

New Zealand's 4th-warmest autumn on record

Temperature	It was New Zealand's 4 th -warmest autumn on record. Temperatures across the country were mostly above average (+0.51°C to +1.20°C of the autumn average) or well above average (>1.20°C of the autumn average) while few locations experienced temperatures which were near average (-0.50° to +0.50°C of the autumn average).
Rainfall	Rainfall totals over much of the North Island were below normal (50-79% of the autumn normal) with isolated pockets of well below normal (<50 % of the autumn normal). The exceptions to this were part of Bay of Plenty and western parts of the Wellington and Manawatu-Whanganui where near normal (80-120% of the autumn normal rainfall) rainfall totals were observed, and in the Taranaki region where rainfall was near to above normal (120-149% of the autumn normal). A large portion of the South Island observed above or well above normal rainfall (>120% of the autumn normal), including West Coast, much of Southland, western parts of Canterbury and Otago, as well as Nelson and northern Marlborough. Remaining parts of the South Island were largely near average with pockets of below average rainfall occurring throughout.
Soil moisture	By the end of autumn 2019, soils were drier than normal for much of the North Island with small areas of wetter than normal soils about western Waitomo and the Kapiti Coast. South Island soil moisture was generally near normal with pockets of below normal soil moisture about Waimate and Waitaki as well as interior Marlborough region.

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Overview

Autumn 2019 was characterised by higher than normal mean sea level pressure over and to the east of New Zealand, resulting in more northerly winds than normal across the country. This, in combination with warmer than average sea surface temperatures around New Zealand coastlines resulted in autumn temperatures which were above (+0.51°C to +1.20°C of the autumn average) or well above average (>1.20°C of the autumn average) for the time of year over most of the country.

The nationwide average temperature for autumn 2019 was 14.4°C (1.17°C above the 1981-2010 average from NIWA's seven station temperature series which begins in 1909) making it the 4th-warmest autumn on record in New Zealand, and only 0.02°C cooler than the autumn of 1999, the 3rd-warmest autumn on record.

Autumn 2019 got off to a warm start during March with above to well above average temperatures experienced across the country. This was the equal 2nd-warmest March on record and many locations observed record or near-record warm mean, mean maximum or mean minimum temperatures during this time. The warmest autumn temperature of 32.4°C was recorded in Waipara West on 5 March. Temperatures during April were largely near average (-0.50° to +0.50°C of average) for the time of year and the lowest autumn temperature of -6.0°C was observed at Ranfurly on 7 April. The season ended on a warm note with New Zealand experiencing its 3rd-warmest May on record. Many locations also observed record or near-record warm mean, mean maximum or mean minimum temperatures during this month.

In terms of rainfall, much of the North Island experienced below normal (50-79% of normal) or well below normal (<50% of normal) levels during March and May whereas April was more variable with below to well below normal rainfall occurring in the south and west. Rainfall anomalies in the South Island also varied spatially during the individual months of autumn ranging from well below normal (particularly in the west and north) to well above normal (>149% of normal). Parts of the West Coast and western Canterbury through to western Otago observed well above normal totals for all three months of autumn. Extremely heavy rainfall occurred in the western South Island between 25-27 March resulting in flooding, the collapse of the Waiho Bridge near Franz Josef, and the declaration of a State of Emergency in Westland (refer to the [highlights and extreme events](#) section for further details). The highest 1-day rainfall was 401 mm, recorded at Milford Sound on 25 March.

Further Highlights:

- The highest temperature was 32.4°C observed in Waipara West on 5 March.
- The lowest temperature was -6.0°C, observed at Ranfurly on 7 April.
- The highest 1-day rainfall was 401 mm, recorded at Milford Sound on 25 March.
- The highest wind gust was 196 km/h, observed at Cape Turnagain on 15 May.
- Of the six main centres in autumn 2019, Auckland was the warmest, sunniest and driest, Christchurch was the coolest and least sunny, and Wellington was the wettest.

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Temperature: 4th-warmest autumn on record

It was New Zealand's 4th-warmest autumn on record. Temperatures across most the country were either above average (+0.51°C to +1.20°C of the autumn average) or well above average (>1.20°C of the autumn average). Only a handful of isolated locations observed near average temperatures (+0.50°C to -0.50°C of the autumn average) including Auckland, parts of Northland, and the coast north of Kaikoura.

