

Hottest November on record for New Zealand

Temperature	The nationwide average temperature in November 2019 was 15.3°C (1.6°C above average) making it New Zealand's hottest November on record. Temperatures were well above average (>1.20°C above average) or above average (0.51-1.20°C above average) for most of the country. The exception was parts of Fiordland and the West Coast where temperatures were near average ($\pm 0.50^\circ\text{C}$ of the November average).
Rainfall	Rainfall was above normal (120-149% of normal) or well above normal (>149% of normal) in many western and southern parts of the South Island. In contrast, rainfall was below normal (50-79% of normal) or well below normal rainfall (<50% of normal) for many eastern, inland and northern parts of the North Island, eastern Marlborough and South Canterbury.
Soil Moisture	As of 1 December, soil moisture levels were lower than normal for much of Northland, Auckland, Waikato, Bay of Plenty, Hawke's Bay and Wairarapa. Soils were wetter than normal for the time of year for parts of Southland and eastern Otago.

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Overview

November 2019 was characterised by lower than normal sea level pressure over the South Island, and considerably lower than normal sea level pressure to the south and south west of the country. This pressure setup resulted from the Southern Hemisphere storm tracks being displaced northwards across the entire Southern Ocean including towards New Zealand, leading to more northwesterlies than normal.

The persistent northwesterly winds delivered warm temperatures to much of the country overall, with several periods of unusually hot temperatures. On 3 November, Kawerau (Bay of Plenty) recorded a maximum temperature of 34.6°C; New Zealand's third-highest November temperature on record. This temperature was especially notable considering how early in the month it occurred – extreme maximum November temperatures typically occur towards the end of the month as the daylight gets longer and sea surface temperatures around New Zealand increase. Overall, the nationwide average temperature in November 2019 was 15.3°C, making it New Zealand's hottest November on record. This was 1.6°C above the 1981-2010 November average from NIWA's seven station temperature series which begins in 1909. This is also substantially warmer than the previous national record for November

of 15.1°C, shared by the years 2013 and 1954. Notably, four of New Zealand's hottest ten Novembers have occurred since 2009. The record for the highest average daily maximum temperature at any location was also broken with Wairoa (Hawke's Bay) recording an average daily maximum temperature for November of 26.2°C.

Rainfall was plentiful for many western and southern parts of the South Island, with persistent northwesterly winds delivering frequent rainfall along and near the Southern Alps. As a result, hydro lake storage levels increased dramatically during the month. In contrast, it was a relatively dry month for many eastern, inland and northern parts of the North Island, as well as eastern parts of Marlborough and South Canterbury. Several active frontal systems brought brief periods of very unsettled weather to the country, including hail for Auckland and Timaru, and a tornado in Christchurch (see *Highlights and extreme events* for further details). Dust and bushfire smoke that originated in Australia were transported over New Zealand by the prevailing northwest winds, bringing a light haze to the sky at times for parts of the country.

Further Highlights:

- The highest temperature was 34.6°C, observed at Kawerau on 3 November. This is New Zealand's third-highest November temperature on record.
- The lowest temperature was -1.6°C, observed at Hanmer Forest on 21 November.
- The highest 1-day rainfall was 185 mm, recorded at Milford Sound on 9 November.
- The highest wind gust was 191 km/h, observed at South West Cape on 22 November.
- Of the six main centres in November 2019, Tauranga was the warmest, driest and sunniest, Wellington was the wettest and least sunny, and Dunedin was the coldest.
- Of the available, regularly reporting sunshine observation sites, the sunniest four locations in 2019 so far (1 January – 30 November) are Wider Nelson (2584 hours), Marlborough (2529 hours), Hawke's Bay (2476 hours) and Bay of Plenty (2420 hours).

