

A wet and warm autumn for much of New Zealand

Temperature	Autumn temperatures were above average (+0.51°C to +1.20°C of average) or well above average (>1.20°C of average) across nearly all of Aotearoa New Zealand. Small pockets of near average temperatures ($\pm 0.50^\circ\text{C}$ of average) were observed near Cape Reinga, eastern Northland, and far interior Canterbury and Otago. No areas experienced below average autumn temperatures.
Rainfall	It was a wet season for large swathes of New Zealand, with above normal (120-149% of normal) or well above normal (>149% of normal) rainfall observed in much of Northland, Auckland, parts of Bay of Plenty and the Central Plateau, Taranaki, coastal Manawatū-Whanganui, parts of Wellington-Wairarapa, much of Marlborough, Nelson, Tasman, the West Coast, central Canterbury, Otago, and interior Southland. Pockets of below normal rainfall (50-79% of normal) occurred in eastern Northland, northern Waikato, coastal Gisborne and Hawke's Bay, and coastal South Canterbury. Elsewhere, autumn rainfall was near normal (80-119% of normal).
Soil moisture	At the end of autumn, soil moisture levels were near normal or above normal across a large majority of New Zealand. However, below normal soil moisture was observed in coastal South Canterbury.

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Overview

Autumn 2023 was characterised by higher than normal mean sea level pressure (MSLP) east of Aotearoa New Zealand and lower than normal MSLP over New Zealand and the Tasman Sea. This generally resulted in more northeasterly winds than normal, bringing moist air from the tropics and sub-tropics across New Zealand, resulting in periods of wet and warm weather.

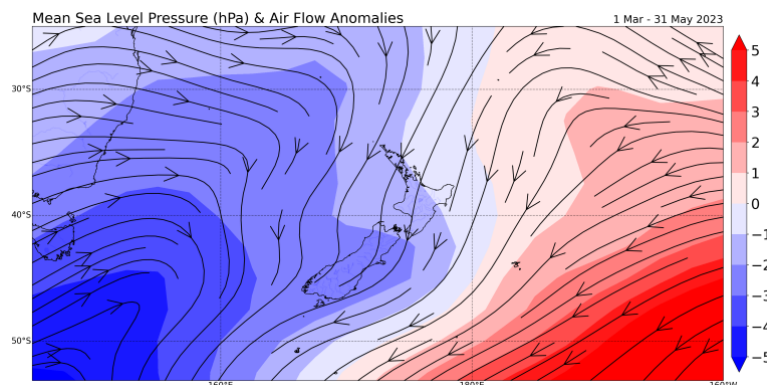


Figure 1: Mean sea level pressure anomalies (shaded) and air flow anomalies (streamlines) for autumn 2023.

The season saw a transition from a long-term La Niña pattern to an ENSO-neutral state, allowing for some variability in the monthly air flow patterns. While March saw more westerly winds than normal, both April and May returned to northerly-quarter air flow anomalies, more typical of a La Niña regime. Periodic pulses of the Madden-Julian Oscillation (MJO) traversing the equatorial Pacific Ocean also enabled New Zealand to remain in a wetter La Niña-like pattern, especially during May.

The season saw monthly variations in temperature and rainfall as well. While March featured near average temperatures overall, April was New Zealand's 11th-warmest April on record, and May was New Zealand's warmest May on record since 1909, with an incredible anomaly of 2.0°C above the long-term (1991-2020) average. May in particular pushed the season up to become the 4th-warmest autumn on record, surpassed only by 2022, 2016, and 1938.

An ongoing marine heatwave event contributed to the unusual warmth. For the west and east of the South Island, autumn sea surface temperatures (SSTs) were the 2nd-warmest on record since records began in 1981. For the north of the South Island, SSTs were the 3rd-warmest on record.

Similarly, both March and May were very wet for many regions of the country, while April tended drier than normal for many regions.

Overall, the most impactful event during the season was an atmospheric river originating in the tropics that brought heavy rain to large swathes of the country during approximately the first ten days of May. The atmospheric river varied in strength and location during this time, but nevertheless delivered periods of heavy rainfall and thunderstorms to much of the North Island and the western and northern South Island. During this time, parts of the North Island and South Island recorded 1-2 times their normal May rainfall, including Kaikohe receiving 372 mm or 237% of its May normal, Nelson at 167 mm or 194% of its May normal, Whangārei at 178 mm or 158% of its May normal, and Auckland 133 mm or 120% of its normal May rainfall (see the *Highlights and extreme events* section below for more details).