Several South Island locations observed their warmest autumn on record. Of these, the largest departure from normal mean autumn temperatures was in Reefton at 13.9°C, which is 2.1°C higher than the average for this location (records there begin in 1960). South West Cape was just below this at 12.8°C, which is 2.0°C warmer than the autumn average (records there begin in 1991).

Several locations around New Zealand also experienced record-high mean maximum (i.e. daytime) air temperatures including Taupo (19.8°C) and Lake Tekapo (17.6°C), both of which were 2.5°C above average for the time of year, the highest anomalies in this category. Record-high mean minimum (i.e. night-time) air temperatures were also observed in a handful of South Island locations, with the greatest anomaly observed at Farewell Spit where average minimum night-time temperatures were 13.3°C (2.3°C warmer than average for autumn).

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

Location	Mean air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Farewell Spit	16.5	1.9	1971	Highest
Reefton	13.9	2.1	1960	Highest
Milford Sound	12.4	1.5	1934	Highest
Secretary Island	14.1	1.6	1985	Highest
Puysegur Point	13.3	1.6	1978	Highest
Medbury	12.9	1.1	1927	Highest
Dunedin (Musselburgh)	13.5	1.9	1947	Highest
South West Cape	12.8	2.0	1991	Highest
Cape Reinga	18.0	1.0	1951	2nd-highest
Mokohinau	18.6	1.0	1994	2nd-highest
Whangaparaoa	18.0	1.1	1982	2nd-highest
Ngawi	16.2	1.1	1972	2nd-highest
Porirua	14.7	0.6	1968	2nd-highest
Westport	14.9	1.6	1937	2nd-highest
Milford Sound	12.4	1.5	1934	2nd-highest
Motueka	14.3	1.5	1956	2nd-highest
Mt Cook Village	10.7	1.4	1929	2nd-highest
Roxburgh	12.7	1.9	1950	2nd-highest
Gore	11.8	1.8	1907	2nd-highest
Nugget Point	12.0	1.4	1970	2nd-highest
Haast	13.4	1.4	1949	3rd-highest
Waiau	13.4	1.7	1974	3rd-highest
Cheviot	13.0	1.2	1982	3rd-highest
Ranfurlly	10.6	1.5	1897	3rd-highest
Manapouri (West Arm Jetty)	10.7	1.3	1971	3rd-highest
Five Rivers	11.1	1.2	1982	3rd-highest
Invercargill	11.9	1.6	1905	3rd-highest
Taupo	14.0	1.9	1949	4th-highest
Martinborough	14.4	1.2	1986	4th-highest
Hawera	14.3	1.0	1977	4th-highest
Franz Josef	13.1	1.5	1953	4th-highest
Orari Estate	12.4	1.2	1972	4th-highest
Lumsden	11.1	1.2	1982	4th-highest
Balclutha	11.8	1.1	1964	4th-highest
Low records or near-records				
None observed				

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.

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

Location	Mean maximum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Paeroa	21.9	1.5	1947	Highest
Rotorua	19.5	1.8	1964	Highest
Taupo	19.8	2.5	1949	Highest
Te Kuiti	21.7	2.0	1959	Highest
Farewell Spit	19.8	1.3	1971	Highest
Reefton	19.2	2.2	1960	Highest
Milford Sound	16.9	1.7	1934	Highest
Secretary Island	16.9	1.6	1985	Highest
Puysegur Point	15.9	1.9	1978	Highest
Mt Cook (Airport)	16.3	1.8	1929	Highest
Lake Tekapo	17.6	2.5	1927	Highest
Ranfurly	17.7	2.2	1897	Highest
South West Cape	15.2	2.2	1991	Highest
Whangarei	22.0	1.3	1967	2nd-highest
Whangaparaoa	21.2	1.5	1982	2nd-highest
Auckland (Mangere)	21.2	1.3	1959	2nd-highest
Ngawi	19.4	1.3	1972	2nd-highest
Waipawa	20.4	1.7	1945	2nd-highest
Palmerston North	20.2	1.6	1928	2nd-highest
Porirua	18.6	0.8	1968	2nd-highest
Ohakune	17.8	2.0	1962	2nd-highest
Westport	18.7	1.7	1937	2nd-highest
Milford Sound	16.7	1.3	1934	2nd-highest
Hanmer Forest	20.0	2.4	1906	2nd-highest
Waiau	20.1	1.9	1974	2nd-highest
Tara Hills	17.9	1.8	1949	2nd-highest
Dunedin (Musselburgh)	17.2	2.1	1947	2nd-highest
Manapouri	16.4	1.6	1963	2nd-highest
Five Rivers	16.7	1.5	1982	2nd-highest
Cromwell	19.2	2.1	1949	2nd-highest
Balclutha (Telford)	17.4	1.8	1964	2nd-highest
Mokohinau	20.4	1.0	1994	3rd-highest
Auckland (Whenuapai)	21.4	1.2	1945	3rd-highest
Whakatane	21.4	1.0	1974	3rd-highest
Hamilton	21.2	1.4	1946	3rd-highest
New Plymouth	19.7	1.2	1944	3rd-highest
Haast	17.1	1.3	1949	3rd-highest
Medbury	19.0	0.9	1927	3rd-highest
Timaru	18.0	1.3	1885	3rd-highest
Wanaka	17.8	1.5	1955	3rd-highest
Dunedin (Airport)	18.4	2.1	1962	3rd-highest
Nugget Point	15.2	1.3	1970	3rd-highest

