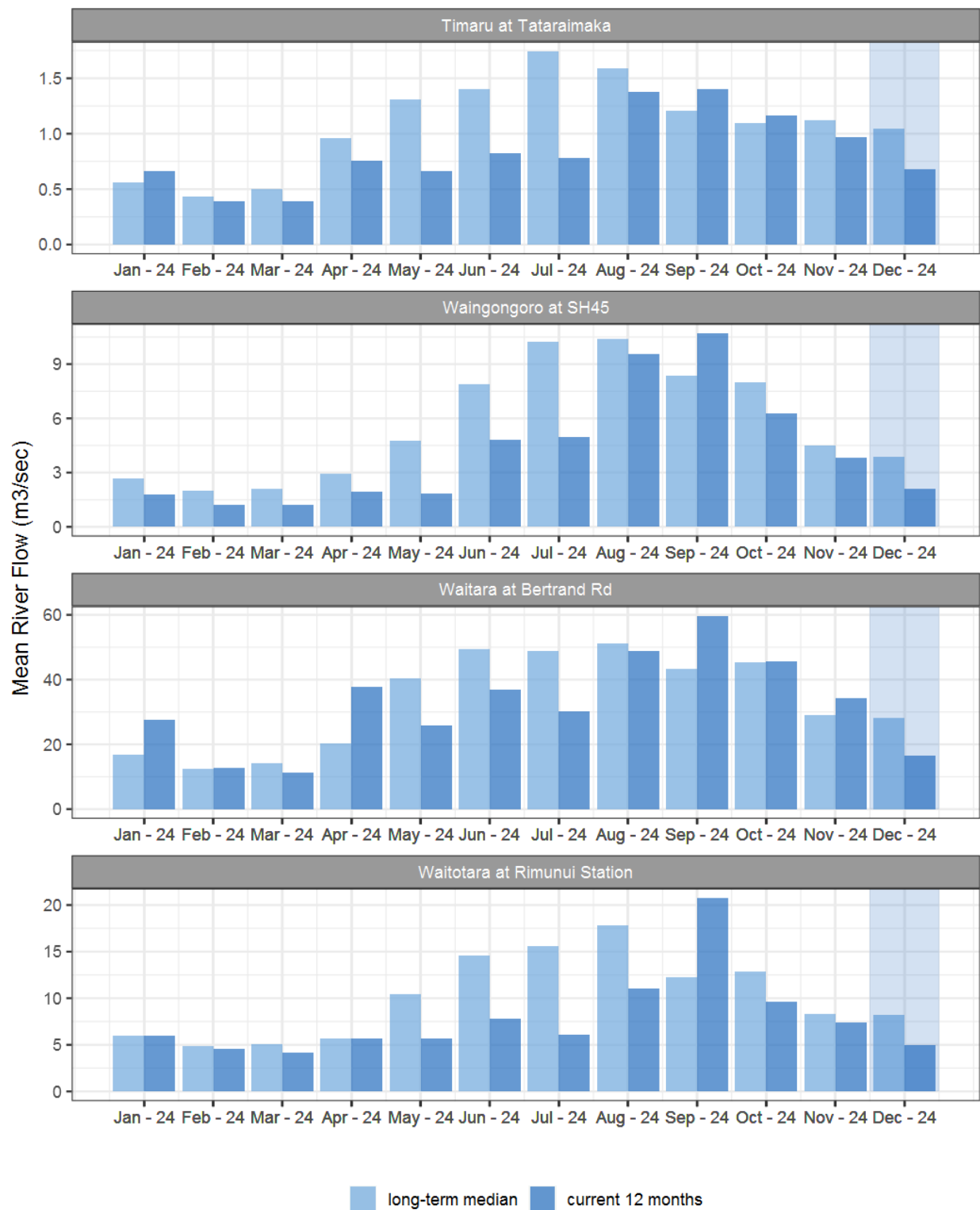


Figure 2.2: Monthly mean river flow for this month and the mean of all previously recorded months.

3. River Temperature

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

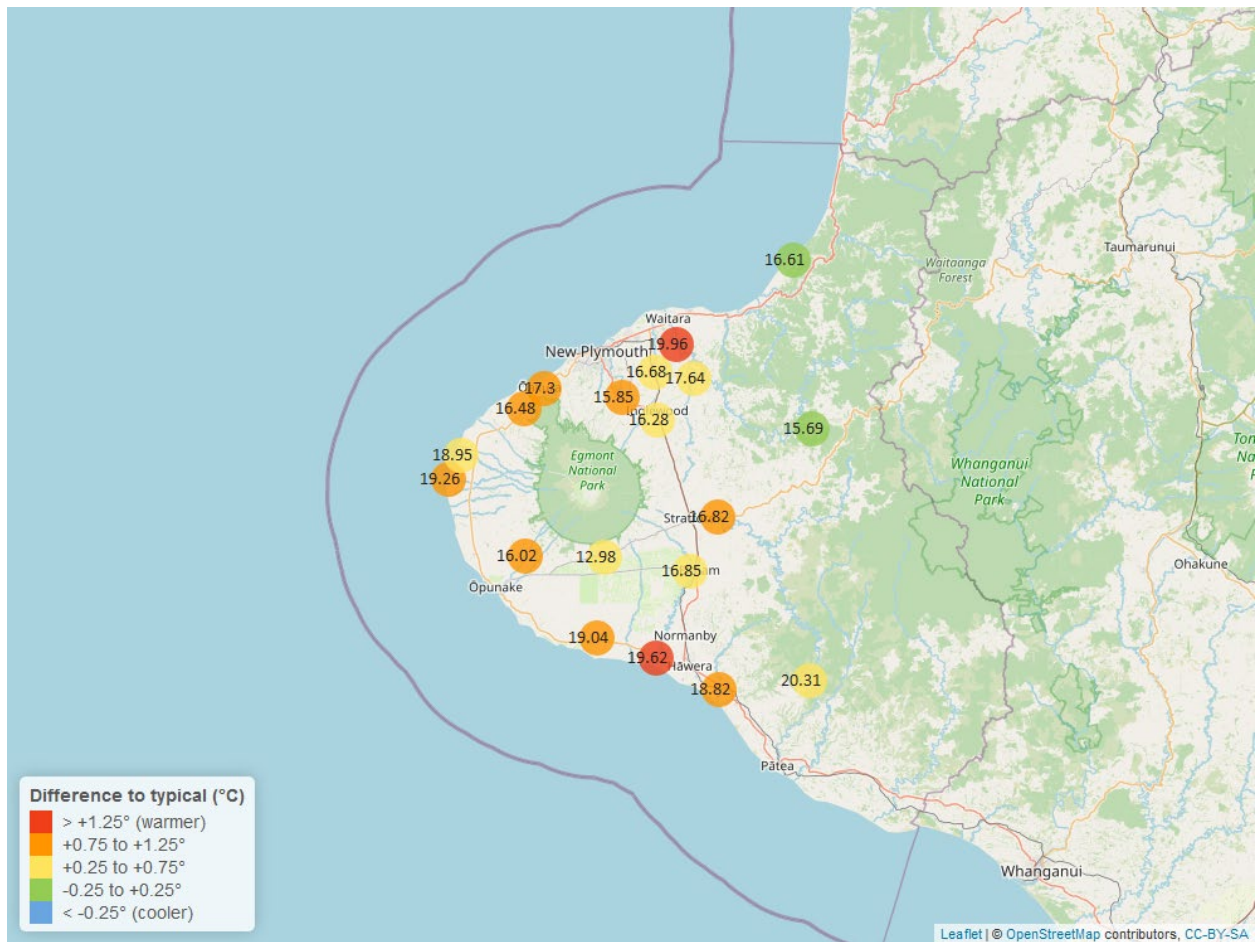


Table 3: Summary of high, low and mean river temperature for December and for December in all preceding years of record.

December 2024 - River Temperature (°C)								
	Highs		Lows		Mean			
River and Site	current month	historic	current month	historic	current month	historic	December maximum	Data years
Kapoaiaia at Lighthouse	22.93	22.43	15.77	14.65	19.26	18.10	24.72	25
Kaupokonui at Glenn Rd	24.26	22.51	15.66	14.16	19.04	17.96	25.40	35
Manganui at Everett Park	19.60	20.85	14.97	14.48	17.64	17.31	20.41	16
Mangawheroiti Above Intake W.W	14.93	14.83	11.20	10.15	12.98	12.33	16.13	12
Matau at Woolshed	18.73	20.09	13.70	13.01	15.69	15.69	20.28	7
Ngatoro at SH3	18.54	19.15	14.00	12.65	16.28	15.90	19.46	26
Oakura at Victoria Rd	20.65	20.16	14.41	13.49	17.30	16.52	22.48	6
Patea at McColls Bridge	22.15	23.55	18.38	16.19	20.31	19.64	23.54	9
Patea at Skinner Rd	19.79	19.60	14.59	13.10	16.82	16.01	21.32	20
Tangahoe below Railway Bridge	21.72	21.31	16.27	15.18	18.82	17.80	22.81	7
Timaru at Tataraimaka	19.60	19.70	14.39	13.11	16.48	15.73	21.19	11
Waiaua 2 at Barraclough Opua	21.80	20.77	13.08	11.75	16.02	15.22	23.55	6
Waikaramarama at Bridge	17.66	18.57	15.04	14.19	16.61	16.56	17.98	7
Waingongoro at Eltham Rd	19.86	20.00	14.52	13.16	16.85	16.16	20.96	20
Waingongoro at SH45	22.34	21.30	17.21	14.86	19.62	17.91	23.78	19
Waiongana at SH3a	18.98	19.70	14.28	13.54	16.68	16.30	20.27	13
Waitara at Bertrand Rd	21.77	22.14	17.50	15.64	19.96	18.54	22.64	33
Waiwhakaiho at Egmont Village	18.42	18.31	13.51	11.95	15.85	15.00	19.49	33
Warea at Coast	23.23	22.92	15.40	14.81	18.95	18.22	24.80	6