Despite the season's strong wet and warm lean, there were a few hints at the colder months to come. On 21 March, snow fell to approximately 800 metres above sea level across parts of the lower South Island. And On 11 May, a powerful cold front brought the coldest day since October 2022 for large parts of the South Island and snow down to around 400 metres for parts of Southland, Queenstown-Lakes District, and the Mackenzie Basin.

Further highlights for autumn 2023:

- The highest temperature was 30.5°C, observed at Akaroa on 2 March.
- The lowest temperature was -5.2°C, observed at Middlemarch on 16 May.
- The highest 1-day rainfall was 241 mm, recorded at Milford Sound on 2 May.
- The highest wind gust was 193 km/h, observed at Cape Turnagain on 26 April.
- Of the available, regularly reporting sunshine observation sites, the sunniest four regions in 2023 so far are Taranaki (1101 hours), Central Otago (1100 hours), Mackenzie Country (1096 hours), and the West Coast (1060 hours).
- Of the six main centres in autumn 2023, Auckland was the warmest, Christchurch was the coolest, Tauranga was the wettest and sunniest, Dunedin was the driest, and Wellington was the least sunny.

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Temperature: Above average for nearly all of New Zealand

The nationwide average temperature for autumn 2023 was 14.5°C (1.1°C above the 1991-2020 average from NIWA's seven station temperature series which begins in 1909), making autumn 2023 the 4th-warmest autumn on record, surpassed only by 2022, 2016, and 1938.

Thirty-eight locations in New Zealand observed either their warmest or near-warmest autumn on record. Notably, Chatham Island had its warmest autumn since records began there in 1878, while Napier had its 2nd-warmest autumn since 1870. Much of this warmth was driven by very warm overnight temperatures, as 14 locations experienced their warmest mean overnight temperature for autumn. This included Christchurch (Botanic Gardens), which saw its warmest mean overnight temperature for autumn since records began there in 1863.

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				
Taupō	14.3	1.9	1949	Highest
Motu	13.2	1.5	1990	Highest
Campbell Island	8.6	0.9	1991	Highest
Chatham Island	15.0	1.9	1878	Highest
Te Puke	16.2	1.2	1973	2nd-highest
Whakatāne	16.7	1.3	1974	2nd-highest
Ngawi	16.4	1.2	1972	2nd-highest
Napier	16.6	1.7	1870	2nd-highest
Wairoa	16.4	1.5	1964	2nd-highest
Paraparaumu	15.3	1.4	1953	2nd-highest
Hāwera	14.7	1.1	1977	2nd-highest
Farewell Spit	17.4	2.1	1971	2nd-highest
Arapito	14.9	1.7	1978	2nd-highest
Kaikōura	14.5	1.2	1963	2nd-highest
Rangiora	13.4	1.4	1965	2nd-highest
Oban (Stewart Island)	12.5	1.8	1975	2nd-highest
Nugget Point	12.2	1.3	1970	2nd-highest
South West Cape	12.3	1.4	1991	2nd-highest
Martinborough	14.5	1.2	1986	3rd-highest
Waipawa	14.4	1.2	1945	3rd-highest
Paraparaumu	15.1	1.2	1953	3rd-highest
Wellington (Airport)	15.6	1.0	1962	3rd-highest
Tākaka	14.4	1.1	1978	3rd-highest
Ōkārito	13.4	0.7	1982	3rd-highest
Secretary Island	13.8	1.1	1985	3rd-highest
Gore	11.8	1.5	1907	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.

Tauranga	16.9	1.0	1913	4th-highest
Upper Hutt (Trentham)	14.1	1.2	1939	4th-highest
Waiouru	11.1	1.3	1962	4th-highest
Greymouth	14.4	1.4	1947	4th-highest
Motueka	14.3	1.2	1956	4th-highest
Waiau	13.0	0.8	1974	4th-highest
Lincoln	13.6	1.2	1881	4th-highest
Dunedin (Musselburgh)	13.1	1.4	1947	4th-highest
Waipounamu	10.9	0.9	1980	4th-highest
Invercargill	12.0	1.5	1905	4th-highest
Tiwai Point	12.5	1.3	1970	4th-highest
Tautuku	12.4	1.4	1976	4th-highest
Low records or near-records				
None observed				