Kerikeri	22.0	1.1	1945	4th-highest
Rotorua	19.2	1.2	1964	4th-highest
Auckland (Airport)	21.1	1.1	1959	4th-highest
Martinborough	19.8	1.2	1986	4th-highest
Gisborne	21.7	1.6	1905	4th-highest
Upper Hutt	19.2	1.2	1939	4th-highest
Waiouru	15.9	1.6	1962	4th-highest
Oamaru	17.2	1.1	1967	4th-highest
Manapouri (West Arm Jetty)	14.3	1.2	1971	4th-highest
Lumsden	16.5	1.3	1982	4th-highest

Low records or near-records

None observed

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

Location	Mean minimum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Farewell Spit	13.3	2.3	1971	Highest
Reefton	8.6	2.1	1960	Highest
Haast	9.7	1.6	1949	Highest
Secretary Island	11.3	1.6	1985	Highest
Puysegur Point	10.7	1.5	1978	Highest
Dunedin (Musselburgh)	9.8	1.7	1947	Highest
Gore	7.0	1.2	1907	Highest
South West Cape	10.3	1.8	1991	Highest
Mokohinau	16.8	1.2	1994	2nd-highest
Westport	11.0	1.5	1937	2nd-highest
Motueka	8.8	1.8	1956	2nd-highest
Cape Campbell	12.6	1.0	1953	2nd-highest
Medbury	6.8	1.3	1927	2nd-highest
Cheviot	6.9	1.3	1982	2nd-highest
Mt Cook	5.4	1.3	1929	2nd-highest
Oamaru	7.9	0.7	1967	2nd-highest
Nugget Point	8.9	1.4	1970	2nd-highest
Cape Reinga	15.4	1.1	1951	3rd-highest
Wellington (Kelburn)	12.0	1.2	1927	3rd-highest
Hawera	10.7	1.4	1977	3rd-highest
Franz Josef	8.7	1.7	1953	3rd-highest
Kaikoura	10.8	0.9	1963	3rd-highest
Orari Estate	6.7	1.3	1972	3rd-highest
Roxburgh	7.2	2.6	1950	3rd-highest
Invercargill	7.4	1.6	1905	3rd-highest
Culverden	6.9	1.7	1928	4th-highest

Low records or near-records

None observed

Rainfall: Record and near-record low rainfall for parts of the North Island

Rainfall in the North Island was near normal (80-119% of the autumn normal) for a portion of the Bay of Plenty region and for western parts of the Wellington and Manawatu-Whanganui regions while near to above normal (120-149% of the autumn normal) rainfall totals were experienced in the Taranaki region. The remaining majority of the North Island however experienced rainfall levels which were below normal (50-79% of the autumn normal) with isolated pockets of well below normal (<50 of the autumn normal) rainfall occurring in the Far North, Coromandel Peninsula, and Napier. Kaitaia, Whitianga and Te Puke experienced their driest autumn on record with Kaitaia notably observing 91 mm of rainfall for the entire season (only one quarter of the autumn normal for this location). A handful of North Island locations also observed near-record low rainfall levels.

In contrast, much of the South Island observed above to well above normal (>149% of the autumn normal) rainfall, particularly to the west. This includes West Coast, much of Southland, western parts of Canterbury and Otago, as well as Nelson-northern Marlborough in the northeast. Remaining parts of the South Island experienced rainfall levels which were largely near average with pockets of below average rainfall occurring throughout. Hokitika observed 1101 mm of rainfall during autumn 2019 which is 174% of normal for the time of year, making autumn 2019 the 2nd-wettest autumn on record at that location (records there begin in 1866).

