

New Zealand's warmest November on record

Temperature	November 2021 was New Zealand's warmest November on record. Temperatures were well above average (>1.20°C above average) across the entire North Island, along with large portions of the upper, western, and lower South Island. Above average temperatures (0.51°C to 1.20°C above average) were observed across much of Canterbury, with small pockets of near average temperatures (±0.50°C of average) in Banks Peninsula and interior Otago.
Rainfall	Rainfall was above normal (120-149% of normal) or well above normal (>149% of normal) across Gisborne, northern Hawke's Bay, a small portion of eastern Northland, the northern West Coast, southern Canterbury, interior Otago, and parts of Fiordland. Below normal (50-79% of normal) or well below normal (<50% of normal) rainfall was observed in parts of Northland, much of Auckland and the Coromandel Peninsula, Bay of Plenty, the Central Plateau, Manawatū-Whanganui, Wellington-Wairarapa, Nelson, Marlborough, and northern and central Canterbury. Elsewhere, near normal rainfall (80-119% of normal) was observed.
Soil Moisture	At the end of November, soil moisture levels were below normal across northern Waikato, Bay of Plenty, most of the Central Plateau, northern Manawatū-Whanganui, Wairarapa, Nelson, Marlborough, northern and central Canterbury, and the lower West Coast. Soil moisture levels were above normal in a portion of the Far North, coastal Gisborne, interior southern Canterbury, and interior Southland. Elsewhere, soil moisture levels were near normal.

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Overview

November 2021 was characterised by higher than normal mean sea level pressure (MSLP) located to the southeast of Aotearoa New Zealand, with lower than normal MSLP over eastern Australia. This setup resulted in a northeast airflow anomaly (i.e. more northeasterly winds than normal). These warm and humid northeasterly winds from the subtropics combined with well above average sea surface temperatures surrounding the country, resulting in New Zealand's warmest November on record. The pattern was associated with a developing La Niña in the equatorial Pacific.

Overall, the nationwide average temperature in November 2021 was 15.4°C. This was 1.7°C above the 1981-2010 November average, making it New Zealand's warmest November since NIWA's seven station temperature series began in 1909. November 2021 surpassed November 2019 as the warmest on record, and three of the four warmest Novembers have now occurred since 2013.

Temperatures were well above average (>1.20°C above average) across the entire North Island, along with large portions of the upper, western, and lower South Island. Above average temperatures (0.51°C to 1.20°C above average) were observed across much of Canterbury, with small pockets of near average temperatures (±0.50°C of average) in Banks Peninsula and interior Otago.

Rainfall patterns were very mixed across the country, with above normal (120-149% of normal) or well above normal (>149% of normal) rainfall observed in Gisborne, northern Hawke's Bay, a small portion of eastern Northland, the northern West Coast, southern Canterbury, interior Otago, and parts of Fiordland. Below normal (50-79% of normal) or well below normal (<50% of normal) rainfall was observed in parts of Northland, much of Auckland and the Coromandel Peninsula, Bay of Plenty, the Central Plateau, Manawatū-Whanganui, Wellington-Wairarapa, Nelson, Marlborough, and northern and central Canterbury. Elsewhere, near normal rainfall (80-119% of normal) was observed. A notable heavy rain event affected Gisborne and northern Hawke's Bay early in the month, resulting in flooding and the declaration of a State of Emergency (see <u>Highlights and extreme events</u> section for further details).

Further Highlights:

- The highest temperature was 31.7°C, observed at Hastings on 14 November.
- The lowest temperature was -3.8°C, observed at Cass (inland Canterbury) on 4 November.
- The highest 1-day rainfall was 178 mm, recorded at Tolaga Bay on 3 November.
- The highest wind gust was 152 km/h, observed at Puysegur Point on 19 November.
- Of the six main centres in November 2021, Tauranga was the warmest, Dunedin was the coolest and sunniest, Hamilton was the wettest and least sunny, and Christchurch was the driest.
- Of the available, regularly reporting sunshine observation sites, the sunniest four regions in 2021 so far are Taranaki (2368 hours), Marlborough (2317 hours), Greater Nelson (2317 hours), and Hawke's Bay (2301 hours).