3.2 Long-term data patterns

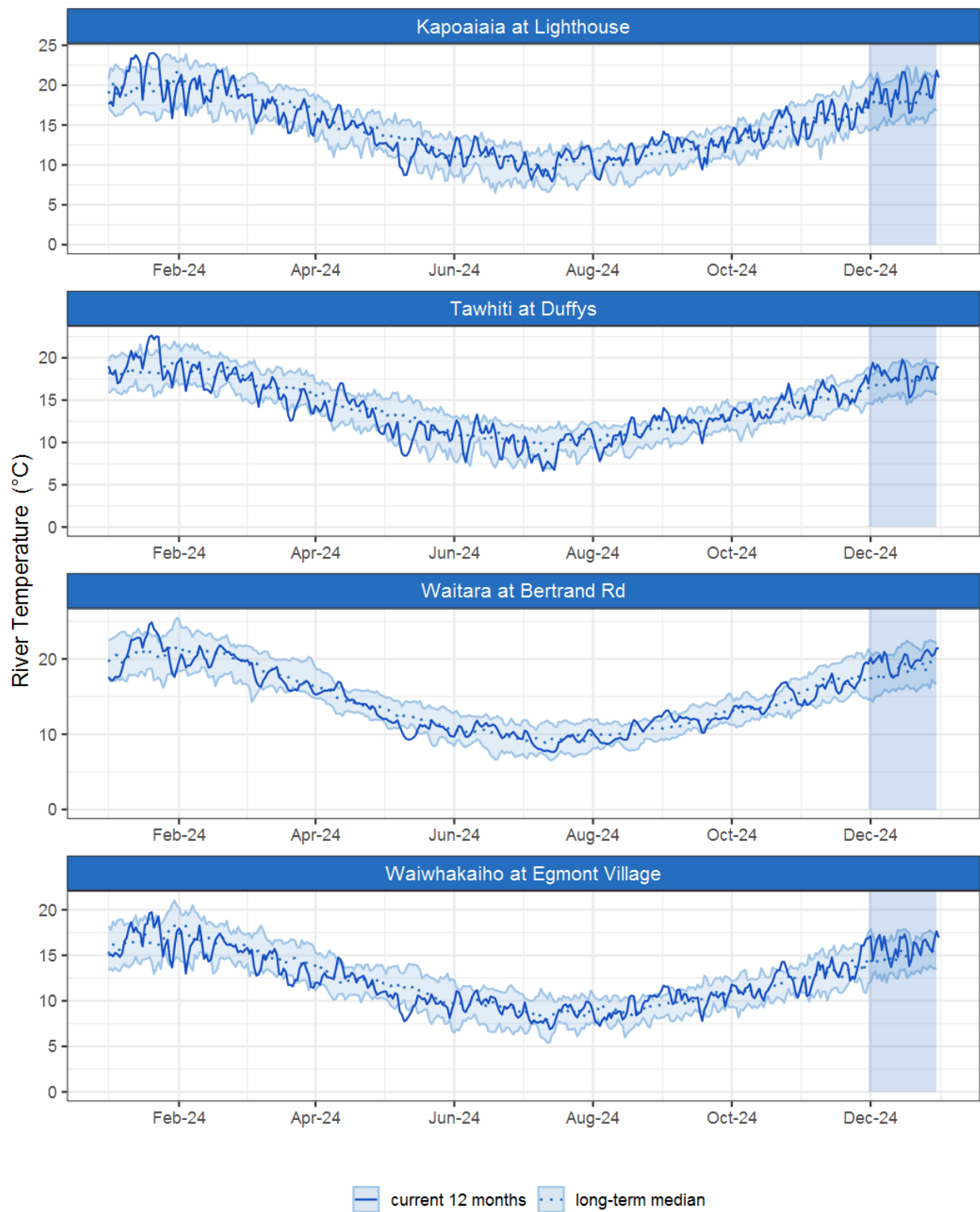


Figure 3.1: Running average river temperature for selected sites, set in context of the historic record.

3.3 Monthly Bar Charts

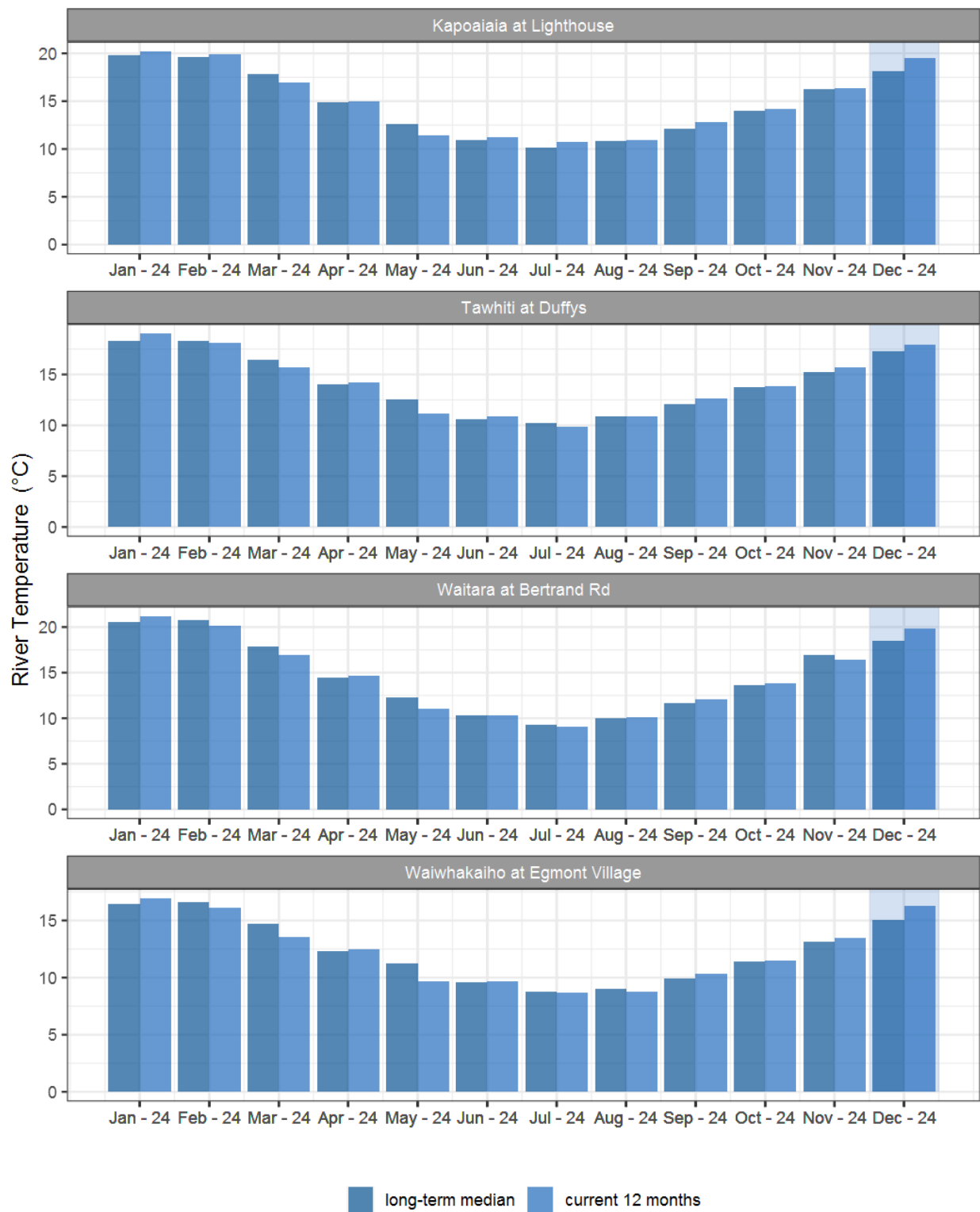


Figure 3.2: Monthly mean river temperature for this month and the mean of all previously recorded months.

4. Air Temperature

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

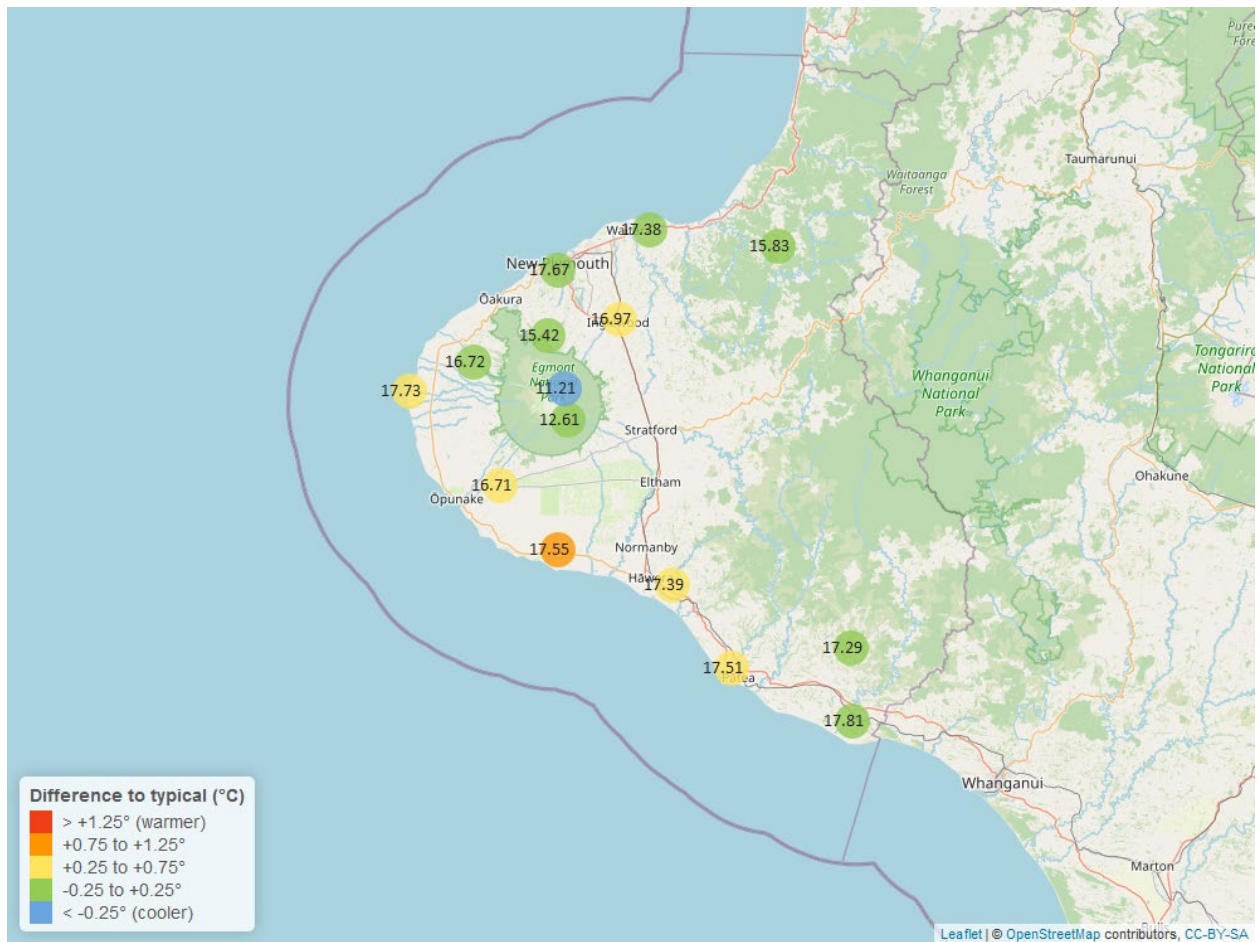


Table 4: Summary of high, low and mean air temperature for December and for December in all preceding years of record.