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

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
High records or near-records				
Hokitika	1101	174	1866	2nd-highest
Low records or near-records				
Kaitaia	91	26	1948	Lowest
Whitianga	171	37	1961	Lowest
Te Puke	215	51	1973	Lowest
Whangarei	126	36	1937	2nd-lowest
Rotorua	186	56	1963	2nd-lowest
Auckland (Mangere)	178	65	1959	2nd-lowest
Whatawhata	235	63	1952	2nd-lowest
Dargaville	182	65	1943	4th-lowest
Auckland (Western Springs)	223	77	1948	4th-lowest
Dannevirke	130	55	1951	4th-lowest

Autumn climate in the six main centres

Temperatures were above average for five of the six main centres during autumn 2019 and well above average for Dunedin which had its warmest autumn on record. In terms of rainfall, Auckland saw well below normal autumn rainfall totals, observing its 2nd-driest autumn on record, while Tauranga and Hamilton experienced below normal rainfall levels. Wellington saw above normal autumn rainfall totals while Christchurch and Dunedin observed near normal rainfall. Of the six main centres in autumn 2019, Auckland was the warmest, sunniest and driest, Christchurch was the coolest and least sunny, and Wellington was the wettest.

Autumn 2019 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland ^a	16.9	+0.6	Above average
Tauranga ^b	16.5	+0.8	Above average
Hamilton ^c	15.1	+0.8	Above average
Wellington ^d	14.7	+1.0	Above average
Christchurch ^e	12.9	+1.0	Above average
Dunedin ^f	13.5	+1.9	Well above average (highest on record)
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland ^a	122	44%	Well below normal (2 nd -lowest on record)
Tauranga ^b	192	59%	Below normal
Hamilton ^c	191	69%	Below normal
Wellington ^d	408	145%	Above normal
Christchurch ^e	160	108%	Near normal
Dunedin ^f	150	84%	Near normal
Sunshine			
Location ²	Sunshine (hours)		
Auckland ^a	589		
Tauranga ^b	551		
Hamilton ^g	529		
Wellington ^d	495		
Christchurch ^e	469		
Dunedin ^f	497		

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

² Tauranga, Wellington and Christchurch record sunshine use Campbell-Stokes manual sunshine recorders, whereas Auckland, Hamilton and Dunedin record sunshine with high-precision electronic sensors.

Highlights and extreme events

This section contains information pertaining to some of the more significant highlights and extreme events that occurred during autumn 2019. Note that a more detailed list of significant weather events for autumn 2019 can be found in the *Highlights and extreme events* section of NIWA's monthly Climate Summaries. These monthly summaries are available online, and may be viewed at the following website: <http://www.niwa.co.nz/climate/summaries/monthly>

Rain, slips and dryness

Severe meteorological drought was present across the upper South Island to start the autumn season. On March 3, according to the New Zealand Drought Index, Nelson tied for the 2nd most severe meteorological drought in the past 12 years, and the Tasman District had its 3rd most severe drought.

Whanganui observed 23.6 mm of rain in an hour on 8 March, making it the wettest March hour on record there (data since 1995).

Extremely heavy rainfall occurred in the western South Island on March 25-27. The weather event was a mix of an 'atmospheric river'³ extending from Australian cyclones coupled with extra energy from the Tasman Sea marine heatwave, as well as a strong low-pressure system siphoning moisture toward New Zealand. The impacts of this event are listed below:

- On 26 March, a state of emergency was declared in Westland as torrential rainfall and strong winds battered the region and caused evacuations, power outages and road closures. The Waiho River bridge on State Highway 6, the link between Franz Josef and Fox Glacier, was claimed by raging floodwaters. Haast River at Roaring Billy recorded a water level of 7.423 m, the 2nd highest water level at the station since 1969 (highest 7.580 m in 1978).
- On March 27, a 66 year-old woman was found deceased in flood waters in the Arahura Valley, north of Hokitika, just after 9 am. Acting area commander Senior Sergeant Peter Payne said it appeared the woman got out of the vehicle she was driving and tried to cross the flood waters on foot.
- Between 25 March – 27 March, a New Zealand 48-hour rainfall record was set at the Hokitika catchment of the Cropp River which recorded 1086mm, or more than a metre of rain. That beat the previous New Zealand two-day record, also from Cropp River in December 1995, by about 40mm.