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Temperature: A very warm month for most

The nationwide average temperature in November 2019 was 15.3°C, making it New Zealand’s hottest November on record. This was 1.6°C above the 1981-2010 November average from NIWA’s seven station temperature series which begins in 1909. This is also substantially warmer than the previous national record for November of 15.1°C, shared by the years 2013 and 1954. The warmth was widespread, with many locations throughout the country observing record or near-record mean temperatures for November. Wairoa (Hawke’s Bay) recorded a mean maximum temperature for November of 26.2°C. This is a new record for New Zealand, exceeding the previous November record of 25.6°C (also recorded in Wairoa, in 1953). Kawerau (Bay of Plenty) recorded a mean maximum temperature of 25.3°C; New Zealand’s third-highest mean maximum temperature for November on record.

Record¹ or near-record mean air temperatures for November were recorded at:

Location	Mean air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Kaikohe	16.8	1.8	1973	Highest
Whangaparaoa	17.3	1.2	1982	Highest
Tauranga	18.1	2.2	1913	Highest
Ngawi	17.6	2.2	1972	Highest
Wairoa	19.3	3.6	1964	Highest
Mahia	16.4	1.5	1990	Highest
Farewell Spit	17.0	2.3	1971	Highest
Kaikoura	16.0	2.7	1963	Highest
Le Bons Bay	14.3	2.3	1984	Highest
Nugget Point	12.9	1.7	1970	Highest
Whangarei	18.3	1.8	1967	2nd-highest
Rotorua	15.8	1.9	1964	2nd-highest
Hastings	18.0	3.5	1965	2nd-highest
Wellington (Airport)	15.8	1.3	1962	2nd-highest
Lumsden	13.6	2.2	1982	2nd-highest
Campbell Island	8.2	1.0	1991	2nd-highest
Whitianga	17.4	1.6	1962	3rd-highest
Hamilton (Airport)	16.3	1.6	1946	3rd-highest
Castlepoint	16.7	2.3	1972	3rd-highest
Gisborne	17.9	2.1	1905	3rd-highest
Puysegur Point	12.5	1.4	1978	3rd-highest
Brothers Island	14.4	0.6	1997	3rd-highest

¹ The rankings (1st, 2nd, 3rd.etc) in all Tables in this summary are relative to climate data from a *group* of nearby stations, some of which may no longer be operating. The current climate value is compared against all values from any member of the group, without any regard for homogeneity between one station’s record, and another. This approach is used due to the practical limitations of performing homogeneity checks in real-time.

Paeroa	17.2	1.4	1947	4th-highest
Whakatane	16.8	1.5	1974	4th-highest
Levin	15.4	1.4	1895	4th-highest
Low records or near-records				
None observed				

Record or near-record mean maximum air temperatures for November were recorded at:

Location	Mean maximum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Kerikeri	23.0	2.6	1945	Highest
Kaikohe	21.6	2.8	1973	Highest
Whangarei	23.7	3.1	1967	Highest
Whangaparaoa	21.4	1.9	1982	Highest
Auckland (Whenuapai)	21.7	2.2	1945	Highest
Whitianga	24.3	4.1	1962	Highest
Paeroa	23.1	2.3	1947	Highest
Tauranga	23.2	3.1	1913	Highest
Te Puke	23.1	3.1	1973	Highest
Kawerau	25.3	4.7	1954	Highest
Rotorua	22.5	4.3	1964	Highest
Taupo	23.4	5.1	1949	Highest
Hamilton	22.7	2.8	1946	Highest
Te Kuiti	23.6	3.6	1959	Highest
Lower Retaruke	22.5	3.0	1966	Highest
Masterton	22.9	2.9	1906	Highest
Takapau Plains	21.0	2.5	1962	Highest
Dannevirke	20.9	2.7	1951	Highest
Ngawi	21.2	2.3	1972	Highest
Gisborne	25.0	4.0	1905	Highest
Hastings	24.7	4.9	1965	Highest
Waipawa	24.1	4.4	1945	Highest
Wairoa	26.2	5.3	1964	Highest
Mahia	20.3	2.1	1990	Highest
Upper Hutt	20.4	2.6	1939	Highest
Stratford	19.7	2.7	1960	Highest
Ohakune	21.2	4.5	1962	Highest
Waiouru	18.8	3.6	1962	Highest
Farewell Spit	21.9	3.5	1971	Highest
Hanmer Forest	24.4	5.5	1906	Highest
Waiau	23.8	4.1	1974	Highest
Cheviot	23.8	5.0	1982	Highest
Waipara West	23.2	3.4	1973	Highest
Akaroa	21.9	2.6	1978	Highest
Le Bons Bay	18.4	2.9	1984	Highest
Oamaru	20.2	3.4	1967	Highest