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				
Campbell Island	10.7	1.1	1991	Highest
Chatham Island	17.8	1.7	1878	Highest
Whakatu	21.4	1.8	1965	2nd-highest
Wairoa	21.8	1.7	1964	2nd-highest
Paraparaumu	19.3	1.3	1953	2nd-highest
Farewell Spit	21.6	3.0	1971	2nd-highest
Arapito	19.6	1.5	1978	2nd-highest
Greymouth	18.2	1.7	1947	2nd-highest
Nugget Point	15.3	1.3	1970	2nd-highest
South West Cape	14.6	1.5	1991	2nd-highest
Taupō	19.4	1.9	1949	3rd-highest
Motu	18.2	1.7	1990	3rd-highest
Hāwera	18.6	1.0	1977	3rd-highest
Secretary Island	16.9	1.4	1985	3rd-highest
Appleby	19.9	1.0	1932	3rd-highest
Oban (Stewart Island)	16.0	1.7	1975	3rd-highest
Tautuku	16.5	1.4	1976	3rd-highest
Ngawi	19.4	1.1	1972	Equal 3rd-highest
Napier	21.2	1.2	1870	4th-highest
Paraparaumu	19.1	1.1	1953	4th-highest
Ōkārito	17.6	0.6	1982	4th-highest
Franz Josef	17.9	1.4	1953	4th-highest
Haast	17.2	1.2	1949	4th-highest
Milford Sound	16.6	0.9	1934	4th-highest
Waipounamu	16.8	1.3	1980	4th-highest
Gore	17.1	2.4	1907	4th-highest
Invercargill	16.8	1.6	1905	4th-highest

Tiwai Point	16.2	1.5	1970	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				
Te Puke	12.0	2.0	1973	Highest
Whakatāne	12.2	2.1	1974	Highest
Masterton	9.6	1.6	1906	Highest
Martinborough	9.6	1.6	1986	Highest
Ngawi	13.5	1.2	1972	Highest
Kaikōura	11.3	1.2	1963	Highest
Cheviot	7.1	1.4	1982	Highest
Christchurch (Botanic Gardens)	9.3	2.1	1863	Highest
Lincoln	9.3	1.9	1881	Highest
Oamaru	8.0	1.0	1967	Highest
Gore	7.1	1.3	1907	Highest
Oban (Stewart Island)	8.9	1.9	1975	Highest
Chatham Island	12.1	2.1	1878	Highest
Tauranga	13.0	1.4	1913	2nd-highest
Motu	8.1	1.4	1990	2nd-highest
Māhia	13.3	1.0	1990	2nd-highest
Rangiora	8.2	1.9	1965	2nd-highest
Le Bons Bay	10.5	1.2	1984	2nd-highest
Orari	6.8	0.9	1972	2nd-highest
Nugget Point	9.1	1.3	1970	2nd-highest
South West Cape	10.0	1.2	1991	2nd-highest
Campbell Island	6.5	0.9	1991	2nd-highest
Cape Reinga	15.5	0.8	1951	3rd-highest
Auckland (Western Springs)	13.4	1.1	1948	3rd-highest
Whitianga	12.2	1.3	1962	3rd-highest
Taupō	9.2	1.8	1949	3rd-highest
Port Taharoa	14.1	1.3	1973	3rd-highest
Paraparaumu	11.3	1.4	1953	3rd-highest
Wellington (Kelburn)	12.0	1.0	1928	3rd-highest
Wellington (Airport)	12.8	1.0	1962	3rd-highest
Upper Hutt (Trentham)	9.4	1.6	1939	3rd-highest
Hāwera	10.7	1.1	1977	3rd-highest
Farewell Spit	13.1	1.0	1971	3rd-highest
Arapito	10.2	1.8	1978	3rd-highest
Akaroa	10.4	1.1	1978	3rd-highest
Dunedin (Musselburgh)	9.3	1.2	1947	3rd-highest
Tautuku	8.3	1.5	1976	3rd-highest

Kaitaia	14.4	1.6	1948	4th-highest
Mokohinau	16.7	0.7	1994	4th-highest
Waipawa	8.8	1.5	1945	4th-highest
Wairoa	11.0	1.2	1964	4th-highest
Waimate	8.0	1.5	1908	4th-highest
Tiwai Point	8.9	1.0	1970	4th-highest
Low records or near-records				
None observed				

Rainfall: Wet across many regions, but dry in coastal Gisborne & Hawke's Bay

Five locations experienced their wettest autumn on record and an additional seven locations experienced a near-record wet autumn.

