

A dry month for many parts of the country.

Rainfall	Rainfall was below normal (50-79%) or well below normal (< 50%) for the majority of the South Island, as well as southern and far northern parts of the North Island. Conversely, rainfall was above normal (120-149%) or well above normal (> 149%) for Gisborne, Hawke's Bay, western Waikato and southern Auckland.
Temperature	November temperatures were below average (-1.20°C to -0.51°C) for southern and western parts of the North Island, and some southern, central and northern parts of the South Island. In contrast, above average temperatures (+0.51°C to +1.20°C) were recorded in parts of Northland.
Soil Moisture	As of 1 December 2015, soil moisture levels were below normal for the time of year for extensive areas of New Zealand. In particular, soil moisture levels were much lower than normal in eastern and northern parts of the South Island, and southern, central, western and northern parts of the North Island. Soil moisture levels were above normal in Gisborne, southern Fiordland and Stewart Island.
Sunshine	A sunny November for the eastern parts of the South Island and central parts of the North Island, with above normal (110-125%) or well above normal sunshine (> 125%) recorded in many of these areas.

Click on the link to jump to the information you require:

[Overview](#)

[Rainfall](#)

[Temperature](#)

[Sunshine](#)

[November 2015 climate in the six main centres](#)

[Highlights and extreme events](#)

Overview

November 2015 saw strong El Niño conditions continue in the Tropical Pacific. Overall, the month was characterised by air pressures which were slightly higher than normal over New Zealand, with lower pressures than normal present to the south of the country. This pressure pattern resulted in westerly-quarter airflow anomalies over New Zealand. It was a dry month for most of the South Island, where rainfall was typically below normal (50-79% of the November normal) or well below normal (< 50% of the November normal). Southern, western and northern parts of the North Island also received below normal or well below normal rainfall. In contrast, rainfall in Hawke's Bay, western Waikato and southern Auckland was above normal (120-149% of the November normal). It was a particularly wet month in Gisborne where rainfall was well above normal (> 149% of the November normal). Notably, nearly two-thirds of Gisborne's rainfall occurred during a single rain event. Remaining areas of New Zealand typically received near normal rainfall (within 20% of the November normal) for the month.

November temperatures were near average (within 0.50°C of the November average) or below average (0.51 to 1.20°C below the November average) for most parts of the country. Below average temperatures were observed most prominently in western and southern parts of the North Island. Parts of central Northland observed above average temperatures (0.51 to 1.20°C above the November average). The nation-wide average temperature in November 2015 was 13.6°C (0.1°C below the 1981-2010 November average from NIWA's seven station temperature series which begins in 1909)¹.

As of 1 December 2015, soil moisture levels were below normal for the time of year for extensive areas of New Zealand, but especially for Canterbury, Nelson, Marlborough, Wellington, Wairarapa, Taranaki, southern Waikato and Northland. Soil moisture levels were above normal in Gisborne, which resulted from the wetter than normal month that was observed in the region. Likewise, soil moisture levels were above normal in southern Fiordland and Stewart Island.

The majority of the country received near normal (90-109% of the November normal) or above normal (110-125% of the November normal) sunshine hours for November. It was particularly sunny for eastern areas of the South Island and central areas of the North Island, with well above normal sunshine (> 125%) observed in Taumarunui, Cheviot, Dunedin and Balclutha.

Further Highlights:

- The highest temperature was 31.7°C, observed at Hastings on 26 November.
- The lowest temperature was -5.6°C, observed at Snowdon (Canterbury) on 5 November.
- The highest 1-day rainfall was 166 mm, recorded at Mount Cook Village on 26 November.
- The highest wind gust was 170 km/hr, observed at Puysegur Point on 27 November.
- Of the six main centres in November 2015, Auckland was the warmest, Dunedin was the coolest, Christchurch was the driest, Hamilton was the wettest, Tauranga was the sunniest and Wellington was the cloudiest.
- Of the available, regularly reporting sunshine observation sites, the sunniest four locations so far in 2015 (1 January to 30 November) are: Blenheim (2519 hours), Whakatane (2476 hours), Appleby (2456 hours) and Lake Tekapo (2423 hours).