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Temperature: Widespread well above average temperatures; numerous records

More subtropical northeast wind flows than normal combined with a developing marine heatwave in the New Zealand region to lead to a very warm month, with numerous records being set. Well above average temperatures (>1.20°C above average) were observed across the entire North Island and large swaths of the South Island. Sixty-three locations observed record or near-record high mean air temperatures during the month. Notably, Taupō and Hastings both recorded mean temperatures a massive 3.5°C above average. Meanwhile, all four main centres in the North Island observed their warmest or 2nd-warmest November on record. The unusually warm sea surface temperatures surrounding New Zealand helped to keep night-time temperatures especially warm, with 71 locations recording record or near-record warm mean minimum temperatures. Despite the record-setting warm

month, there were few individual hot days. Only one daily maximum temperature record was observed (28.1°C at Mahia on the 14th), with 15 other locations attaining near-records. This is in notable contrast to the 55 locations that observed record or near-record daily warm minimum (night-time) temperatures. This paints a picture of a month that was consistently warmer than average as opposed to one featuring a handful of extremely warm days.

Location	Mean air	Departure from	Year	Comments
	temp. (°C)	normal (°C)	records	
			began	
High records or near-records				
Kerikeri	17.9	2.1	1945	Highest
Kaikohe	17.2	2.2	1973	Highest
Whangārei	18.7	2.2	1967	Highest
Mokohinau	17.9	1.5	1994	Highest
Leigh	19.0	2.8	1966	Highest
Whangaparāoa	18.5	2.4	1982	Highest
Auckland (Western Springs)	18.1	2.2	1948	Highest
Whitianga	17.9	2.1	1962	Highest
Paeroa	18.0	2.2	1947	Highest
Matamata	17.6	3.1	1999	Highest
Tauranga	18.4	2.5	1913	Highest
Te Puke	18.2	3.3	1973	Highest
Whakatāne	17.7	2.1	1974	Highest
Rotorua	16.7	3.0	1964	Highest
Taupō	16.6	3.5	1949	Highest
Motu	14.9	2.9	1990	Highest
Auckland (Airport)	18.2	2.0	1959	Highest
Pukekohe	17.5	2.4	1969	Highest
Whatawhata	16.8	2.1	1952	Highest
Hamilton (Ruakura)	17.6	2.7	1906	Highest
Hamilton (Airport)	17.2	2.5	1946	Highest
Tūrangi	15.5	2.2	1968	Highest
Lower Retaruke	16.2	2.3	1966	Highest
Dannevirke	16.0	2.4	1951	Highest
Martinborough	16.5	2.5	1986	Highest
Mahia	16.5	1.6	1990	Highest
Paraparaumu	15.7	1.8	1953	Highest
Levin	16.0	2.0	1895	Highest
Upper Hutt	15.4	2.0	1939	Highest
Hāwera	15.1	2.0	1977	Highest
Tākaka	15.7	1.7	1978	Highest
South West Cape	12.2	1.6	1991	Highest

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

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.