Dunedin (Airport)	20.3	2.5	1962	Highest
Dunedin (Musselburgh)	19.0	2.9	1947	Highest
Balclutha	19.3	2.1	1964	Highest
Nugget Point	17.2	2.3	1970	Highest
Mokohinau	19.5	0.8	1994	2nd-highest
Whakatane	22.1	1.8	1974	2nd-highest
Whatawhata	21.1	2.1	1952	2nd-highest
Taumarunui	22.9	3.1	1947	2nd-highest
Turangi	21.6	2.9	1968	2nd-highest
Castlepoint	20.5	2.9	1972	2nd-highest
Martinborough	21.6	2.3	1986	2nd-highest
Napier	23.9	3.5	1870	2nd-highest
Wellington (Kelburn)	18.0	1.5	1927	2nd-highest
Hawera	19.0	2.3	1977	2nd-highest
Puysegur Point	15.4	1.8	1978	2nd-highest
Blenheim	22.5	2.4	1932	2nd-highest
Kaikoura	20.2	3.2	1963	2nd-highest
Medbury	22.3	2.8	1927	2nd-highest
Rangiora	21.8	3.0	1965	2nd-highest
Orari Estate	21.2	2.6	1972	2nd-highest
Campbell Island	10.5	0.6	1991	2nd-highest
Ranfurly	20.5	2.6	1897	Equal 2nd-highest
Wellington (Airport)	18.7	1.2	1962	3rd-highest
Lumsden	19.2	2.3	1982	3rd-highest
Kaitaia	22.1	2.5	1948	4th-highest
Hamilton (Ruakura)	22.4	2.5	1906	4th-highest
Palmerston North	20.6	2.0	1928	4th-highest
Arapito	19.4	1.7	1978	4th-highest
Motueka	21.3	1.5	1956	4th-highest
Christchurch	21.6	2.7	1863	4th-highest
Timaru	21.2	3.2	1885	4th-highest
South West Cape	14.6	1.0	1991	4th-highest
Hicks Bay	20.1	1.8	1969	Equal 4th-highest
Low records or near-records				
None observed				

Record or near-record mean minimum air temperatures for November were recorded at:

Location	Mean minimum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Ngawi	14.0	2.1	1972	Highest
Wellington (Kelburn)	11.8	1.5	1927	Highest
Kaikoura	11.8	2.1	1963	Highest
Culverden	10.0	3.0	1928	Highest
Medbury	10.0	2.5	1927	Highest
Cheviot	9.7	2.5	1982	Highest
Mt Cook (Airport)	7.9	2.5	1929	Highest