For further information, please contact:

Mr Chris Brandolino

Principal Scientist – Forecasting, NIWA National Climate Centre

Tel. 09 375 6335, Mobile (027) 886 0014

Rainfall: Very dry in Canterbury, Marlborough and Wairarapa

November was a particularly dry month for Wairarapa, Marlborough and eastern parts of Canterbury, where less than half the normal November rainfall was recorded. Blenheim observed its driest

¹ Interim value

November on record; here, a 36-day dry spell² was broken by a measly 1.4 mm of rain which fell on 27 November. The dry November has followed Blenheim's second-driest October on record, and remarkably just 9 mm of rain has been recorded over the past two months. It was a relatively wet month in Wairoa, which recorded approximately 169 mm of rainfall (224% of the November normal).

Record³ 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				
None observed				
Low records or near-records				
Blenheim	3	5	1941	Lowest
Toenepi	23	28	1951	3rd-lowest
Winchmore	14	25	1909	3rd-lowest
Martinborough	11	18	1924	Equal 4th-lowest

Temperature: A cool start but warm to finish

As of 22 November, 26 locations were headed for record or near-record low mean temperatures. However, the final week of November saw a persistent north-westerly airflow that resulted in relatively high temperatures throughout the country. This saw November mean temperatures increase in most areas, such that no locations observed record or near-record low mean temperatures for the month as a whole. Four locations observed near-record low mean minimum air temperatures. This could be attributed to clearer skies associated with slightly higher than normal pressure which was observed over the country during the month. The nation-wide average temperature in November 2015 was 13.6°C (0.1°C below the 1981-2010 November average from NIWA's seven station temperature series which begins in 1909).

Record 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	16.7	1.7	1973	Highest
Leigh	17.4	1.2	1966	3rd-highest
Low records or near-records				
None observed				

² Number of consecutive days where each daily rainfall total < 1.0 mm.

³ 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.

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				
Kaikohe	21.1	2.3	1973	Highest
Leigh	22.5	3.3	1966	2nd-highest
Whangaparaoa	20.4	0.9	1982	3rd-highest
Cheviot	20.3	1.5	1982	4th-highest
Low records or near-records				
Port Taharoa	17.4	-1.6	1973	2nd-lowest
Cape Campbell	15.5	-0.7	1953	4th-lowest

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				
None observed				
Low records or near-records				
Appleby	6.1	-2.9	1932	2nd-lowest
Te Kuiti	7.6	-1.9	1959	3rd-lowest
Turangi	6.0	-1.9	1968	3rd-lowest
Balclutha	5.4	-1.8	1964	4th-lowest

Sunshine: Plentiful in the eastern South Island and central North Island

November was a sunny month for eastern parts of the South Island and central parts of the North Island. Five locations observed near-record high November sunshine hours, including Dunedin, Invercargill and Balclutha, which each recorded more November sunshine hours than Auckland. Of the available, regularly reporting sunshine observation sites, the sunniest four locations so far in 2015 (1 January to 30 November) are: Blenheim (2519 hours), Whakatane (2476 hours), Appleby (2456 hours) and Lake Tekapo (2423 hours).

Record or near-record November sunshine hours were recorded at:

Location	Sunshine hours	Percentage of normal	Year records began	Comments
High records or near-records				
Dunedin (Musselburgh)	216	129	1980	3rd-highest
Invercargill	218	120	1913	3rd-highest
Balclutha	234	140	1964	3rd-highest
Turangi	237	121	1976	Equal 3rd-highest
Cheviot	251	131	1983	4th-highest
Low records or near-records				
None observed				

November climate in the six main centres

November temperatures were above average in Auckland but near average in the remaining main centres. It was a dry month in Christchurch where rainfall was just 35% of the November normal. It was a sunny month in Dunedin; the city received 129% of normal November sunshine. Of the six main centres in November 2015, Auckland was the warmest, Dunedin was the coolest, Christchurch was the driest, Hamilton was the wettest, Tauranga was the sunniest and Wellington was the cloudiest.