December 2024 - Air Temperature (°C)								
	Highs		Lows		Mean			
Site	current month	historic	current month	historic	current month	historic	December maximum	Data years
Brooklands Zoo at New Plymouth	23.00	23.93	12.69	11.88	17.67	17.73	27.60	12
Dawson Falls	18.42	18.60	7.70	6.29	12.61	12.52	21.50	9
Inglewood at Oxidation Ponds	23.28	23.26	11.24	9.93	16.97	16.45	26.60	13
Kapoaiaia at Lighthouse	20.15	20.89	13.77	12.73	17.73	17.26	20.86	12
Kaupokonui at Glenn Rd	22.26	21.73	13.20	11.59	17.55	16.74	23.66	9
Mangorei Upper at Forest Hill	19.45	20.63	11.29	10.57	15.42	15.59	22.61	7
Motunui M39 at Weston W3	20.52	21.70	12.77	11.88	17.38	17.36	22.30	8
North Egmont at Visitors Centre	17.06	18.10	6.29	6.48	11.21	12.35	20.62	10
Patea at Bore 3	21.42	21.50	13.57	11.79	17.51	16.94	22.93	13
Stony at Mangatete Bridge	20.23	21.55	12.64	11.80	16.72	16.63	21.92	8
Taungatara at Eltham Rd	20.81	20.89	12.30	11.56	16.71	16.18	21.96	9
Tawhiti at Duffys	21.28	21.65	10.94	9.93	17.39	16.88	23.74	11
Uruti at Kaka Rd	20.20	21.12	11.77	10.58	15.83	15.92	22.21	6
Waitotara at Hawken Rd	22.29	22.73	13.58	12.12	17.81	17.59	24.54	8
Weraweraonga at Mangawhio Rd	23.23	23.74	11.77	11.00	17.29	17.47	25.79	7

4.2 Long-term data patterns

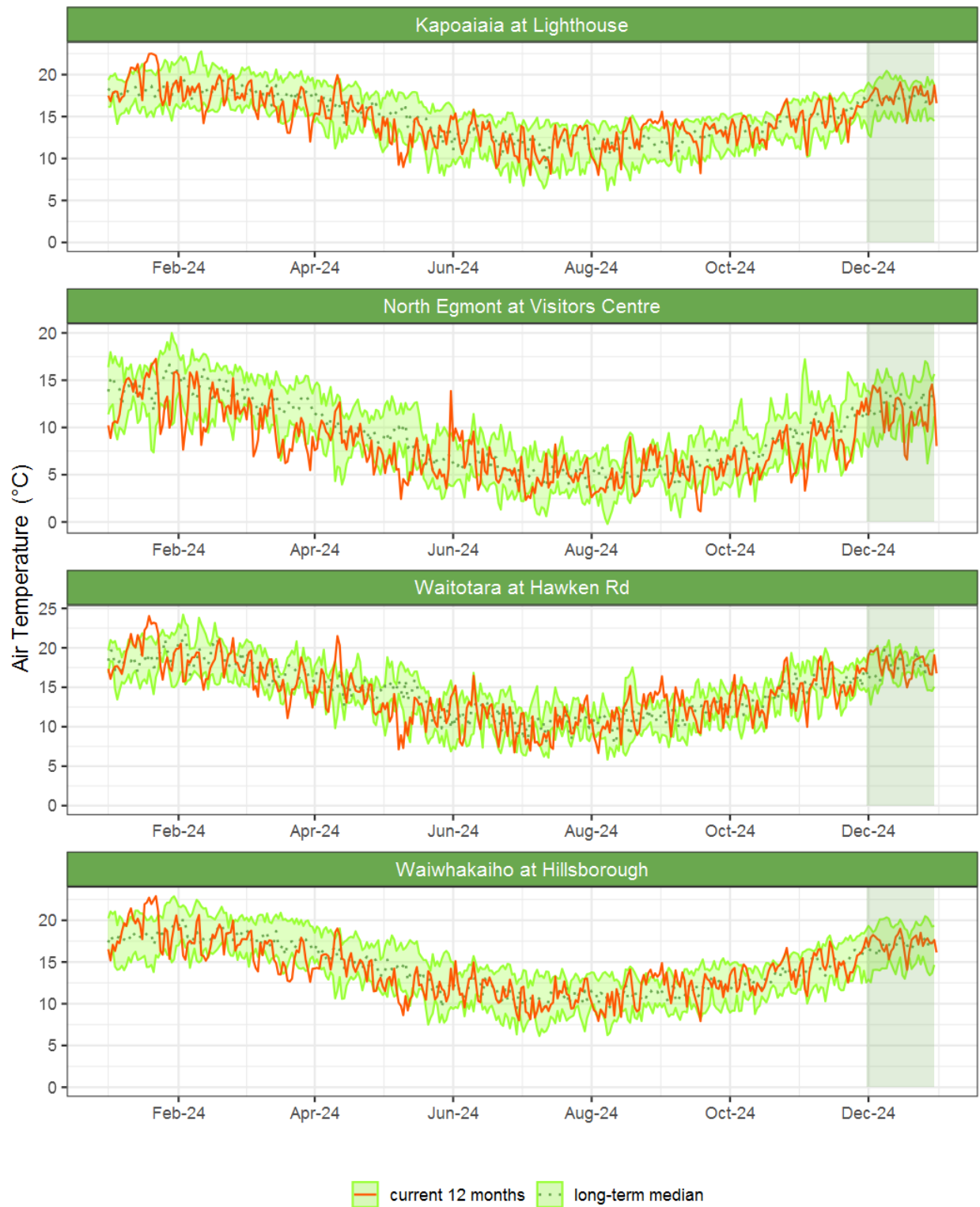


Figure 4.1: Running average air temperature for selected sites, set in context of the historic record.

4.3 Monthly Bar Charts

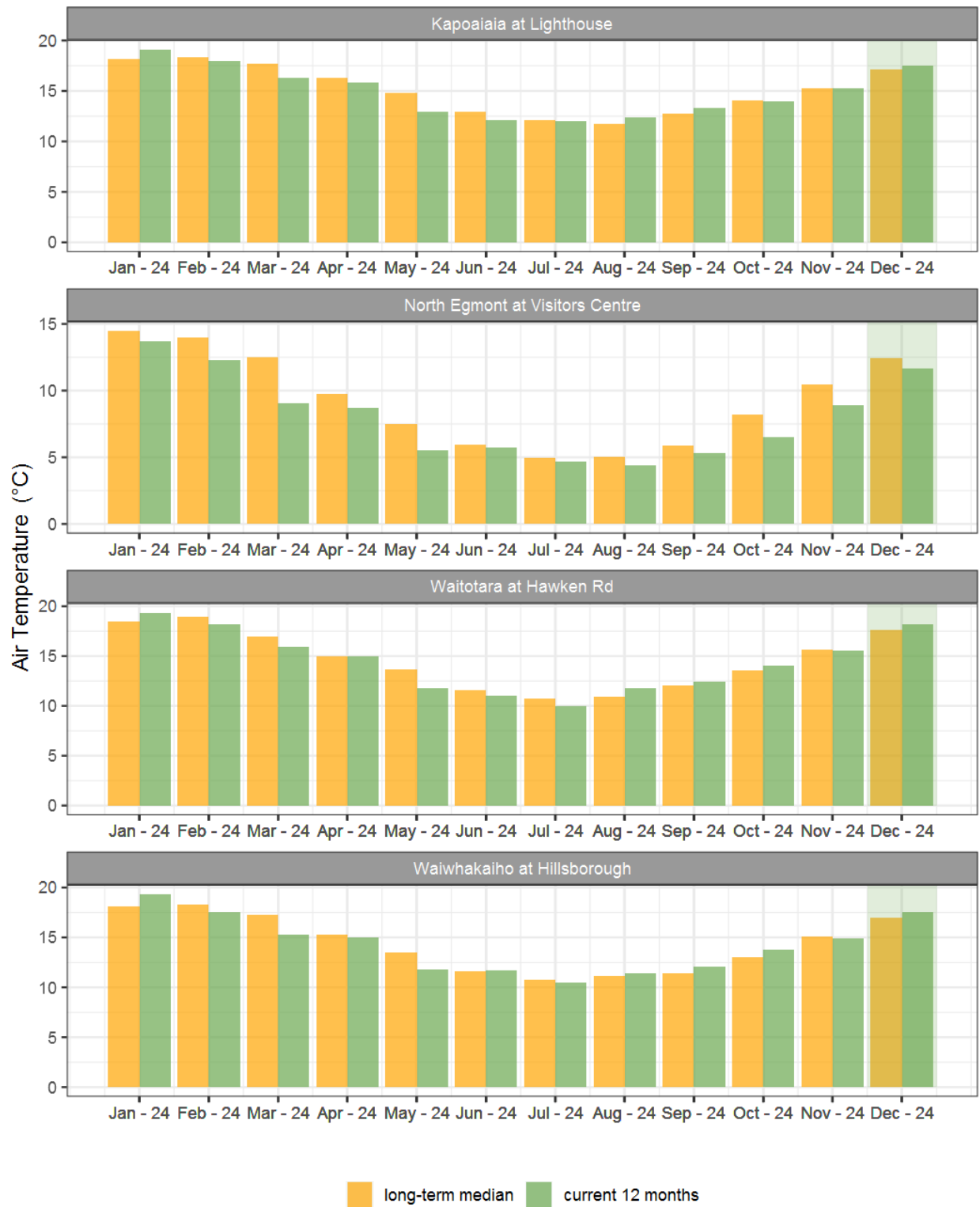


Figure 4.2: Monthly mean air temperature for December and the mean of all previously recorded months.