Waipara West	10.5	2.4	1973	Highest
Le Bons Bay	10.2	1.8	1984	Highest
Ranfurlly	7.4	2.8	1897	Highest
Oamaru	9.1	1.4	1967	Highest
Wellington (Airport)	13.0	1.6	1962	2nd-highest
Stratford	10.0	2.0	1960	2nd-highest
Brothers Island	12.4	0.7	1997	2nd-highest
Rangiora	9.3	1.8	1965	2nd-highest
Tara Hills	7.4	1.9	1949	2nd-highest
Dunedin (Musselburgh)	10.2	1.6	1947	2nd-highest
Te Anau	8.1	2.4	1963	2nd-highest
Roxburgh	9.2	3.0	1950	2nd-highest
Campbell Island	5.9	1.4	1991	2nd-highest
Te Puke	11.7	1.8	1973	3rd-highest
Martinborough	10.7	2.0	1986	3rd-highest
Mahia	12.5	1.0	1990	3rd-highest
Porirua	11.8	1.3	1968	3rd-highest
Hawera	10.9	1.4	1977	3rd-highest
Blenheim	11.2	1.8	1932	3rd-highest
Waiau	9.4	2.4	1974	3rd-highest
Lincoln	10.1	2.0	1881	3rd-highest
Orari Estate	8.5	1.5	1972	3rd-highest
Wanaka	9.1	2.1	1955	3rd-highest
Lumsden	7.9	1.9	1982	3rd-highest
Gore	8.5	1.7	1907	3rd-highest
Mokohinau	14.7	0.5	1994	4th-highest
Port Taharoa	13.7	1.7	1973	4th-highest
Wairoa	12.4	1.9	1964	4th-highest
Paraparaumu	11.9	1.5	1953	4th-highest
Akaroa	10.5	1.8	1978	4th-highest
Nugget Point	8.7	1.2	1970	4th-highest
Masterton	9.9	2.1	1906	Equal 4th-highest
Low records or near-records				
None observed				

Rainfall: Dry for much of the North Island, wet in the west of the South Island

Rainfall was above normal (120-149% of normal) or well above normal (>149% of normal) in many western and southern parts of the South Island. Rainfall was particularly high for Manapouri (West Arm Jetty), which received 237% of normal November rainfall. It was also a very wet month in Arthur's Pass (227% of the November normal) and Wanaka (223% of the November normal). In contrast, rainfall was below normal (50-79% of normal) or well below normal rainfall (<50% of normal) for many eastern, inland and northern parts of the North Island, eastern Marlborough and South Canterbury.

As of 1 December, soil moisture levels were lower than normal for much of Northland, Auckland, Waikato, Bay of Plenty, Hawke's Bay and Wairarapa. Soils were wetter than normal for the time of year for parts of Southland and eastern Otago. Soil moisture levels were typically near normal for the time of year for remaining parts of the country.

Record or near-record November rainfall totals were recorded at:

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
High records or near-records				
Manapouri (West Arm Jetty)	732	237	1971	3rd-highest
Low records or near-records				
Orari Estate	9	16	1897	Lowest
Leigh	22	31	1966	2nd-lowest
Takapau Plains	21	30	1962	2nd-lowest
Whitianga	36	35	1961	4th-lowest

November climate in the six main centres

November was a very warm month, with all main centres observing well above average temperatures. Tauranga observed its hottest November on record. The high temperatures were accompanied by a lack of rain in Hamilton and Tauranga, with each receiving just half of their usual November rainfall. Of the six main centres in November 2019, Tauranga was the warmest, driest and sunniest, Wellington was the wettest and least sunny, and Dunedin was the coldest.

November 2019 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland ^a	17.5	+1.4	Well above average
Tauranga ^b	18.1	+2.2	Highest on record
Hamilton ^c	16.3	+1.6	Well above average
Wellington ^d	14.9	+1.5	Well above average
Christchurch ^e	15.5	+2.0	Well above average
Dunedin ^f	14.6	+2.2	Well above average
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland ^a	56	86	Near normal
Tauranga ^b	38	51	Below normal
Hamilton ^c	44	49	Well below normal
Wellington ^d	105	107	Near normal
Christchurch ^e	45	98	Near normal
Dunedin ^f	53	94	Near normal
Sunshine			
Location	Sunshine (hours)		
Auckland ^a	265		
Tauranga ^b	296		
Hamilton ^g	241		
Wellington ^d	209		
Christchurch ^e	220		
Dunedin ^f	227		

^a Mangere ^b Tauranga Airport ^c Hamilton Airport ^d Kelburn ^e Christchurch Airport ^f Musselburgh ^g Ruakura

Highlights and extreme events

Temperatures

The first week of November saw unusually high temperatures in most parts New Zealand. This heat was associated with a northwesterly airflow delivering warm, dry air from the interior of Australia. Dozens of locations observed record or near-record high daily maximum temperatures for November during this time. Most notable was Kawerau (Bay of Plenty), which recorded a maximum temperature of 34.6°C on 3 November. This was New Zealand's third-highest November temperature on record. From 3-5 November, Kawerau observed daily maximum temperatures of 34.6°C, 33.0°C and 32.1°C. These three consecutive days all exceeded the previous hottest November temperature on record for Kawerau (32.0°C; recorded on 25 November 2007).