November 2015 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland ^a	16.7	+0.6	Above average
Tauranga ^b	16.2	+0.3	Near average
Hamilton ^c	14.4	-0.3	Near average
Wellington ^d	13.1	-0.3	Near average
Christchurch ^e	13.5	0.0	Near average
Dunedin ^f	12.0	-0.4	Near average
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland ^a	70	107%	Near normal
Tauranga ^b	88	118%	Near normal
Hamilton ^c	115	129%	Above normal
Wellington ^d	60	61%	Below normal
Christchurch ^e	16	35%	Well below normal
Dunedin ^f	54	96%	Near normal
Sunshine			
Location	Sunshine (hours)	% of normal	Comments
Auckland ^a	198	103%	Near normal
Tauranga ^b	241	108%	Near normal
Hamilton ^g	204	108%	Near normal
Wellington ^d	195	93%	Near normal
Christchurch ^e	240	107%	Near normal
Dunedin ^f	216	129%	Well above normal

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

Highlights and extreme events

Wind

On 26 November a vegetation fire near Dipton (Central Southland) flared up due to strong winds, with fire crews required to dampen down the blaze. In Riverton, the roof of the grandstand at the local racecourse was torn off by the gales. Farther north, a large forest fire was fanned by gale winds in the Waikakaho Valley near Blenheim. Dozens of fire fighters and nine helicopters were used in response to the fire. In addition, a total fire ban was declared in Marlborough as strong winds, high temperatures and very dry conditions contributed to an elevated fire risk.

On 27 November, strong winds persisted and even intensified over much of the country compared to the previous day. In Wellington, at least a dozen flights were cancelled or diverted and the *East by West* ferry services to Eastbourne were cancelled. At least seven helicopters were used to fight a forest fire at Whareama (east of Masterton), with strong winds meaning conditions were too dangerous for fire fighters to tackle the blaze from the ground. Numerous roads were closed and power was out across parts of the Southern Lakes and Central Otago, where there was considerable damage to vegetation (mostly downed trees) resulting from strong winds. Specifically, power was reportedly out to consumers in parts of Wanaka, Dalefield, Lake Hayes, Lake Hayes Estate, Makarora, Cadrona, Glenorchy, Closeburn, and Alexandra.

The highest wind gust was 170 km/hr, observed at Puysegur Point on 27 November.

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

Location	Extreme wind gust (km/hr)	Date of extreme gust	Year records began	Comments
Puysegur Point	170	27th	1986	Highest
Manapouri	87	26th	1991	Equal highest
Westport	96	22nd	1973	2nd-highest
Secretary Island	143	27th	1994	Equal 2nd-highest
New Plymouth	93	4th	1972	4th-highest
Mt Kaukau (Wellington)	137	27th	1969	4th-highest

Rain and slips

The highest 1-day rainfall was 166 mm, recorded at Mount Cook Village on 26 November.

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
Campbell Island	34	26th	1991	Highest
Mahia	82	4th	1990	2nd-highest
Wairoa	88	4th	1967	3rd-highest
South West Cape	29	2nd	1991	4th-highest

Temperatures

The final week of November saw persistent north-westerly airflows that resulted in relatively high temperatures throughout the country. During this time, a number of locations observed record or near-record high daily maximum and daily minimum air temperatures (see tables below).

The highest daily maximum temperature was 31.7°C, observed at Hastings. This was followed by 31.4°C recorded at Leeston, and 31.3°C recorded at Cheviot on 22 November. All of these temperatures were observed on 26 November. The lowest daily minimum temperature was -5.6°C, observed at Snowdon (Canterbury) on 5 November. This was followed by -3.9°C, recorded at both Ranfurly and Middlemarch on 19 November.

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				
Kaikohe	25.8	26th	1973	Highest
Whatawhata	27.1	25th	1952	Highest
Hastings	31.7	26th	1965	Highest
Cheviot	31.3	26th	1982	Highest
Te Puke	27.4	9th	1973	Equal highest
Auckland (Mangere)	26.8	26th	1959	Equal highest
Whangarei	27.4	27th	1967	2nd-highest
Mokohinau	22.8	26th	1994	2nd-highest
Leigh	27.1	26th	1966	2nd-highest
Waipawa	29.1	27th	1945	2nd-highest
Whangaparaoa	24.4	28th	1982	Equal 3rd-highest
Waiau	30.6	26th	1974	Equal 3rd-highest
Warkworth	25.6	27th	1966	4th-highest
South West Cape	21.3	26th	1991	4th-highest
Low records or near-records				
Masterton	9.1	4th	1943	Lowest
Martinborough	9.0	4th	1986	Lowest
Ngawi	9.6	4th	1972	Lowest
Gisborne	11.7	5th	1940	Lowest
Wellington (Airport)	9.9	4th	1972	Lowest
Cheviot	8.4	4th	1982	Lowest
Hanmer Forest	6.5	4th	1972	Equal lowest
Waipara West	9.2	4th	1973	Equal lowest
Waione	10.8	4th	1993	2nd-lowest
Mahia	10.7	5th	1990	2nd-lowest
Hawera	10.7	4th	1977	2nd-lowest
Ohakune	9.1	4th	1972	2nd-lowest
Whanganui	11.1	4th	1972	2nd-lowest
Blenheim	10.9	4th	1972	2nd-lowest
Lumsden	6.9	3rd	1982	2nd-lowest
Paraparaumu	11.2	4th	1972	Equal 2nd-lowest