Cape Reinga	17.3	1.7	1951	2nd-highest
Kaitaia	17.9	2.0	1948	2nd-highest
Auckland (Whenuapai)	17.2	1.8	1945	2nd-highest
Port Taharoa	17.5	2.0	1973	2nd-highest
Mt Ruapehu (Chateau)	10.9	2.5	2000	2nd-highest
Masterton	16.4	2.5	1906	2nd-highest
Ngawi	16.7	1.3	1972	2nd-highest
Gisborne	18.3	2.7	1905	2nd-highest
Hastings	18.0	3.5	1965	2nd-highest
Palmerston North	16.1	1.9	1928	2nd-highest
Wellington (Kelburn)	15.0	1.6	1928	2nd-highest
Wellington (Airport)	16.0	1.5	1962	2nd-highest
Ohakune	13.7	2.1	1962	2nd-highest
Waiouru	12.9	2.8	1962	2nd-highest
Whanganui	16.6	1.7	1937	2nd-highest
Westport	14.9	1.7	1937	2nd-highest
Arapito	15.2	1.7	1978	2nd-highest
Greymouth	14.7	1.7	1947	2nd-highest
Motueka	15.7	1.5	1956	2nd-highest
Brothers Island	14.6	0.8	1997	2nd-highest
Dargaville	17.5	1.9	1943	3rd-highest
Te Kuiti	16.7	1.9	1959	3rd-highest
Reefton	15.6	2.2	1960	3rd-highest
Puysegur Point	12.6	1.5	1978	3rd-highest
Hanmer Forest	14.4	2.3	1906	3rd-highest
New Plymouth	15.8	1.6	1944	4th-highest
Wairoa	18.0	2.3	1964	4th-highest
Stratford	14.3	1.8	1960	4th-highest
Franz Josef	13.6	2.0	1953	4th-highest
Windsor	13.2	0.9	2000	4th-highest
Middlemarch	13.5	1.4	2000	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				
Leigh	23.3	4.1	1966	Highest
Whangaparāoa	22.5	3.0	1982	Highest
Auckland (Whenuapai)	21.9	2.4	1945	Highest
Paeroa	23.2	2.4	1947	Highest
Matamata	23.2	3.3	1999	Highest
Auckland (Airport)	22.1	2.6	1959	Highest
Whatawhata	21.7	2.7	1952	Highest
Whanganui	20.9	2.1	1937	Highest
Tākaka	21.8	2.2	1978	Highest

Kaikohe	21.2	2.4	1973	2nd-highest
Whangārei	23.0	2.4	1967	2nd-highest
Mokohinau	19.8	1.1	1994	2nd-highest
Whitianga	23.1	2.9	1962	2nd-highest
Te Puke	22.9	2.9	1973	2nd-highest
Rotorua	21.6	3.4	1964	2nd-highest
Taupō	22.5	4.2	1949	2nd-highest
Pukekohe	22.1	2.9	1969	2nd-highest
Hamilton (Ruakura)	23.1	3.2	1906	2nd-highest
Hamilton (Airport)	22.5	2.6	1946	2nd-highest
Te Kuiti	23.1	3.1	1959	2nd-highest
New Plymouth	19.9	2.2	1944	2nd-highest
Dannevirke	20.8	2.6	1951	2nd-highest
Waipawa	22.7	3.0	1945	2nd-highest
Wellington (Airport)	18.8	1.3	1962	2nd-highest
Stratford	19.3	2.3	1960	2nd-highest
Waiouru	18.2	3.0	1962	2nd-highest
Greymouth	18.5	2.0	1947	2nd-highest
South West Cape	15.1	1.5	1991	2nd-highest
Tauranga	22.2	2.1	1913	3rd-highest
Motu	20.0	3.4	1990	3rd-highest
Tūrangi	21.4	2.7	1968	3rd-highest
Masterton	22.5	2.5	1906	3rd-highest
Martinborough	21.6	2.3	1986	3rd-highest
Ngawi	20.1	1.2	1972	3rd-highest
Palmerston North	20.7	2.1	1928	3rd-highest
Hāwera	18.8	2.1	1977	3rd-highest
Ohakune	19.3	2.6	1962	3rd-highest
Arapito	19.5	1.8	1978	3rd-highest
Cape Reinga	20.1	1.7	1951	4th-highest
Dargaville	21.5	2.5	1943	4th-highest
Whakatāne	21.9	1.3	1974	4th-highest
Port Taharoa	20.7	1.7	1973	4th-highest
Lower Retaruke	22.0	2.5	1966	4th-highest
Mt Ruapehu (Chateau)	16.1	2.7	2000	4th-highest
Takapau Plains	19.9	1.4	1962	4th-highest
Levin	20.1	2.1	1895	4th-highest
Upper Hutt	19.5	1.7	1939	4th-highest
Hanmer Forest	21.9	3.0	1906	4th-highest
Low records or near-records				
None observed				