It was the wettest autumn on record for Hokitika since records began there in 1866, surpassing the previous wettest autumn which occurred in 1907. Incredibly, Kaikohe received more than one metre of rain during autumn 2023, or 252% of normal for the season.

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				
Kaikohe	1039	252	1956	Highest
Hokitika	1283	180	1866	Highest
Ōkārito	1221	167	1981	Highest
Tara Hills	255	221	1949	Highest
Five Rivers	383	167	1982	Highest
Lumsden	363	158	1982	2nd-highest
Paraparaumu	452	197	1945	3rd-highest
Stratford	743	155	1960	3rd-highest
Greymouth	943	161	1947	4th-highest
Lake Moeraki	1311	130	1985	4th-highest
Motueka (Riwaka)	569	182	1943	4th-highest
Christchurch (Riccarton)	245	148	2002	4th-highest
Low records or near-records				
None observed				

Autumn in the six main centres

Temperatures were above average or well above average in all main centres, with Tauranga and Dunedin having their 4th-warmest autumn on record. Five of the six main centres received above normal or well above normal rainfall, with the exception of Hamilton, which was near normal. Of the six main centres in autumn 2023, Auckland was the warmest, Christchurch was the coolest, Tauranga was the wettest and sunniest, Dunedin was the driest, and Wellington was the least sunny.

Autumn 2023 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland ^a	17.2	+0.7	Above average
Tauranga ^b	16.9	+1.0	Above average (4 th -warmest on record)
Hamilton ^c	15.1	+0.6	Above average
Wellington ^d	14.8	+0.9	Above average
Christchurch ^e	13.0	+1.0	Above average
Dunedin ^f	13.1	+1.4	Well above average (4 th -warmest on record)
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland ^a	364	124	Above normal
Tauranga ^b	422 ²	123	Above normal
Hamilton ^c	330	115	Near normal
Wellington ^d	419	139	Above normal
Christchurch ^e	251	156	Well above normal
Dunedin ^f	225	126	Above normal
Sunshine			
Location	Sunshine (hours)		
Auckland ^a	531		
Tauranga ^b	536 ³		
Hamilton ^g	515		
Wellington ^d	460 ⁴		
Christchurch ^e	473		
Dunedin ^f	466		

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

² Missing three days of data.

³ Missing four days of data

⁴ Missing one day of data

Highlights and extreme events

This section contains information pertaining to some of the more significant highlights and extreme events that occurred during autumn 2023. Note that a more detailed list of significant weather events for autumn 2023 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 [here](#).

Temperatures

The highest temperature was 30.5°C, observed at Akaroa on 2 March.

The lowest temperature was -5.2°C, observed at Middlemarch on 16 May.

On 28 March, a strong cold front moved up the South Island, bringing unseasonably low temperatures. In Invercargill, the maximum temperature was only 11.9°C, the city's lowest March daily maximum temperature in 14 years. Conversely, in Whangārei, where the cold front had not yet reached, the day's maximum temperature was 25.4°C, which is closer to the January average maximum temperature in the city.

From 1-3 May, a blocking high situated to the east of New Zealand directed a warm and moist flow from the tropics. This flow of moisture moved over the country, where it brought a series of exceptionally warm days and nights. Added by foehn winds, some areas saw temperatures as high as 10°C above the average for May. Between 1-3 May, 18 locations had their warmest or equal-warmest May temperatures (both overnight and daytime), while dozens of other had near-record warm days.

Another burst of warm air due to a prolonged northerly flow led to another stretch of record or near-record breaking temperatures from 6-9 May.

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				
Motu	27.4	Mar-4th	1990	Highest
Waipounamu	28.2	Mar-8th	1980	2nd-highest
Lumsden	27.9	Mar-8th	1982	3rd-highest
Whangaparāoa	27.0	Mar-4th	1982	Equal 3rd-highest
Whitianga	28.2	Mar-4th	1962	4th-highest
Tākaka	28.0	Mar-2nd	1978	Equal 4th-highest
Pukaki	29.2	Mar-2nd	1972	Equal 4th-highest
Low records or near-records				
Secretary Island	7.9	May-10th	1989	4th-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				
None observed				

High records or near-records				
Dunedin (Airport)	19.1	Mar-9th	1972	Highest
Orari	16.0	Mar-3rd	1972	3rd-highest
Oban (Stewart Island)	15.6	Mar-2nd	1975	3rd-highest
Campbell Island	11.8	Mar-17th	1991	3rd-highest
Secretary Island	17.4	Apr-17th	1988	Equal 4th-highest
Waipara West	20.6	Mar-9th	1973	Equal 4th-highest

Rain and slips

The highest 1-day rainfall was 241 mm, recorded at Milford Sound on 2 May.