On 23 November, several inland parts of the North Island observed record or near-record high temperatures. Taupo reached a high of 32.8°C, exceeding its previous November record (29.5°C recorded in 2016) by 3.3°C. Rotorua recorded a high of 30.9°C; exceeding its previous November record by a remarkable 4.3°C. These extreme high temperatures mark the first time on record that 30°C has been exceeded in Taupo and Rotorua in November (records began in 1949 and 1964 respectively).

On 27 November, Wairoa recorded a high of 34.1°C, the equal fourth-highest November temperature on record in New Zealand.

Record or near-record daily maximum air temperatures for November were recorded at:

Location	Extreme maximum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Kaitaia	26.4	4th	1948	Highest
Kerikeri	29.4	4th	1945	Highest
Kaikohe	28.4	4th	1973	Highest
Whangarei	29.4	5th	1967	Highest
Mokohinau	23.6	5th	1994	Highest
Whitianga	30.9	4th	1962	Highest
Tauranga	29.2	3rd	1913	Highest
Te Puke	31.5	3rd	1973	Highest
Kawerau	34.6	3rd	1954	Highest
Rotorua	30.9	23rd	1964	Highest
Taupo	32.8	23rd	1949	Highest
Te Kuiti	29.2	25th	1959	Highest
Lower Retaruke	29.5	23rd	1966	Highest
Waipawa	29.5	5th	1945	Highest
Ohakune	27.8	3rd	1962	Highest
Hanmer Forest	32.5	28th	1906	Highest
Cheviot	33.1	3rd	1982	Highest
Waipara West	32.1	3rd	1973	Highest
Rangiora	31.7	28th	1965	Highest
Akaroa	31.1	3rd	1978	Highest

Le Bons Bay	26.9	3rd	1984	Highest
Lumsden	27.5	2nd	1982	Highest
Clyde	32.5	2nd	1978	Highest
Balclutha	28.6	2nd	1964	Highest
Hamilton (Airport)	28.3	7th	1946	Equal highest
Wairoa	34.1	27th	1964	Equal highest
Alexandra	32.2	2nd	1928	Equal highest
Dargaville	26.2	7th	1943	2nd-highest
Paeroa	27.4	4th	1947	2nd-highest
Whakatane	31.9	4th	1975	2nd-highest
Motu	28.1	4th	1990	2nd-highest
Whatawhata	26.9	7th	1952	2nd-highest
Turangi	28.7	3rd	1968	2nd-highest
Castlepoint	27.6	3rd	1972	2nd-highest
Martinborough	28.4	3rd	1986	2nd-highest
Gisborne	32.6	5th	1905	2nd-highest
Hastings	32.1	5th	1965	2nd-highest
Waiouru	25.4	23rd	1962	2nd-highest
Farewell Spit	26.2	3rd	1971	2nd-highest
Waiau	31.6	3rd	1974	2nd-highest
Orari Estate	32.3	2nd	1972	2nd-highest
Oamaru	31.1	2nd	1967	2nd-highest
Nugget Point	26.9	3rd	1970	2nd-highest
Whangaparaoa	24.9	5th	1982	Equal 2nd-highest
Mt Cook (Airport)	28.5	2nd	1929	Equal 2nd-highest
Lake Tekapo	28.1	4th	1925	Equal 2nd-highest
Ranfurlly	29.0	2nd	1897	Equal 2nd-highest
Cape Reinga	23.8	4th	1951	3rd-highest
Napier	31.7	5th	1868	3rd-highest
Upper Hutt	26.4	3rd	1939	3rd-highest
Stratford	24.5	30th	1960	3rd-highest
Motueka	28.7	22nd	1956	3rd-highest
Cromwell	31.2	2nd	1949	3rd-highest
Auckland (Whenuapai)	25.8	5th	1945	Equal 3rd-highest
Warkworth	26.8	5th	1966	4th-highest
Auckland (Mangere)	25.8	6th	1959	4th-highest
Taumarunui	29.7	23rd	1947	4th-highest
Palmerston North	26.7	23rd	1918	4th-highest
Whanganui	26.9	8th	1937	4th-highest
Medbury	30.8	3rd	1927	4th-highest
Christchurch	31.4	3rd	1863	4th-highest
Lincoln	31.5	3rd	1881	4th-highest
Te Anau	25.9	2nd	1963	4th-highest
Pukekohe	25.8	7th	1969	Equal 4th-highest
Takaka	27.7	24th	1978	Equal 4th-highest
Dunedin (Musselburgh)	29.4	2nd	1947	Equal 4th-highest
Low records or near-records				
Akaroa	9.8	11th	1978	Equal 3rd-lowest