5. Soil Moisture

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

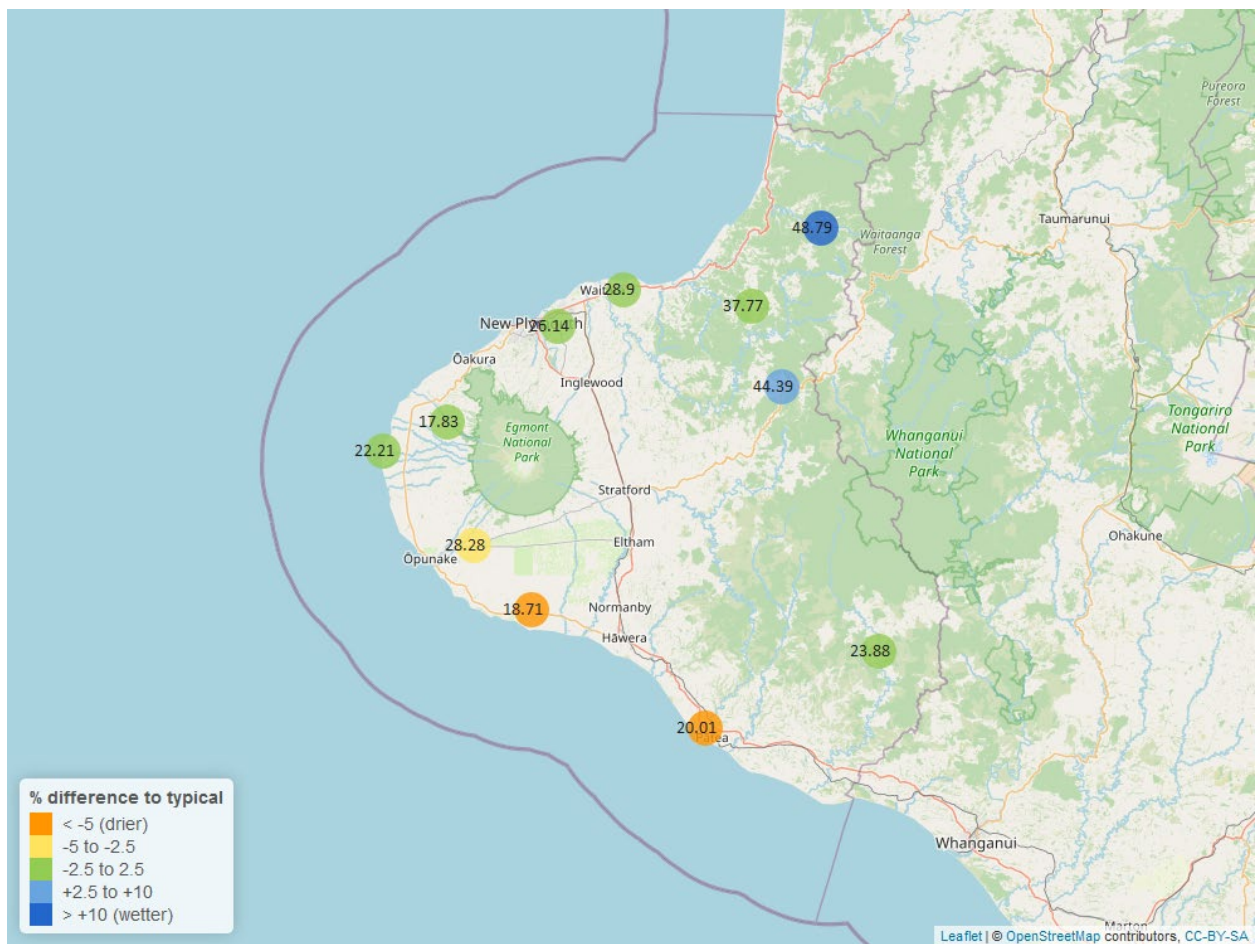


Table 5: Summary of high, low and mean soil moisture for December and for December in all preceding years of record.

December 2024 - Soil Moisture (%)								
	Highs		Lows		Mean			
Site	current month	historic	current month	historic	current month	historic	December maximum	Data years
Kapoaiaia at Lighthouse	25.13	28.50	17.69	10.16	22.21	22.37	25.32	12
Kaupokonui at Glenn Rd	25.02	35.11	14.69	9.04	18.71	29.85	25.91	13
Kotare at OSullivans	53.85	48.13	42.26	23.45	48.79	38.30	58.98	12
Motunui M39 at Weston W3	31.58	31.70	27.14	15.63	28.90	27.99	32.03	11
Patea at Bore 3	24.26	30.95	17.25	21.39	20.01	27.28	25.28	8
Pohokura Saddle	49.06	50.51	40.61	32.17	44.39	41.14	50.47	10
Stony at Mangatete Bridge	22.17	24.35	15.42	9.87	17.83	16.54	24.95	8
Taungatara at Eltham Rd	32.90	41.99	18.76	15.99	28.28	32.61	36.60	11
Uruti at Kaka Rd	40.07	44.72	35.41	23.41	37.77	39.04	40.57	13
Waitotara at Rimunui Station	24.77	29.00	23.55	19.36	23.88	25.64	25.26	7
Waiwhakaiho at Hillsborough	29.38	31.37	22.91	15.29	26.14	27.17	30.72	12

5.2 Long-term data patterns

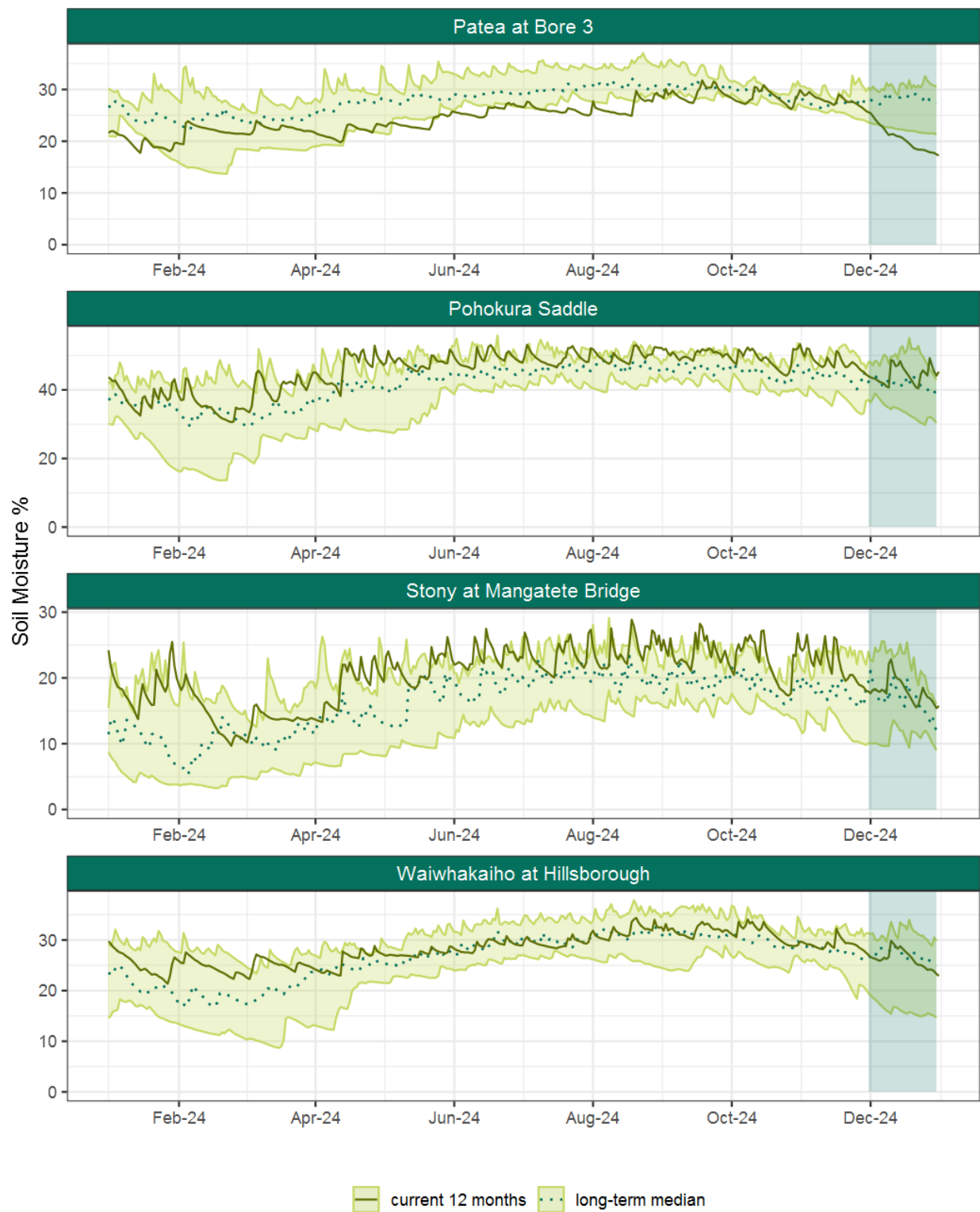


Figure 5.1: Running average soil moisture for selected sites, set in context of the historic record.