Overnight from 5 to 6 March, heavy rain caused a washout which closed SH25 between Hikuai and Whangamatā. Fire and Emergency New Zealand were called out to ten homes in Tauranga and seven homes in Whangamatā which had been flooded.

From 20-21 March, heavy rain caused surface flooding in parts of Southland and Otago. Several roads were closed due to flooding, particularly in the Clutha District. Farther north in the West Coast, SH6 was closed between Harihari and Ross due to a slip.

On 19 April, a period of heavy rain caused surface flooding for parts of Wellington. The city recorded a total of 63.2 mm rainfall in the 13 hours to 2 p.m., with 10.8 mm recorded in the hour to 1 p.m.

From 1 May, a subtropical low directed an atmospheric river over the North Island. Atmospheric rivers (ARs) are long, narrow, and transient corridors of strong horizontal water vapour transport, typically associated with a low-level jet stream ahead of the cold front of an extratropical cyclone. Over the following 10 days, this atmospheric river would wax and wane in strength, but nevertheless continue to deliver periods of heavy rainfall and thunderstorms across large swathes of the North Island and the western and northern South Island. During this time, parts of the North Island and South Island recorded 1-2 times their normal May rainfall, including Kaikohe receiving 372 mm or 237% of its May normal, Nelson at 166 mm or 194% of its May normal, Whangārei 178 mm or 158% of its May normal, and Auckland with 133 mm or 120% of its May normal.

The top of the South Island was also hit by several days of heavy rainfall. 29 people were evacuated in Riwaka after the Brooklyn Stream breached its banks on 5 May. State Highway 60 was closed due to flooding in some areas, and several slips and rockfalls affected many sections of roads. The Maitai River threaten to burst its banks several times.

On 9 May, a state of emergency was declared in Auckland after a series of showers and thunderstorms delivered in excess of 40 mm in an hour to some areas. Parts of the SH1 were closed due to flooding during the evening rush hour. A number of workplaces sent their employees home, with at least 17 schools closing due to the deluge. Further north, thunderstorms brought flash flooding to Northland, and 29 mm fell in 30 minutes (nearly a mm a minute) to Kaikohe. The flash flooding had disastrous consequences; a group of students and their teachers were stranded in Abbey Caves during a field trip on 9 May and a teenage boy perished due to flash flooding.

On 9 May, Rotorua observed 109.3 mm of rainfall in 24 hours, the wettest May day there in 13 years.

On 21 May, a low pressure system and front produced heavy rainfall that led to mandatory evacuations in the central North Island at Marton while multiple state highways closed because of

slips and flooding, as Tutaenui Stream and Turakina River burst their banks. Surface flooding was reported in parts of Whanganui and Manawatū.

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
Kaikohe	169	Apr-30th	1956	Highest
Kokiri	170	Mar-8th	1980	Highest
Lumsden	63	Mar-20th	1982	Highest
Mandeville	65	Mar-20th	1967	Highest
Tiwai Point	71	Mar-20th	1970	Highest
Te Aroha	91	Mar-17th	1992	2nd-highest
Chatham Island	78	May-30th	1878	2nd-highest
Mokohinau	98	May-9th	1994	3rd-highest
Karangahake Gorge	135	Apr-30th	1981	3rd-highest
Auckland (Airport)	94	May-9th	1959	3rd-highest
Lake Moeraki	148	Mar-20th	1985	3rd-highest
Five Rivers	52	Mar-20th	1982	3rd-highest
Gore	55	Mar-20th	1907	3rd-highest
Auckland (Whenuapai)	112	May-9th	1943	4th-highest
Hamilton (Ruakura)	83	May-9th	1907	4th-highest
Hamilton (Airport)	79	May-9th	1935	4th-highest
Motueka	137	May-5th	1956	4th-highest
Cheviot	59	Mar-5th	1982	4th-highest
Plains Station	65	Mar-20th	1950	4th-highest

Wind

The highest wind gust was 193 km/h, observed at Cape Turnagain on 26 April.