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

Location	Mean	Departure from	Year records	Comments
	minimum air	normal (°C)	began	
	temp. (°C)			
High records or near-records				
Cape Reinga	14.5	1.8	1951	Highest
Kaitaia	14.4	2.4	1948	Highest
Kerikeri	13.4	2.4	1945	Highest
Kaikohe	13.1	1.8	1973	Highest
Whangārei	14.3	2.0	1967	Highest
Mokohinau	15.9	1.7	1994	Highest
Auckland (Western Springs)	13.5	1.4	1948	Highest
Whitianga	13.0	1.7	1962	Highest
Te Puke	13.5	3.6	1973	Highest
Whakatāne	13.4	2.7	1974	Highest
Taupō	10.7	2.8	1949	Highest
Motu	9.9	2.5	1990	Highest
Port Taharoa	14.3	2.3	1973	Highest
Mt Ruapehu (Chateau)	5.7	2.3	2000	Highest
Masterton	10.7	2.9	1906	Highest
Martinborough	11.4	2.7	1986	Highest
Gisborne	13.5	3.1	1905	Highest
Hastings	12.7	3.6	1965	Highest
Wairoa	13.1	2.6	1964	Highest
Mahia	13.6	2.1	1990	Highest
Wellington (Kelburn)	12.2	1.9	1928	Highest
Wellington (Airport)	13.2	1.8	1962	Highest
Hāwera	11.5	2.0	1977	Highest
Westport	11.7	2.0	1937	Highest
Brothers Island	12.7	1.0	1997	Highest
Rangiora	9.8	2.3	1965	Highest
Oamaru	9.2	1.9	1967	Highest
Leigh	14.8	1.6	1966	2nd-highest
Whangaparāoa	14.5	1.9	1982	2nd-highest
Paeroa	12.7	1.9	1947	2nd-highest
Matamata	12.0	3.0	1999	2nd-highest
Tauranga	14.5	2.8	1913	2nd-highest
Rotorua	11.9	2.6	1964	2nd-highest
Pukekohe	12.9	2.0	1969	2nd-highest
Hamilton (Ruakura)	12.0	2.1	1906	2nd-highest
Hamilton (Airport)	11.8	2.3	1946	2nd-highest
Ngawi	13.4	1.5	1972	2nd-highest
Paraparaumu	12.3	1.9	1953	2nd-highest
Waiouru	7.6	2.6	1962	2nd-highest
Reefton	10.0	2.2	1960	2nd-highest
Puysegur Point	10.2	1.6	1978	2nd-highest
Nelson	12.0	1.7	1862	2nd-highest
Blenheim	11.6	2.2	1932	2nd-highest

Kaikōura	11.1	1.4	1963	2nd-highest
Cheviot	9.1	1.9	1982	2nd-highest
Waimate	9.4	2.2	1908	2nd-highest
Windsor	8.2	1.7	2000	2nd-highest
Middlemarch	7.1	1.5	2000	2nd-highest
South West Cape	9.4	1.8	1991	2nd-highest
Dargaville	13.5	1.4	1943	3rd-highest
Auckland (Whenuapai)	12.6	1.4	1945	3rd-highest
Auckland (Airport)	14.4	1.6	1959	3rd-highest
Lower Retaruke	10.5	2.3	1966	3rd-highest
Hicks Bay	13.9	1.7	1969	3rd-highest
Napier	13.6	2.9	1870	3rd-highest
Levin	12.0	1.9	1895	3rd-highest
Upper Hutt	11.2	2.3	1939	3rd-highest
Secretary Island	10.4	1.6	1985	3rd-highest
Motueka	10.5	1.9	1956	3rd-highest
Culverden	9.7	2.7	1928	3rd-highest
Waipara West	9.7	1.6	1973	3rd-highest
Lincoln	10.4	2.3	1881	3rd-highest
Orari Estate	8.5	1.5	1972	3rd-highest
Dunedin (Musselburgh)	10.2	1.6	1947	3rd-highest
Whatawhata	12.0	1.6	1952	4th-highest
Dannevirke	11.1	2.1	1951	4th-highest
Arapito	10.9	1.7	1978	4th-highest
Franz Josef	9.0	1.4	1953	4th-highest
Waiau	9.6	2.6	1974	4th-highest
Te Anau	7.7	2.0	1963	4th-highest
Nugget Point	8.7	1.2	1970	4th-highest
Low records or near-records				
None observed				