5.3 Monthly Bar Charts

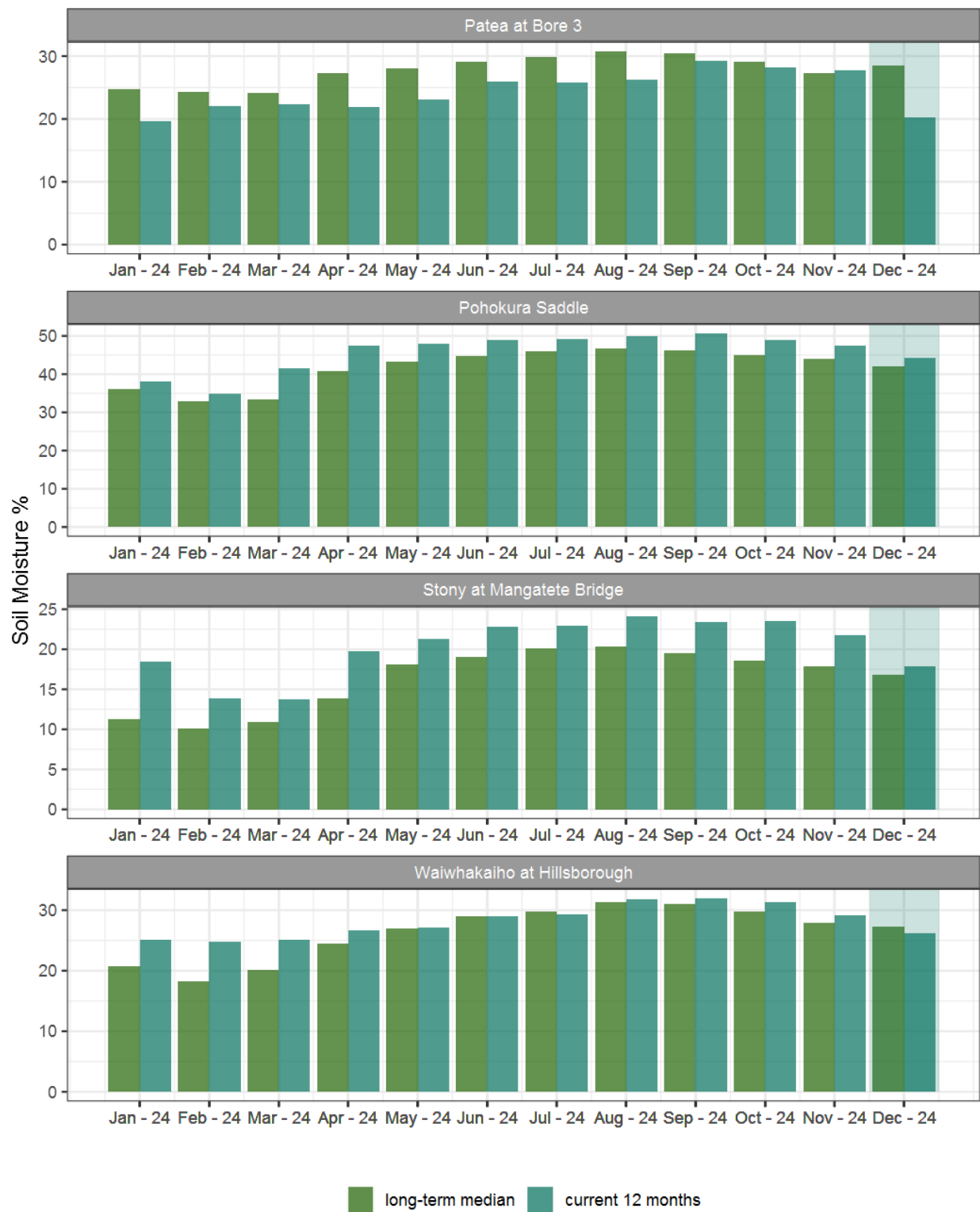


Figure 5.2: Monthly mean soil moisture for this month and the mean of all previously recorded months.

6. Soil Temperature

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

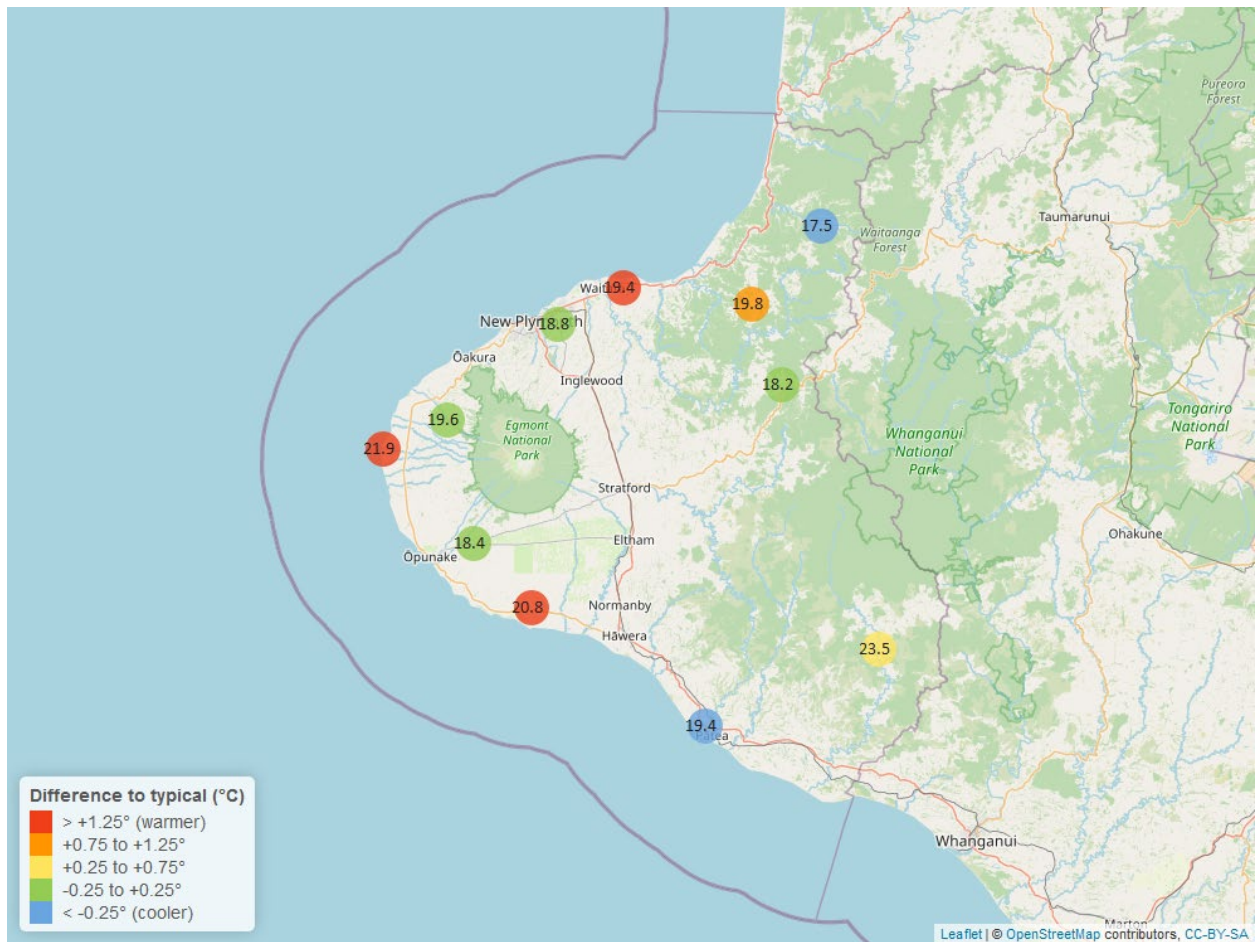


Table 6: Summary of high, low and mean soil temperature for December and for December in all preceding years of record.

December 2024 - Soil Temperatures (°C)								
	Highs		Lows		Mean			
Site	current month	historic	current month	historic	current month	historic	December maximum	Data years
Kapoaiaia at Lighthouse	27.23	23.56	19.11	17.00	21.9	19.69	30.55	12
Kaupokonui at Glenn Rd	22.95	22.97	19.56	16.30	20.8	19.30	23.80	13
Kotare at OSullivans	18.19	21.70	16.81	15.01	17.5	18.16	18.49	12
Motunui M39 at Weston W3	20.51	20.70	18.26	15.74	19.4	18.07	21.21	11
Patea at Bore 3	21.37	24.72	18.10	17.03	19.4	20.49	22.03	8
Pohokura Saddle	19.46	20.30	16.98	15.64	18.2	18.04	20.06	10
Stony at Mangatete Bridge	21.50	23.08	18.07	16.91	19.6	19.80	22.50	7
Taungatara at Eltham Rd	20.16	21.47	16.96	15.84	18.4	18.28	20.90	11
Uruti at Kaka Rd	20.62	21.56	18.51	16.70	19.8	18.89	20.88	13
Waitotara at Rimunui Station	26.20	26.27	21.32	20.25	23.5	23.04	27.23	7
Waiwhakaiho at Hillsborough	19.86	21.83	17.60	16.30	18.8	18.65	20.53	12