Record or near-record daily minimum air temperatures for November were recorded at:

Location	Extreme minimum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Akaroa	20.5	28th	1978	Highest
Dunedin (Airport)	18.3	27th	1972	Highest
Motueka	16.7	8th	1972	Equal highest
Martinborough	17.8	9th	1986	2nd-highest
Ngawi	19.1	23rd	1972	2nd-highest
Upper Hutt	17.3	10th	1972	2nd-highest
Arapito	16.2	8th	1978	2nd-highest
Milford Sound	15.4	28th	1935	2nd-highest
Kaikoura	17.7	28th	1972	2nd-highest
Cheviot	18.2	9th	1982	2nd-highest
Ashburton	18.8	28th	1928	2nd-highest
Ranfurly	15.8	27th	1897	2nd-highest
Queenstown	15.4	28th	1871	2nd-highest
Secretary Island	14.6	28th	1988	Equal 2nd-highest
Puysegur Point	15.0	27th	1978	Equal 2nd-highest
Five Rivers	15.5	28th	1982	Equal 2nd-highest
Nugget Point	13.2	4th	1972	Equal 2nd-highest
Mokohinau	17.6	29th	1994	3rd-highest
Porirua	16.1	10th	1972	3rd-highest
Waipara West	19.6	10th	1973	3rd-highest
Lincoln	17.9	9th	1881	3rd-highest
Le Bons Bay	17.9	28th	1984	3rd-highest
Dunedin (Musselburgh)	16.1	27th	1947	3rd-highest
Whakatane	17.5	9th	1975	Equal 3rd-highest
Port Taharoa	17.6	10th	1974	4th-highest
Paraparaumu	17.0	10th	1972	4th-highest
Hawera	16.5	10th	1977	4th-highest
Reefton	15.1	9th	1972	4th-highest
Lake Tekapo	15.2	24th	1928	4th-highest
Tiwai Point	14.6	5th	1972	4th-highest
Stratford	14.8	10th	1972	Equal 4th-highest
Low records or near-records				
None observed				

Rain and slips

From 10-11 November, heavy rain fell in northern parts of the South Island and southern parts of the North Island. A large slip closed SH6 between Korere and Glenhope, north of Murchison. Wellington (Kelburn) observed its third-highest November 1-day rainfall total since records began in 1928. The heavy rain there caused a slip on SH2 at Horokiwi.

Record or near-record November extreme 1-day rainfall totals were recorded at:

Location	Extreme 1-day rainfall (mm)	Date of extreme rainfall	Year records began	Comments
Wellington (Airport)	77	10th	1958	2nd-highest
Wellington (Kelburn)	70	10th	1928	3rd-highest
Campbell Island	29	27th	1991	4th-highest

Wind

On 18 November, a tornado struck parts of Christchurch between 1.45-2.00 p.m. Damage was reported from Sydenham to New Brighton, including roofing material being torn off buildings and severed vegetation. The storm briefly cut power to 1000 homes. As the severe thunderstorm moved offshore, waterspouts were reported over the ocean.