Rainfall: Flooding in Gisborne; mixed rainfall patterns overall

Rainfall anomalies (i.e. rainfall measured as a difference from normal) were quite varied across New Zealand during the month. Most notably, a moist easterly air flow brought heavy rain and flooding to Gisborne from 3-5 November. By 4 November, Gisborne had received more than its normal November rainfall total in less than 24 hours, and it was already the town's wettest month in 2021. By the end of the month Gisborne had received 458% of its normal monthly rainfall, making it the city's wettest November since records began in 1905. Conversely, it was a very dry month across the Central Plateau and Wairarapa, as Taupō and Masterton received only 24% and 15% of their normal November rainfall, respectively. At the end of the month, NIWA's <u>New Zealand Drought Index</u> indicated "very dry" conditions in coastal Wairarapa. Late in the month an atmospheric river impacted the West Coast with heavy rain, as Westport, Greymouth, and Hokitika all observed record or near-record one-day rainfall on 27 November.

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						
Gisborne	289	458	1905	Highest		
Low records or near-records						
Taupō	16	24	1949	2nd-lowest		
Tūrangi	43	34	1968	3rd-lowest		
Masterton	11	15	1926	4th-lowest		

November climate in the six main centres

All four main centres in the North Island had either their warmest or 2nd-warmest November on record, with Christchurch and Dunedin also seeing above average or well above average temperatures. Five of the six main centres received either below normal or well below normal rainfall, with only Dunedin observing near normal rainfall. Of the six main centres in November 2021, Tauranga was the warmest, Dunedin was the coolest and sunniest, Hamilton was the wettest and least sunny, and Christchurch was the driest.

November 2021 main centre climate statistics:

Temperature			
Location	Mean temp.	Departure	Comments
	(°C)	from normal	
		(°C)	
Auckland ^a	18.1	+2.0	Well above average (warmest on record)
Tauranga ^b	18.4	+2.5	Well above average (warmest on record)
Hamilton ^c	17.2	+2.5	Well above average (warmest on record)
Wellington ^d	15.0	+1.6	Well above average (2 nd -warmest on record)
Christchurch ^e	14.2	+0.7	Above average
Dunedin ^f	13.8	+1.4	Well above average
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland ^a	28	43	Well below normal
Tauranga ^b	29 ²	39	Well below normal
Hamilton ^c	70	78	Below normal
Wellington ^d	60	61	Below normal
Christchurch ^e	25	54	Below normal
Dunedin ^f	47	84	Near normal
Sunshine			
Location	Sunshine		
	(hours)		
Auckland ^a	222		
Tauranga ^b	220		
Hamilton ^g	198		
Wellington ^d	206		
Christchurch ^e	210		
Dunedin ^f	237		
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^a Māngere ^b Tauranga Airport ^c Hamilton Airport ^d Kelburn ^e Christchurch Airport ^f Musselburgh ^g Ruakura

² Missing 4 days of rainfall data.

Highlights and extreme events

Temperatures

The highest temperature was 31.7°C, observed at Hastings on 14 November.

The lowest temperature was -3.8°C, observed at Cass (inland Canterbury) on 4 November.

Despite November 2021 being New Zealand's warmest November on record, only one record daily maximum temperature was observed during the month (at Mahia on the 14th). This indicates that the record warmth was a product of a month that was consistently warm as opposed to having a handful of days that were unusually hot.