Farewell Spit	13.2	4th	1972	Equal 2nd-lowest
Culverden	8.3	4th	1930	Equal 2nd-lowest
Wairoa	11.3	5th	1972	3rd-lowest
Cape Campbell	10.3	4th	1972	3rd-lowest
Balclutha	8.3	3rd	1972	3rd-lowest
Castlepoint	9.6	4th	1972	Equal 3rd-lowest
Stratford	10.4	4th	1972	Equal 3rd-lowest
Puysegur Point	8.7	3rd	1978	Equal 3rd-lowest
Le Bons Bay	8.4	4th	1984	Equal 3rd-lowest
Dannevirke	9.3	4th	1951	4th-lowest
Motu	9.5	13th	1990	Equal 4th-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				
Kaikohe	18.5	28th	1973	Highest
Whangarei	19.0	28th	1967	Highest
Whitianga	18.8	28th	1971	Highest
Whakatane	17.9	28th	1975	Highest
Rotorua	17.0	28th	1972	Highest
Motu	14.9	28th	1990	Highest
Waiau	21.6	27th	1974	Highest
Cheviot	20.9	27th	1982	Highest
Waipara West	20.3	27th	1973	Highest
Lincoln	20.7	27th	1881	Highest
Orari Estate	18.8	27th	1972	Highest
Timaru	17.1	27th	1885	Highest
Kerikeri	18.7	28th	1981	Equal highest
Kaitaia	18.4	28th	1948	2nd-highest
Hastings	20.2	28th	1972	2nd-highest
Hanmer Forest	19.1	27th	1972	2nd-highest
Kaikoura	17.4	27th	1972	2nd-highest
Culverden	19.9	27th	1930	2nd-highest
Le Bons Bay	18.4	26th	1984	2nd-highest
Whangaparaoa	17.3	28th	1982	Equal 2nd-highest
Auckland (Whenuapai)	17.9	28th	1951	Equal 2nd-highest
Taupo	16.0	28th	1950	Equal 2nd-highest
South West Cape	12.9	26th	1991	Equal 2nd-highest
Whatawhata	17.7	28th	1952	3rd-highest
Port Taharoa	17.7	28th	1974	3rd-highest
Mahia	17.1	28th	1990	3rd-highest
Ashburton	17.9	27th	1928	3rd-highest
Mokohinau	17.3	27th	1994	Equal 3rd-highest
Te Puke	17.1	28th	1973	Equal 3rd-highest