6.2 Long-term data patterns

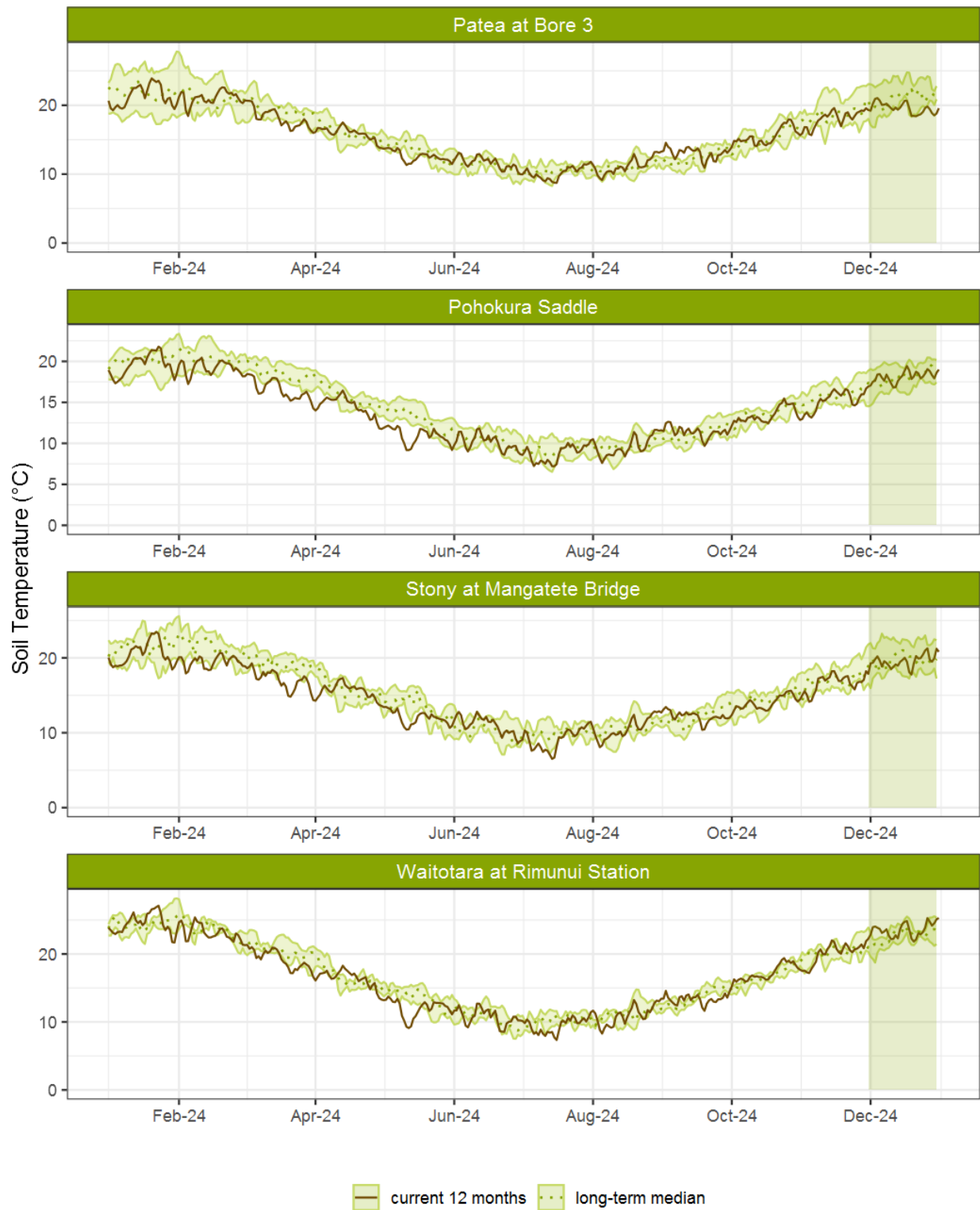


Figure 6.1: Running average soil temperature for selected sites, set in context of the historic record.

6.3 Monthly Bar Charts

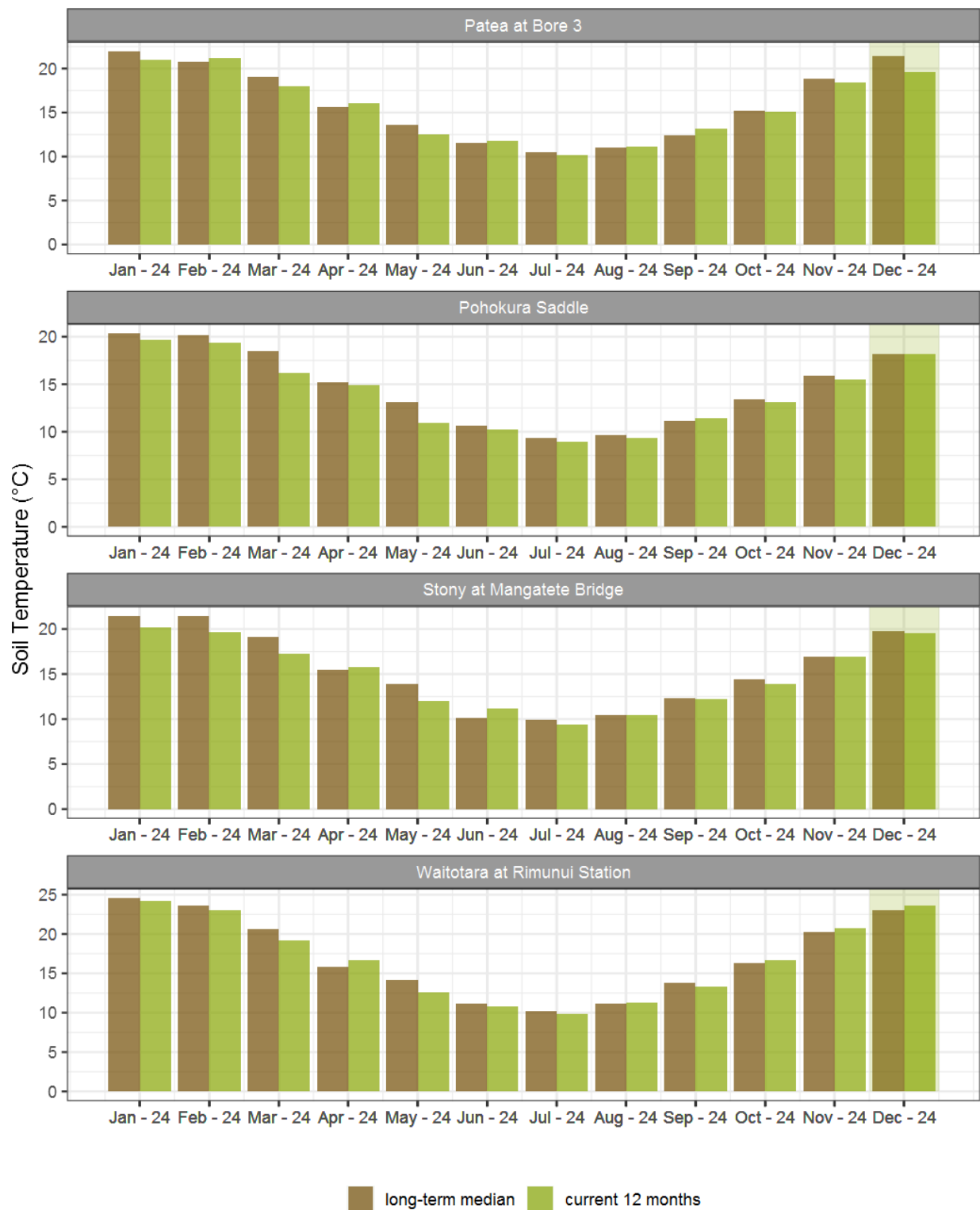


Figure 6.2: Monthly mean soil temperature for this month and the mean of all previously recorded months.

7. Wind Speed and Maximum Gusts

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

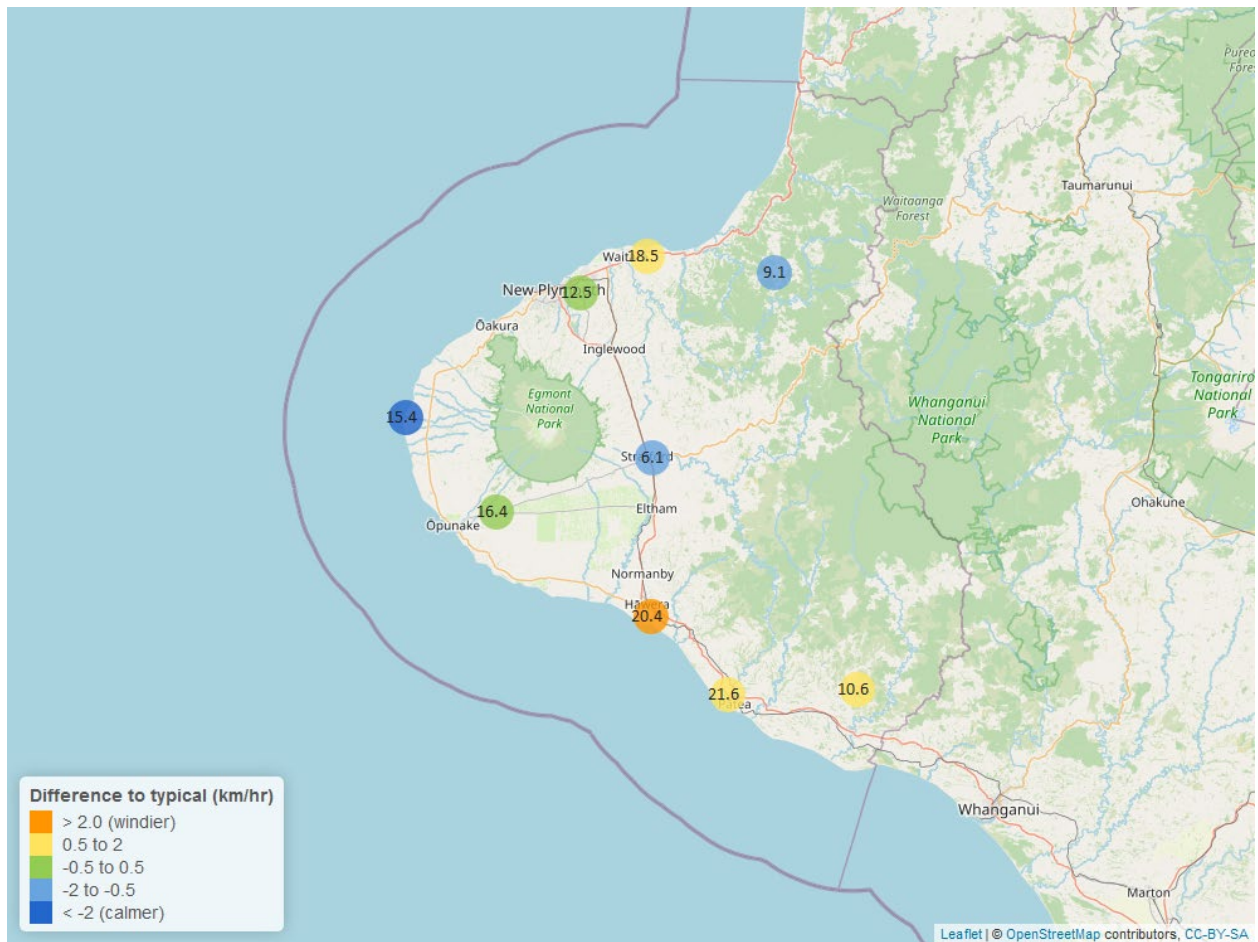


Table 7: Summary of high, low and mean wind speed for December and for December in all preceding years of record.