On 17 March, strong northerly winds forced several flights to divert their planned landing from Wellington Airport to other centres around the country. Wellington's *East by West* ferry service was operating a reduced timetable due to rough conditions on the harbour. Around 1,300 customers were affected by a power outage in Stokes Valley (Hutt Valley) which was caused by a tree hitting power lines. In Picton, tug boats were used to help a *Bluebridge* ferry berth due to strong winds.

On 21 March, strong winds brought down trees and branches in parts of Southland and Otago, including Invercargill and Dunedin. Approximately 6,000 customers in Southland and Otago lost power due to downed power lines.

On 30 April, around 4,500 people were without power as strong winds brought down power lines. A large tree was toppled in the Te Arai region of Auckland, causing extensive damage to a local coffee boutique.

On 20 May, the same low pressure system that brought flooding to the central North Island brought powerful winds to parts of the North Island. The Auckland Harbour Bridge was closed several times as wind gusted to 111 km/h at Manukau Heads. At least seven domestic flights were cancelled while a number of other flights were delayed. In parts of western Auckland, Coromandel, Bay of Plenty and Taranaki, around 3,000 properties were without power going into the evening.

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
Secretary Island	169	May-10th	1994	Highest
Hanmer Forest	165	May-15th	1995	Highest
Alexandra	198	Mar-2nd	2001	Highest
Tūrangi	102	May-20th	1973	Equal highest
Dargaville	104	May-20th	1997	2nd-highest
Mokohinau	117	May-20th	1994	3rd-highest
Mt Cook (Airport)	133	May-26th	2000	3rd-highest
Oamaru	95	Mar-13th	1984	3rd-highest
Kaikohe	85	May-20th	1986	Equal 3rd-highest
Reefton	61	Mar-17th	1999	Equal 3rd-highest
Puysegur Point	159	May-26th	1986	Equal 3rd-highest
Auckland (Western Springs)	76	May-11th	1994	4th-highest
South West Cape	169	May-26th	1991	4th-highest
Upper Hutt (Trentham)	85	May-30th	1999	Equal 4th-highest
Bromley	91	Apr-24th	1972	Equal 4th-highest

Snow and ice

On 21 March, snow fell to approximately 800 metres above sea level over southern parts of the South Island. Snow flurries were reported on the Crown Range Road and the Lindis Pass, but the roads remained open.

On 24 April, a dusting of snow settled on the summit of the Crown Range Road, although the road remained open to all vehicles.

On 11 May, a powerful cold front brought the coldest day since October 2022 for large parts of the South Island and snow down to around 400 metres for parts of Southland, Queenstown-Lakes District and the Mackenzie Basin. The Crown Range Road was closed during the morning, but reopened later for chains only. Additionally, Desert Road on the North Island was also closed due to snow.

Lightning, hail, and tornadoes

On 1 March around 1:30 p.m., a funnel cloud was briefly observed over West Auckland before dissipating. It likely resulted from converging winds due to afternoon sea breeze circulations.

Late in the evening of 20 March, a small tornado was reported in Greymouth, causing damage to properties and downing power lines on Turumaha Street. Debris from the tornado caused damage to at least a dozen cars at nearby *Greenfield Motors*.

On 9 April, ten homes were yellow-stickered after a tornado passed through the Auckland suburbs of Pakuranga, Golflands, East Tāmaki, Dannemora, Flat Bush, Botany and Howick. Reported damage included downed trees and fences, lifted tiles of roofs, broken windows and damaged cars.

On 10 April, a tornado impacted approximately 50 homes in parts of Upper Moutere, lifting roofs off houses, and downing trees and power lines. Approximately 34,000 lightning strikes were reported in

the New Zealand region, with 8,827 of those strikes over land. In Taumarunui, very large hailstones were reported during a thunderstorm that occurred around 3 p.m.

On 11 April, at least 20 homes in Paraparaumu were damaged by a tornado, with one home lifted off its piles. One person was confirmed injured. A waterspout was spotted off the coast north of Tīahi Bay. Further north, a tornado caused damage to several properties in Waitara (Taranaki) in the early hours of the morning. In addition, a tornado caused damage to a kiwifruit orchard in Katikati (Bay of Plenty).