Location	Extreme maximum (°C)	Date of extreme temperature	Year records began	Comments			
High records or near-records							
Mahia	28.1	14th	1990	Highest			
Waipawa	29.5	14th	1945	Equal highest			
Whangaparāoa	25.4	29th	1982	2nd-highest			
Whitianga	28.5	29th	1962	2nd-highest			
Te Puke	27.9	29th	1973	2nd-highest			
Farewell Spit	26.4	8th	1971	2nd-highest			
Dargaville	26.2	21st	1943	Equal 2nd-highest			
Mokohinau	23.0	29th	1994	3rd-highest			
Paeroa	27.3	29th	1947	3rd-highest			
Dannevirke	27.6	13th	1951	3rd-highest			
Windsor	29.0	12th	2000	3rd-highest			
Tūrangi	27.6	29th	1968	Equal 3rd-highest			
Hastings	31.7	14th	1965	Equal 3rd-highest			
Whakatu	31.3	14th	1965	4th-highest			
Reefton	28.0	29th	1960	4th-highest			
Hanmer Forest	29.9	29th	1906	4th-highest			
Low records or near-records							
Oamaru	8.0	27th	1972	Lowest			
Whangaparāoa	14.0	3rd	1982	Equal lowest			

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

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				
Cape Reinga	17.5	14th	1971	Highest
Kaitaia	19.8	14th	1948	Highest
Kerikeri	19.4	14th	1952	Highest
Kaikohe	18.7	14th	1973	Highest
Whangārei	20.2	14th	1967	Highest

Mokohinau	18.0	29th	1994	Highest
Whangaparāoa	17.7	14th	1982	Highest
Auckland (Whenuapai)	19.1	14th	1951	Highest
Auckland (Western Springs)	19.2	14th	1971	Highest
Whitianga	19.0	14th	1971	Highest
Paeroa	19.1	14th	1971	Highest
Te Puke	18.0	14th	1973	Highest
Whakatāne	18.1	22nd	1975	Highest
Motu	15.8	14th	1990	Highest
Auckland (Mangere)	19.0	14th	1961	Highest
Hamilton	18.2	14th	1946	Highest
Masterton	18.7	13th	1943	Highest
Dannevirke	19.0	14th	1951	Highest
Waiouru	14.8	14th	1972	Highest
Reefton	15.9	13th	1972	Highest
Dargaville	19.2	14th	1951	Equal highest
Gisborne	20.1	14th	1940	Equal highest
South West Cape	13.0	9th	1991	Equal highest
Warkworth	18.7	14th	1966	2nd-highest
Tauranga	18.4	14th	1941	2nd-highest
Rotorua	16.8	14th	1972	2nd-highest
Pukekohe	18.4	14th	1969	2nd-highest
Port Taharoa	18.2	22nd	1974	2nd-highest
Takapau Plains	17.3	14th	1972	2nd-highest
Palmerston North	17.0	13th	1940	2nd-highest
Porirua	16.3	13th	1972	2nd-highest
Whanganui	19.0	13th	1972	2nd-highest
Westport	17.0	30th	1966	2nd-highest
Arapito	16.3	30th	1978	2nd-highest
Brothers Island	15.0	27th	1997	2nd-highest
Whatawhata	17.8	14th	1952	Equal 2nd-highest
Lower Retaruke	16.2	14th	1972	Equal 2nd-highest
Mt Ruapehu (Chateau)	11.7	14th	2000	Equal 2nd-highest
Martinborough	17.8	13th	1986	Equal 2nd-highest
Wellington (Kelburn)	16.0	30th	1931	Equal 2nd-highest
Ohakune	14.7	14th	1972	Equal 2nd-highest
Te Kuiti	17.4	14th	1959	3rd-highest
Tūrangi	15.2	13th	1968	3rd-highest
Hicks Bay	17.2	13th	1972	3rd-highest
Mahia	17.8	14th	1990	3rd-highest
Upper Hutt	16.9	13th	1972	3rd-highest
Hāwera	17.0	13th	1977	3rd-highest
Motueka	16.5	13th	1972	Equal 3rd-highest
Leigh	18.1	22nd	1966	4th-highest
Matamata	18.0	14th	1999	4th-highest
Hamilton (Ruakura)	18.3	14th	1940	4th-highest
Franz Josef	14.0	12th	1953	4th-highest
Nelson	17.4	30th	1862	4th-highest

Taupō	15.8	22nd	1950	Equal 4th-highest
Low records or near-records				
None observed				

Rain and slips

The highest 1-day rainfall was 178 mm, recorded at Tolaga Bay on 3 November.