December 2024 - Wind Speed (average) - (km/hr)								
	Highs		Lows		Mean			
Site	current month	historic	current month	historic	current month	historic	December maximum	Data years
Hawera AWS	41.67	35.19	7.41	5.56	20.4	17.59	50.93	19
Kapoaiaia at Lighthouse	40.91	36.73	6.32	6.29	15.4	18.64	56.09	24
New Plymouth AWS	45.37	37.04	5.56	5.56	18.5	17.59	57.41	17
Patea at Bore 3	41.20	38.39	6.41	6.09	21.6	19.78	49.37	9
Patea at Stratford	15.77	17.98	2.08	2.03	6.1	7.05	24.14	18
Taungatara at Eltham Rd	36.89	31.96	6.37	6.32	16.4	16.08	42.21	9
Uruti at Kaka Rd	25.48	22.41	3.61	3.60	9.1	9.73	49.47	27
Waitotara at Ngutuwera	23.49	21.43	2.80	1.82	10.6	9.81	30.41	25
Waiwhakaiho at Hillsborough	37.71	28.42	3.64	3.96	12.5	12.04	49.95	7

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

December 2024 - Wind Gusts (Maximum) - (km/hr)								
	Highs		Lows		Mean			
Site	current month	historic	current month	historic	current month	historic	December maximum	Data years
Hawera AWS	72.23	66.67	31.48	25.93	46.3	44.45	77.78	19
Kapoaiaia at Lighthouse	74.16	70.60	17.64	22.30	37.1	42.40	76.32	23
New Plymouth AWS	90.75	64.82	22.22	24.08	40.7	42.60	94.45	17
Patea at Bore 3	79.30	66.60	30.50	26.60	52.4	47.60	83.70	9
Patea at Stratford	59.04	55.40	19.80	22.30	34.2	35.20	64.08	18
Taungatara at Eltham Rd	71.90	74.10	28.10	27.20	47.1	41.80	78.00	9
Uruti at Kaka Rd	92.88	64.40	25.92	23.50	41.0	36.60	140.00	26
Waitotara at Ngutuwera	74.16	66.96	24.12	22.20	50.0	39.40	77.04	25
Waiwhakaiho at Hillsborough	84.50	67.80	21.00	23.40	41.4	39.50	92.50	7

7.2 Long-term data patterns

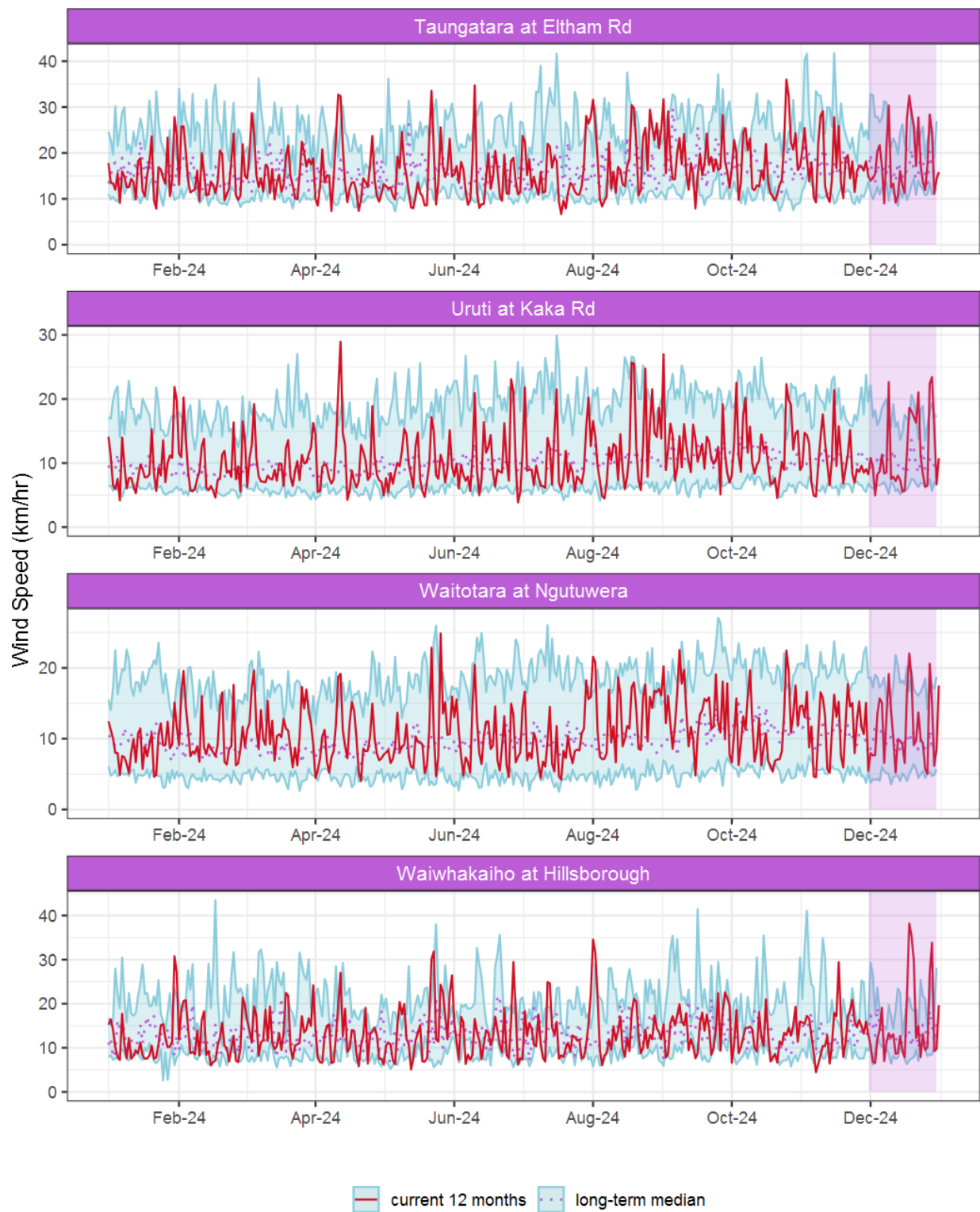


Figure 7.1: Running average wind speed (km/hr) for selected sites, set in context of the historic record.

7.3 Monthly Bar Charts

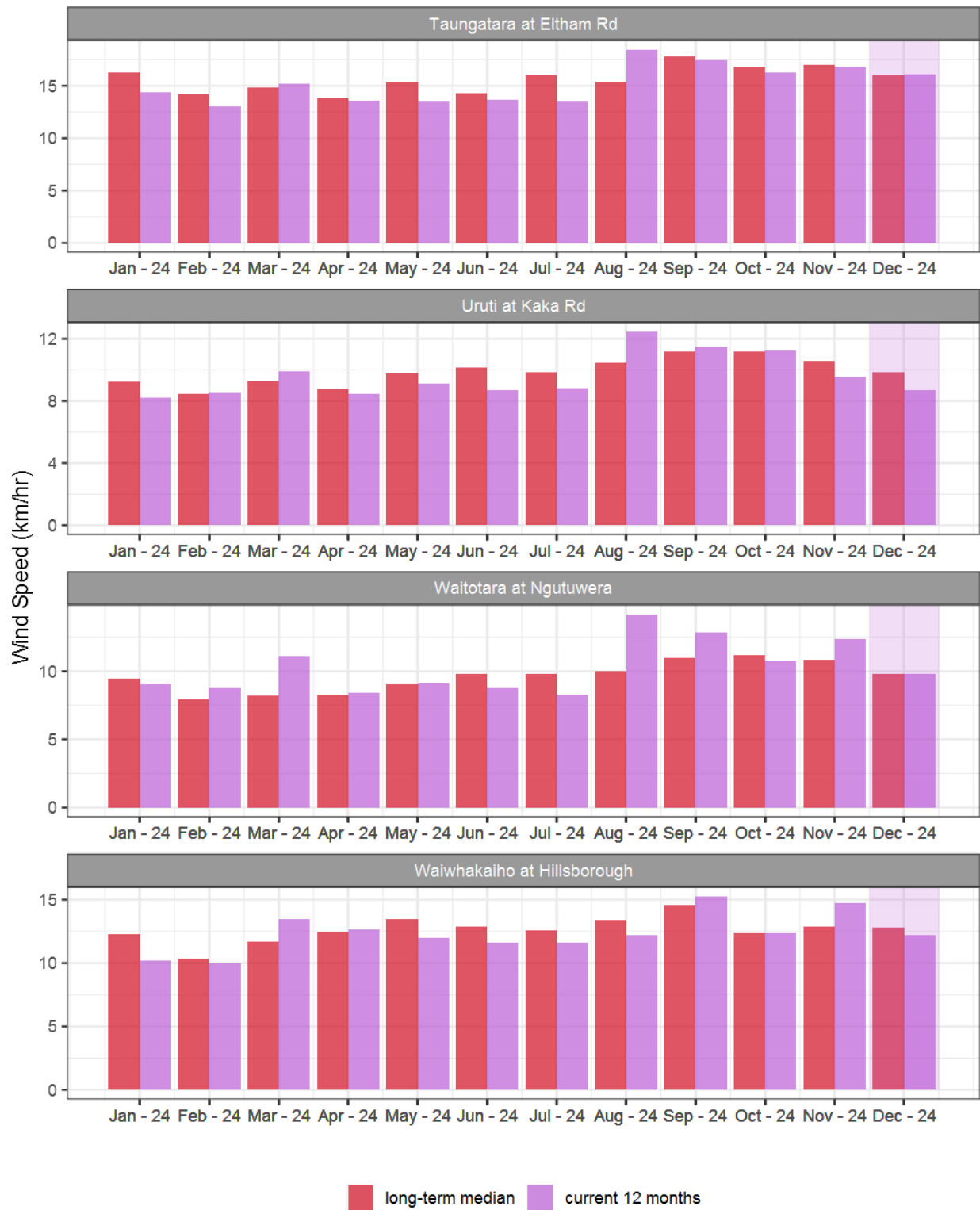


Figure 7.2: Monthly mean wind speed (km/hr) for selected sites, relative to the mean of all previously recorded months.