Auckland (Mangere)	18.3	28th	1961	Equal 3rd-highest
Auckland (Airport)	18.3	28th	1961	Equal 3rd-highest
Hicks Bay	17.0	28th	1972	Equal 3rd-highest
Gisborne	19.1	27th	1940	4th-highest
Christchurch (Riccarton)	19.1	27th	1863	4th-highest
Manapouri	14.2	26th	1973	4th-highest
Campbell Island	8.9	26th	1991	4th-highest
Cape Reinga	16.6	28th	1971	Equal 4th-highest
Hamilton	17.4	28th	1946	Equal 4th-highest
Reefton	14.4	27th	1972	Equal 4th-highest
Low records or near-records				
Kerikeri	3.2	3rd	1981	Lowest
Warkworth	2.7	14th	1966	Lowest
Te Kuiti	-0.1	13th	1959	Lowest
Turangi	-3.7	6th	1968	Lowest
Hicks Bay	2.9	14th	1969	Lowest
Hawera	-0.2	6th	1977	Lowest
Appleby	-1.2	5th	1932	Lowest
Christchurch (Airport)	-2.7	5th	1863	Lowest
Tiwai Point	-0.6	19th	1970	Lowest
Waione	-1.1	14th	1991	2nd-lowest
Martinborough	-0.9	14th	1986	2nd-lowest
Balclutha	-2.3	19th	1964	2nd-lowest
Dannevirke	-1.7	14th	1951	Equal 2nd-lowest
Ranfurlly	-3.9	19th	1975	3rd-lowest
Lumsden	-2.4	19th	1982	3rd-lowest
Kaitaia	5.7	14th	1985	Equal 3rd-lowest
Whangarei	5.4	14th	1967	Equal 3rd-lowest
Stratford	0.4	14th	1960	Equal 3rd-lowest
Ohakune	-2.5	6th	1962	Equal 3rd-lowest
Auckland (Whenuapai)	2.3	14th	1945	4th-lowest
Takaka	1.8	5th	1978	4th-lowest
Taumarunui	-0.6	6th	1947	Equal 4th-lowest
Waipawa	-0.2	14th	1945	Equal 4th-lowest
Whanganui	1.8	6th	1937	Equal 4th-lowest
Motueka	1.1	5th	1956	Equal 4th-lowest

Lightning and Hail

On 12 November a lightning strike set a tree on fire in the Auckland suburb of Remuera.

On 22 November prolonged thunderstorms impacted northern parts of the North Island.

Approximately 10,000 lightning strikes were recorded, of which 1300 occurred in Auckland. More than 2000 Auckland homes lost powers during the severe weather due to trees that were brought down onto power lines.

Snow and ice

In the early hours of 13 November, dozens of helicopters were deployed over Marlborough Vineyards in order to fight off frost. On calm and clear nights, a near surface inversion may form whereby dense and relatively cold air sinks to the Earth's surface, and this can result in frosts. The helicopter deployment strategy works by introducing turbulence into the stable air, and breaks down the near-surface inversion which reduces the likelihood of frost formation.

Cloud and fog

On 10 November early-morning fog was reported in Timaru and surrounding areas of South Canterbury.

For further information, please contact:

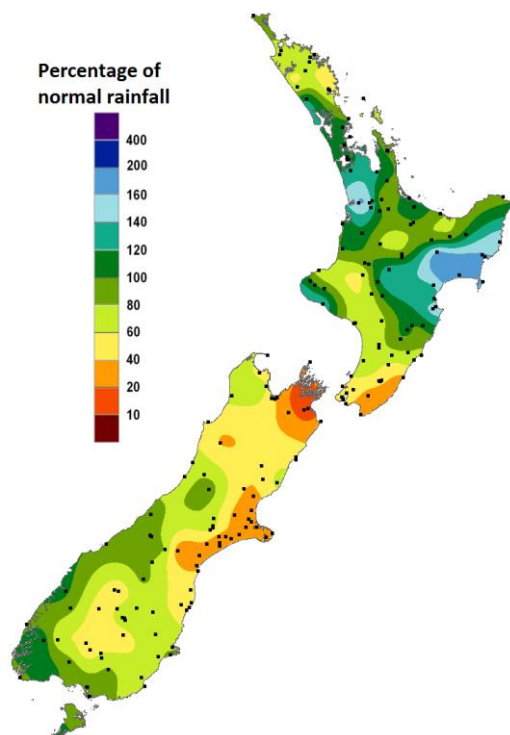
Mr Chris Brandolino

Principal Scientist – Forecasting, NIWA National Climate Centre
Tel. 09 375 6335, Mobile (027) 886 0014

For climate data enquiries, please contact:

Mr Gregor Macara

Climate Scientist, NIWA Wellington
Tel. 04 386 0509



November 2015 total rainfall, expressed as a percentage the 1981-2010 normal.

Rainfall was below normal (50-79%) or well below normal (< 50%) for most of the South Island, as well as southern, western and northern parts of the North Island. Conversely, rainfall was at least above normal (120-149%) for Gisborne, Hawke's Bay, northern Waikato and southern Auckland.

<http://www.niwa.co.nz/climate> © Copyright NIWA 2015.

All rights reserved. Information presented in this summary is based on data available at the time of publication, which is subject to ongoing quality assurance procedures.