On 10 May, thunderstorms hit Auckland and parts of the North Island. The Sky Tower took a direct hit by a lightning strike and hail was reported in the city. On 11 May, hail the size of M&Ms were observed in Wellington as a strong southerly change triggered heavy showers. From 10-11 May, over 3,400 lightning strikes were observed near the North Island.

On 29 May, a thunderstorm drenched Waihi Beach and caused flooding. Fire and Emergency NZ was called to help people evacuate. A slip on State Highway 29 blocked traffic, and flooding blocked parts of state Highway 25.

Cloud and fog

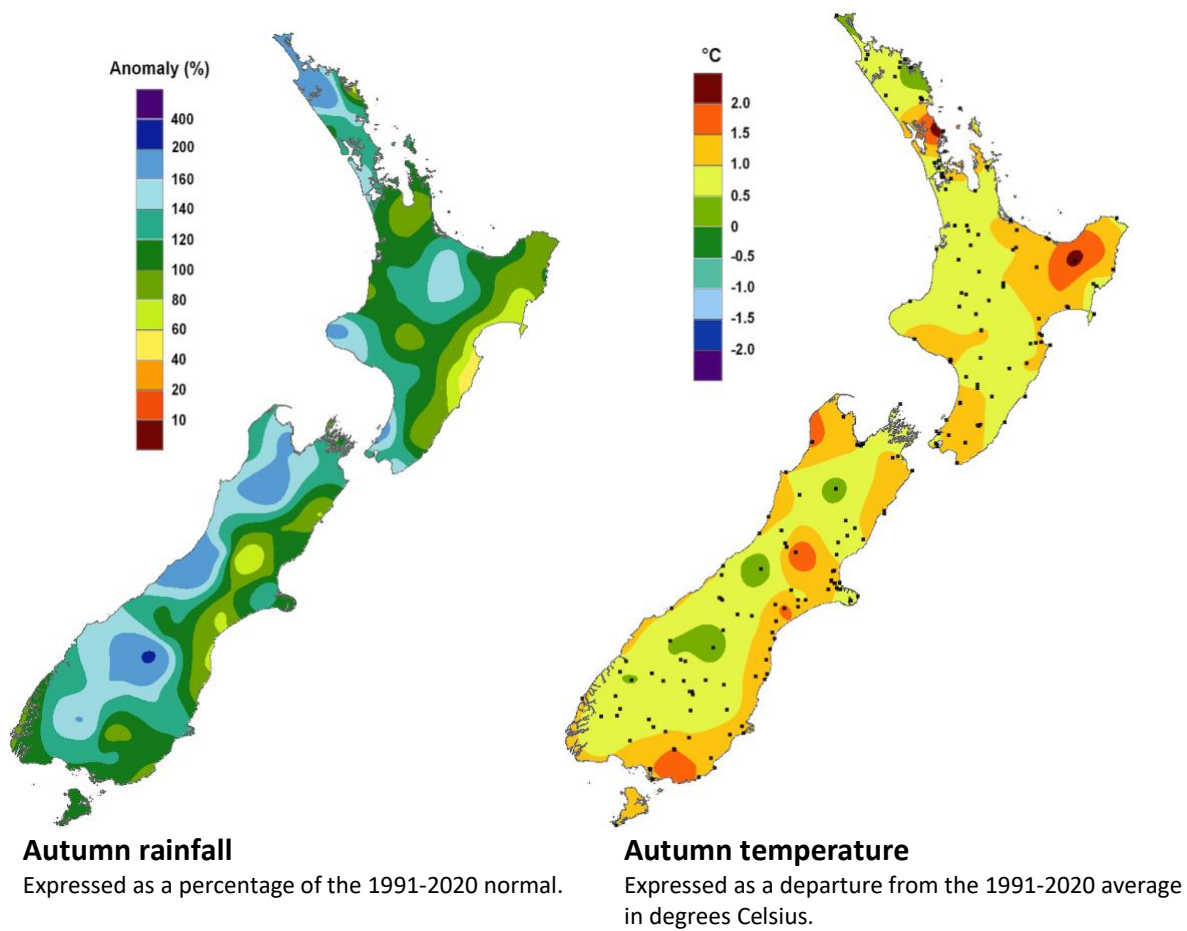
On 1 April, fog blanketed many parts of Auckland during the morning, and several flights at Auckland Airport were cancelled.

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