7.4 Wind roses for December 2024

Average windspeed

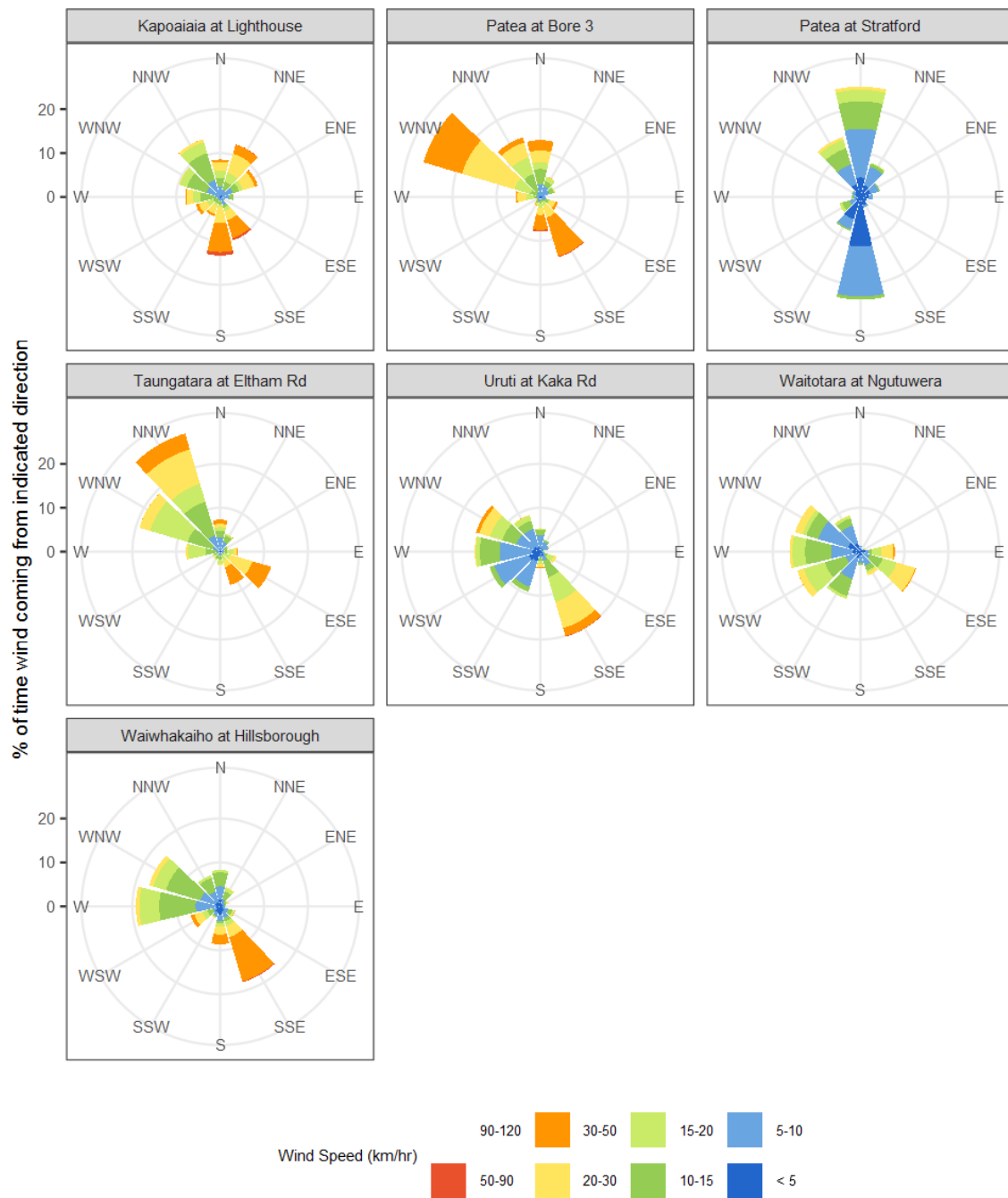


Figure 7.3: Wind roses for December for average wind speed (km/hr).

Maximum gust strength

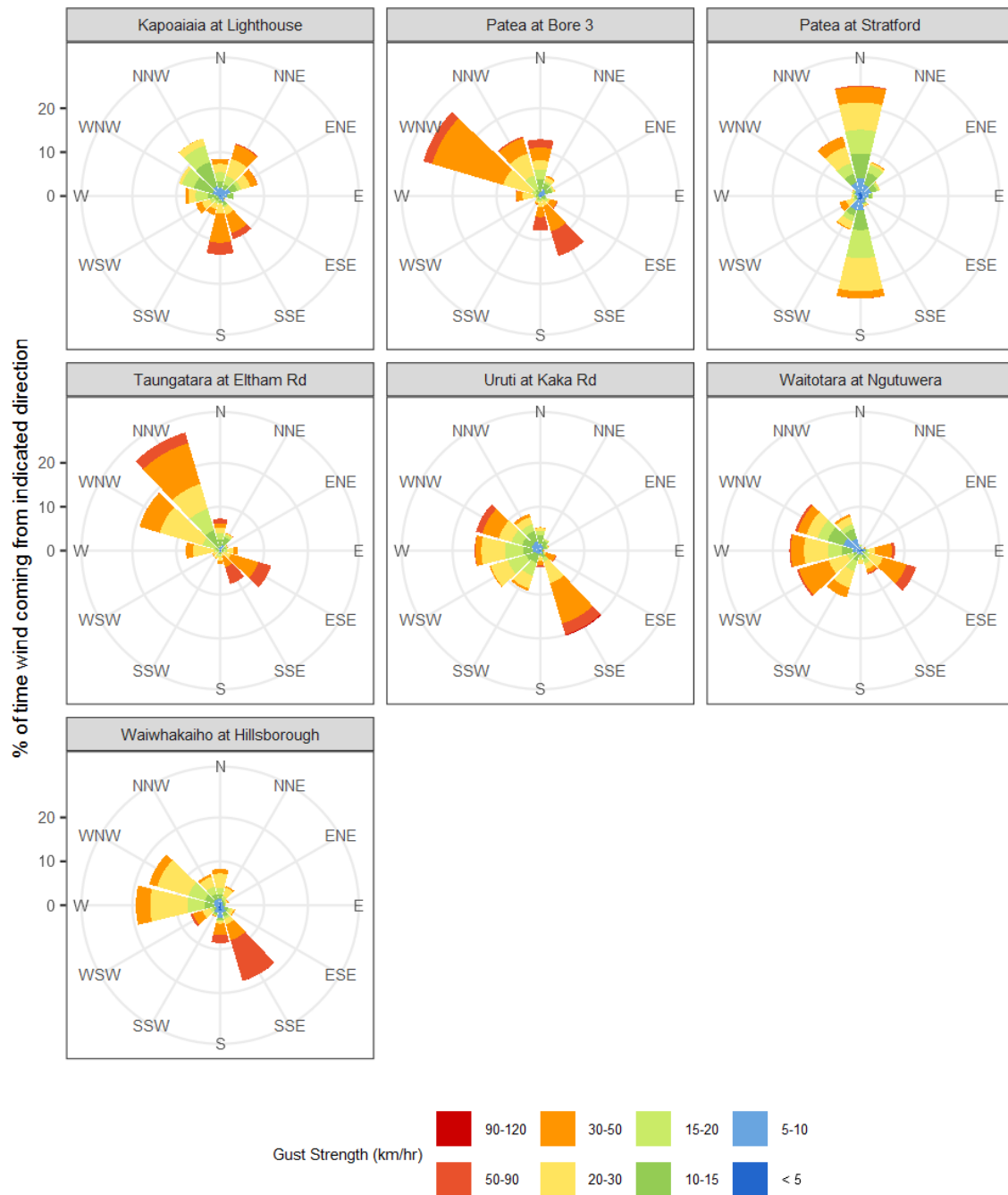


Figure 7.4: Wind roses for December for maximum wind gust (km/hr).

Summary of month's conditions

Rainfall

On average December rainfall was 108.3mm, 34% less than usual, ranging from 63% less than normal rain at Kaupokonui at Glenn Rd, and 11% less than normal at Motunui M39 at Weston W3.

Compared to typical full year totals, on average for 2024, sites received 86% of a typical year's rainfall, with the highest value at Pohokura Saddle, 98% of normal, whereas Waitotara at Hawken Rd sits at 72% of the typical year's total.

River Flow

Mean river flows for December were 31.8% lower than typical values, low flows were 21.9% greater, and high flows 72.5% lower than typical values. The maximum river flow recorded in December was 141.8m³/sec at Waiwhakaiho at Egmont Village on 9 December.

River Water Temperature

Mean river (non-mountain) water temperatures were 17.4°C, an average of 0.7°C warmer than long-term December values. Nighttime-low water temperatures were on average 1.2°C warmer than historic lows, and day-time high temperatures were on average 0.1°C cooler than historic highs. The maximum river water temperature recorded in December was 25.4°C at Kaupokonui at Glenn Rd on 29 December.

Air Temperature

The average air temperature for the region (excluding Te Maunga sites) was 16.5°C, which is 0.2°C warmer than long-term December averages. Low air temperatures for December were on average 1°C warmer than the December average for previous years. Day-time high temperatures were on average 0.5°C cooler than historic highs. The maximum air temperature recorded in December was 27.6°C at Brooklands Zoo at New Plymouth on 28 December.

Soil Moisture

The average soil moisture for December across sites in Taranaki region was 28.8%. Soil moistures were on average 1% drier than typical December values. On average, low soil moistures were 7.3% wetter than previous lows, and the highs were on average 3.5% drier than previous values for December.

Soil Temperature

December soil temperatures were generally 0.4°C warmer than long-term averages. Average nighttime low soil temperatures were 1.7°C warmer than recorded lows, and upper day-time soil temperatures were on average 0.9°C cooler than long-term December highs. The maximum soil temperature recorded in December was 30.6°C at Kapoaiaia at Lighthouse on 15 December.

Wind Speed (average and 10 minute gust)

December average wind speeds were 14.5km/hr, with average gust strength of 43.4km/hr, these were 0.3km/hr stronger, and 2.3km/hr gustier than the long-term average. Average calm weather wind speeds were 0.3km/hr stronger than recorded lows, and windy conditions were on average 4.3km/hr stronger than long-term December highs. The maximum wind gust recorded in December was 140.0km/hr at Uruti at Kaka Rd, on 31 December.

Report date: 10 January 2025.

Supply of environmental data - General terms and conditions

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