On 10 April, heavy rain caused the temporary closure of SH6 between Makarora and Haast due to a washout at Diana Falls. The heavy rainfall delayed efforts to repair the Waiho River bridge (near Franz Josef), which had been damaged by flooding in March.

On 29 April, heavy rain hit Christchurch and the Canterbury region. There were widespread reports of surface flooding in Christchurch city, with 27 streets affected. Heavy rain was thought to have

³ Atmospheric rivers are relatively long, narrow corridors in the atmosphere that transport most of the water vapour outside of the tropics. According to the American Meteorological Society, integrated vapour transport (from Earth's surface to about 9000 m) must be at least 250 kgm-1s-1 along the periphery of the moisture plume to be considered an atmospheric river.

triggered a slip on SH73 between Otira and Kumara Junction, forcing the temporary closure of one lane in the area.

On 12-13 May, a low pressure system in the Tasman Sea brought rain and strong winds to western and lower South Island and central and upper North Island and caused power outages, fallen trees and road closures.

On 16 May, Quartier Road, in Kaiwera, closed due to flooding on the Kaiwera Bridge.

On 30 May, rain flooded parts of State Highway 6 which caused Westland District Council to activate its Emergency Operations Centre to monitor the situation. The Buller River reached its alarm point of 8.4m at Te Kuha (village east of Westport) forcing State Highway 6 at Inangahua Junction to close.

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

Location	Extreme 1-day rainfall (mm)	Date of extreme rainfall	Year records began	Comments
Inchbonnie	237	Mar-26th	1949	Highest
Manapouri (West Arm Jetty)	140	Mar-25th	1971	Highest
Hokitika	174	Mar-26th	1866	3rd-highest
Lower Whataroa	191	Mar-25th	1949	3rd-highest
Secretary Island	148	Mar-25th	1985	3rd-highest
Tapawera	68	Apr-21st	1992	3rd-highest
Hokitika	173	Mar-26th	1866	4th-highest
Kokiri (Maori Gully Road)	94	Mar-26th	1980	4th-highest
Kowhitirangi	148	Mar-26th	1965	4th-highest
Akaroa	114	May-31st	1977	4th-highest

Temperatures

Overnight clouds and high humidity associated with an 'atmospheric river'³ contributed to several record or near-record daily minimum air temperatures in eastern areas between 26-27 March.

On the morning of 7 April, clear skies over inland parts of the South Island contributed to widespread frosty conditions. Ranfurly dropped to -6.0°C; New Zealand's lowest temperature for 2019 so far (excluding remote high elevation locations).

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

Location	Extreme maximum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Whitianga	28.7	Mar-4th	1962	Highest
Motu	26.7	Mar-4th	1990	Highest
South West Cape	26.1	Mar-31st	1991	Highest
Paeroa	29.2	Mar-3rd	1947	Equal highest

Whangaparaoa	27.6	Mar-4th	1982	2nd-highest
Tiri	25.4	Mar-3rd	1982	2nd-highest
Akaroa	32.0	Mar-13th	1978	2nd-highest
Palmerston	32.1	Mar-5th	1969	2nd-highest
Nugget Point	26.8	Mar-5th	1970	2nd-highest
Puysegur Point	23.3	Mar-31st	1978	3rd-highest
Arthurs Pass	25.0	Mar-20th	1978	3rd-highest
Waiau School	31.4	Mar-6th	1974	3rd-highest
Queenstown	29.7	Mar-5th	1871	3rd-highest
Lumsden	27.1	Mar-5th	1982	3rd-highest
Clyde	31.5	Mar-5th	1978	3rd-highest
Te Kuiti	29.8	Mar-17th	1959	Equal 3rd-highest
Medbury	31.7	Mar-5th	1927	Equal 3rd-highest
Tara Hills	30.0	Mar-6th	1949	Equal 3rd-highest
Oamaru	30.1	Mar-5th	1967	Equal 3rd-highest
Dunedin (Airport)	31.5	Mar-5th	1962	Equal 3rd-highest
Mokohinau	25.1	Mar-28th	1994	4th-highest
Rotorua	28.1	Mar-3rd	1964	4th-highest
Ngawi	28.2	Mar-5th	1972	4th-highest
Blenheim	31.5	Mar-4th	1932	4th-highest
Boyle River Lodge	29.5	Mar-3rd	1983	4th-highest
Lake Tekapo	29.7	Mar-6th	1925	4th-highest
Ranfurly	29.4	Mar-6th	1897	4th-highest
Five Rivers	26.9	Mar-5th	1982	4th-highest
Balclutha	30.3	Mar-5th	1964	4th-highest
Alexandra	31.2	Mar-5th	1992	Equal 4th-highest
Low records or near-records				
Puysegur Point	7.8	May-31st	1978	Equal 3rd-lowest