Between 3-5 November, a slow-moving subtropical low caused persistent heavy rainfall that affected the eastern North Island and brought flooding and slips to parts of Gisborne, resulting in a State of Emergency being declared. A search and rescue squad used boats to evacuate residents from flooded homes. Additional flooding occurred in the Gisborne suburb of Sponge Bay, where electricity was turned off as a precautionary measure. Flooding was also reported in Rototahi on 4 November. The heavy rain caused Gisborne District Council to open the emergency sewer valve at Wainui Road into the Turanganui River to prevent sewage from overflowing back into homes and onto roads.

By 4 November, Gisborne had received more than its normal November rainfall total in less than one day, and it was already the town's wettest month in 2021. In less than one day Gisborne also received more rainfall than it did during all of summer 2020-2021 (67 mm). By the end of the rain event, some locations in the Gisborne region had received well above 200 mm of rainfall.

Heavy rainfall from an atmospheric river affected the West Coast during 26-28 November. NZTA Waka Kotahi reported that there was substantial surface flooding on SH6, and parts of the road in southern Westland were shut for a time.

Location	Extreme 1-day rainfall (mm)	Date of extreme rainfall	Year records began	Comments
Westport	97	27th	1944	Highest
Greymouth	165	27th	1947	Highest
Mokohinau	37	2nd	1994	2nd-highest
Gisborne	95	3rd	1937	2nd-highest
Mahia	86	4th	1990	2nd-highest
Arapito	90	28th	1978	2nd-highest
Hokitika	117	27th	1866	3rd-highest
Matamata	53	7th	1951	4th-highest
Lake Tekapo	46	27th	1925	4th-highest

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

Wind

The highest wind gust was 152 km/h, observed at Puysegur Point on 19 November.

On 2-3 November, strong southeasterly winds left 3,500 homes in Taranaki without power. FENZ was called out to clear several trees that had fallen across roadways, along with power and telephone lines.

In addition to the heavy rain and flooding in the eastern North Island on 3-5 November, strong easterly winds also brought down numerous trees across Gisborne, Bay of Plenty, and Waikato. Powerlines were also damaged. Downed trees resulted in the closure of SH1 between SH29 and Karapiro Road.

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
Rotorua	93	3rd	1972	Highest
Mt Ruapehu (Chateau)	115	3rd	2000	Highest
Te Puke	59	3rd	1987	Equal highest
Motu	98	3rd	1991	2nd-highest
New Plymouth	109	3rd	1972	2nd-highest
Puysegur Point	152	19th	1986	2nd-highest
Rangiora	87	16th	1999	2nd-highest
Oamaru	89	16th	1984	3rd-highest
Upper Hutt	87	21st	1999	Equal 3rd-highest
Whakatāne	85	3rd	1974	Equal 4th-highest

Cloud and fog

On 7 November, low cloud and fog at Auckland Airport resulted in a delayed departure for a domestic regional flight.

On 8 November, volcanic gases from Whakaari/White Island mixed with atmospheric moisture to create a rare phenomenon known as vog (volcanic fog). Light northerly winds brought the volcanic fog onshore in Bay of Plenty, resulting in complaints about the strong smell and watery eyes.

For further information, please contact:

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Expressed as a percentage of the 1981-2010 normal. Note that the anomalously dry spot about Balclutha is due to missing data. These data were not corrected in time for production of this map. Expressed as a departure from the 1981-2010 average in degrees Celsius.

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