Record or near-record November extreme wind gusts were recorded at:

Location	Extreme wind gust (km/h)	Date of extreme gust	Year records began	Comments
Clyde	96	22nd	1983	Highest
South West Cape	191	22nd	1991	Highest
Waiouru	120	14th	1970	2nd-highest
Paeroa	80	10th	1991	4th-highest
Secretary Island	135	8th	1994	4th-highest

Lightning and hail

On 10 November, at least 66,000 lightning strikes were recorded around New Zealand and the Tasman Sea. Eight flights into and out of Auckland Airport were cancelled.

On 11 November, heavy falls of hail were reported in parts of Auckland, especially about Orewa. The unsettled spell of weather brought lightning and downpours of rain, with considerable surface flooding reported in Manly.

On 18 November, lightning and hail were reported in Christchurch. Lightning strikes were thought to have started four small fires in trees in Leeston, with another fire in the sand dunes at Waikuku Beach. Approximately 1100 lightning strikes were recorded over Christchurch city. Farther south, considerable falls of hail were reported about Waimate, with local strawberry growers reporting some damage to their crops. In Palmerston, a house was reportedly struck by lightning, blowing fuses and power plugs off the wall.

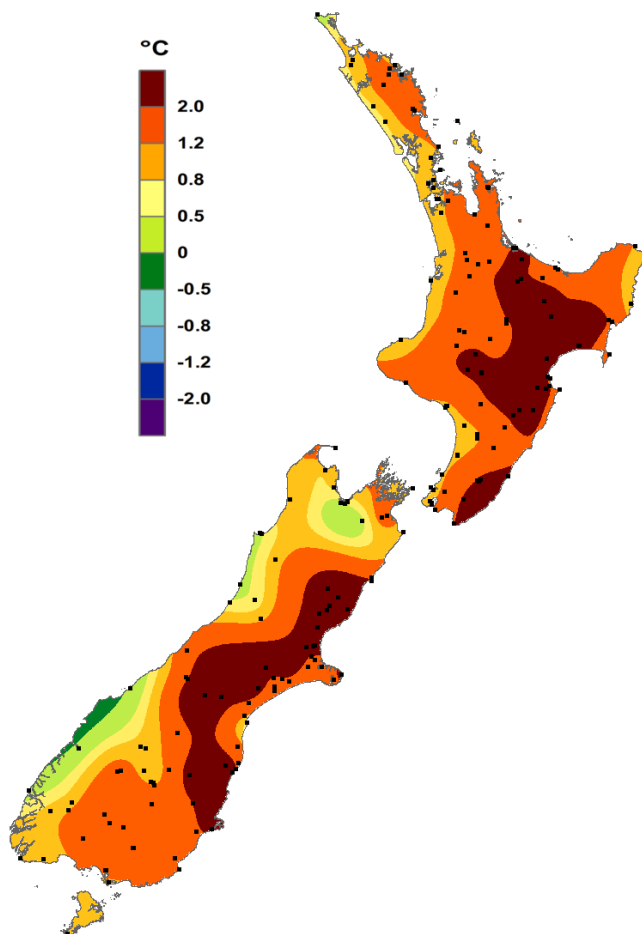
On 20 November, significant hail struck Timaru about midday. The thunderstorm associated with the hail travelled slowly north along the Canterbury plains during the early-mid afternoon, with 1500 lightning strikes recorded.

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November 2019 temperature expressed as a difference from average (1981-2010 average).

Temperatures were above or well above average for most parts of the country (indicated by orange and red shading).

Kawerau recorded 34.6°C on 3 November: New Zealand's third-highest November temperature on record.

<https://www.niwa.co.nz/our-science/climate>

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