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

Location	Extreme minimum (°C)	Date of extreme temperature	Year records began	Comments
Low records or near-records				
Boyle River (Lodge)	-7.0	Apr-19th	1983	2nd-lowest
High records or near-records				
Mahia	20.3	Mar-14th	1990	Highest
Farewell Spit	19.6	Mar-27th	1972	Highest
Milford Sound	19.1	Mar-26th	1935	Highest
Secretary Island	18.5	Mar-26th	1988	Highest
Cheviot	19.7	Mar-26th	1982	Highest
Ashburton	21.1	Mar-26th	1928	Highest
Le Bons Bay	19.7	Mar-26th	1984	Highest
Oamaru	16.8	Mar-26th	1972	Highest
Dunedin (Musselburgh)	17.9	Mar-6th	1947	Highest
Roxburgh	19.4	Mar-6th	1950	Highest

Nugget Point	15.5	Mar-6th	1972	Highest
Winton	18.5	Mar-7th	1972	Equal highest
Gore	17.9	Mar-6th	1907	Equal highest
Balclutha	15.5	Mar-26th	1972	Equal highest
Mokohinau	20.6	Mar-8th	1994	2nd-highest
Martinborough	20.1	Mar-27th	1986	2nd-highest
Westport	19.3	Mar-26th	1966	2nd-highest
Peel Forest	19.7	Mar-26th	1973	2nd-highest
Tapanui	18.8	Mar-26th	1900	2nd-highest
Wellington (Airport)	19.9	Mar-27th	1972	Equal 2nd-highest
Tautuku	17.0	Mar-26th	1976	Equal 2nd-highest
South West Cape	15.6	Mar-6th	1991	Equal 2nd-highest
Masterton	19.6	Mar-27th	1943	3rd-highest
Takapau Plains	17.9	Mar-14th	1972	3rd-highest
Hawera	19.0	Mar-14th	1977	3rd-highest
Haast	17.9	Mar-26th	1949	3rd-highest
Waiau School	18.8	Mar-26th	1974	3rd-highest
Akaroa	18.8	Mar-26th	1978	3rd-highest
Dunedin (Airport)	17.4	Mar-26th	1972	3rd-highest
Manapouri (West Arm Jetty)	15.8	Mar-26th	1972	3rd-highest
Alexandra	16.9	Mar-6th	1992	3rd-highest
Puysegur Point	17.3	Mar-7th	1978	Equal 3rd-highest
Medbury	20.6	Mar-26th	1927	Equal 3rd-highest
Brothers Island	17.4	Mar-27th	1997	4th-highest
Grassmere	20.9	Mar-27th	1972	4th-highest
Oamaru	15.6	Mar-26th	1972	4th-highest
Five Rivers	15.4	Mar-7th	1982	4th-highest
Lumsden	15.5	Mar-7th	1982	4th-highest
Upper Hutt	18.8	Mar-27th	1972	Equal 4th-highest
Winchmore	20.0	Mar-26th	1928	Equal 4th-highest
Stewart Island	14.0	Mar-25th	1975	Equal 4th-highest

Wind

On 29 April, strong winds in eastern parts of Canterbury caused damage to the power network, especially about Banks Peninsula. Approximately 4000 homes were without power for a time. Farther north, a tornado was reported on Lower Weld Road, south of Oakura (Taranaki), causing considerable damage to farm property there.

On 15 May, flights were delayed out of Invercargill Airport and shipping containers were blown into Bluff Harbour as strong winds battered the region.

On 15-16 May, strong winds caused power outages throughout Southland and Otago. Three networks were affected: Invercargill Electricity, The Power Company and OtagoNet.

On 29 May, strong winds in Hokitika blew a piece of roofing iron into powerlines knocking them down. Strong winds caused damage to three power poles in Ōhakea, cutting power to 250 properties, including Ōhakea Air Force Base.

On 30 May, Wellington Airport cancelled and delayed several flights due to strong winds. Wellington had 5 consecutive hours with wind gust over 100 km/h, reaching a max gust of 121 km/h. Wellington's East by West ferries cancelled sailings between Days Bay and Queens Wharf with shuttles being brought in as replacement transport.

Record or near record autumn extreme wind gusts were recorded at:

Location	Extreme wind gust (km/h)	Date of extreme gust	Year records began	Comments
Motu	109	May-13th	1991	Highest
Dannevirke	95	May-16th	1961	2nd-highest
Secretary Island	156	Mar-31st	1994	2nd-highest
Winchmore	98	May-30th	1970	3rd-highest
Brothers Island	139	Apr-29th	1997	4th-highest
Whakatane	95	May-12th	1974	Equal 4th-highest
Oamaru	85	Apr-29th	1984	Equal 4th-highest

Snow and ice

On 7 April, Mt Taranaki reportedly received its first snowfall of the year.

On May 16, snow flurries were observed on Dunedin hill suburbs. The snow was the first near an urban area this year.

On 31 May, snow fell in parts of the South Island. The Remarkables ski area received 5 cm overnight and Coronet Peak 6 cm. the Milford Road was temporarily closed due to snow clearing operations.

Lightning and hail

On 7 April, more than 500 lightning strikes were recorded over the central North Island. Motorists were warned to be cautious of extremely slippery road conditions due to heavy hail between Turangi and Tokoroa, and Taupo and Rotorua.

On 8 April, approximately 1000 lightning strikes were recorded in the Bay of Plenty region.

On 14 May, two houses were struck by lightning in Waianiwa, 18 km northwest of Invercargill, as an active front moved through the region. The occupants were home, but luckily no one was injured.

On 30-31 May, Westland was hammered by heavy rain and thunderstorms and got hit by nearly 6000 lightning strikes.

On 31 May an Air NZ plane had to return to Auckland shortly after take-off as it was struck by lightning.

Cloud and fog

On 14 March, New Plymouth flights were cancelled, and forced to turn around due to fog. The fog was caused by a humid air mass and relatively light winds.

On the evening of 24 April, fog affected flights at Auckland and Wellington airports.

On 4 May, 58 domestic flights out of Auckland Airport were cancelled due to fog, and 54 domestic flights were delayed.

On 11 May, 50 domestic flights out of Auckland Airport were cancelled and 36 domestic flights were delayed due to fog.

On 24-25 May, multiple flights were delayed or cancelled in and out of Christchurch Airport due to heavy fog that reduced visibility down to 100 m.

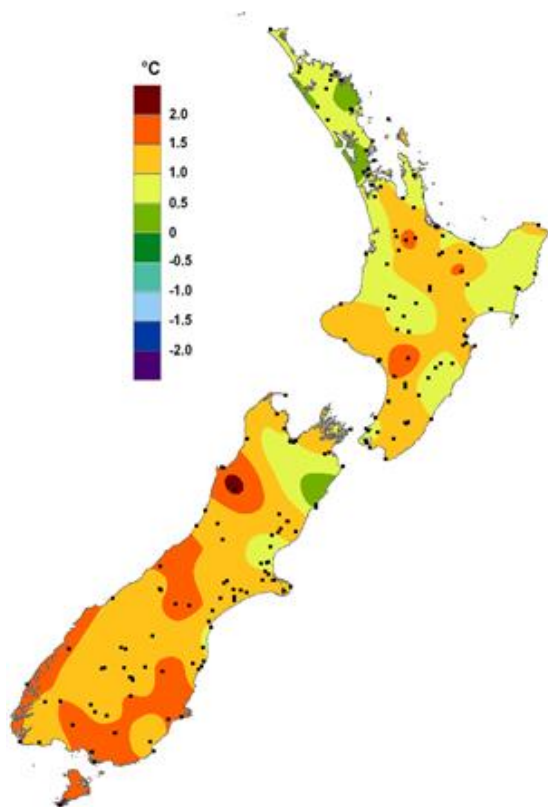
On 31 May, several flights were delayed and cancelled in and out of Dunedin Airport.

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

It was New Zealand's 4th-warmest autumn on record. Temperatures across the country were mostly above average (+0.51°C to +1.20°C of the autumn average) or well above average (>1.20°C of the autumn average) as indicated by the yellow, orange, and red colours.

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

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