

A mild month overall, very wet for much of the South Island

Temperature	Temperatures were above average (0.51°C to 1.20°C above average) or well above average (>1.20°C above average) for most of the North Island, Marlborough, northern and eastern Canterbury, West Coast, Fiordland, and eastern parts of Otago. Near average temperatures ($\pm 0.50^\circ\text{C}$ of average) occurred in northeastern Northland, Tasman, Nelson, inland parts of southern and central Canterbury, inland Otago, and central and southern Southland.
Rainfall	Rainfall was above normal (120-149% of normal) or well above normal (>149% of normal) in much of the South Island, southern Wellington, Bay of Plenty, southern and central parts of Waikato, and northwestern parts of Northland. Below normal (50-79% of normal) or well below normal (<50% of normal) rainfall was observed in Gisborne, Hawke's Bay, southern parts of the Central Plateau, northeastern parts of Wairarapa, and Banks Peninsula.
Soil Moisture	At the end of the month, soil moisture levels were higher than normal across northern Southland, Otago, much of Canterbury, Marlborough, Nelson, southwestern parts of the North Island, and western parts of Northland. Below normal soil moisture was observed in Gisborne and Hawke's Bay. Elsewhere, soil moisture levels were generally near normal.

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Overview

October 2024 was characterised by higher than normal mean sea level pressure to the south and east of Aotearoa New Zealand. This produced more easterly airflows than normal over the lower South Island, and more northerly airflows than normal over the North Island. Temperatures were above average (0.51°C to 1.20°C above average) or well above average (>1.20°C above average) for most of the North Island, Marlborough, northern and eastern Canterbury, West Coast, Fiordland, eastern parts of Otago, and eastern Southland. Near average temperatures (-0.50°C to $+0.50^\circ\text{C}$ of average) occurred in northern and eastern parts of Northland, Coromandel Peninsula, coastal parts of southern Gisborne, Tasman, Nelson, inland parts of southern and central Canterbury, inland Otago, and central and southern parts of Southland. The nationwide average temperature in October 2024 was 12.9°C. This was 0.8°C above the 1991-2020 October average, making it New Zealand's 16th-warmest October since NIWA's seven station temperature series began in 1909.

Rainfall was above normal (120-149% of normal) or well above normal (>149% of normal) in much of the South Island, southern Wellington, Bay of Plenty, southern and central parts of Waikato, and northwestern parts of Northland. It was particularly wet in Dunedin and Oamaru, where more than four times normal October rainfall was recorded. In contrast, it was a dry month for Gisborne, Hawke’s Bay, southern parts of the Central Plateau, northeastern parts of Wairarapa, and Banks Peninsula, where rainfall was below normal (50-79% of normal) or well below normal (<50% of normal). Near normal rainfall (80-119% of normal) was observed elsewhere.

Further Highlights:

- The highest October temperature was 29.1°C, observed at Whakatu on 24 October.
- The lowest October temperature was -4.4°C, observed at Mount Cook Airport on 17 October.
- The highest 1-day rainfall was 292 mm, recorded at Milford Sound on 23 October.
- The highest wind gust was 185 km/h, observed at Cape Turnagain on 24 October.
- Of the six main centres in October 2024, Auckland was the warmest, Christchurch was the driest, Tauranga was the sunniest, and Dunedin was coolest, wettest, and least sunny.
- Of the available, regularly reporting sunshine observation sites, the sunniest four regions in 2024 so far are Marlborough (2225 hours), wider Nelson (2210 hours), Bay of Plenty (2208 hours), and Tasman (2149 hours).

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Temperature: A mild month overall

October was a mild month overall for New Zealand, and ten locations observed record or near-record high mean air temperatures for the month. Perhaps most notable was Chatham Island, which recorded its highest October mean air temperature since records began there in 1878. No locations observed record or near-record low mean temperatures. However, there were two unusually cold spells during the month, and these delivered low daily temperatures and snowfalls to inland parts of the South Island (detailed in the *Highlights and extreme events* section below).

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

Location	Mean air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Kawerau	15.5	1.2	1954	Highest
Chatham Island	12.7	1.6	1878	Highest
Whanganui	14.8	1.4	1937	2nd-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.

Whakatāne	15.2	1.3	1974	3rd-highest
Secretary Island	11.9	1.1	1985	3rd-highest
Akaroa	14.0	1.6	1978	3rd-highest
Windsor	11.4	1.1	2000	3rd-highest
Motu	12.1	1.6	1990	4th-highest
Paraparaumu	13.8	1.3	1953	4th-highest
Palmerston North	14.0	1.5	1928	4th-highest
Low records or near-records				
None observed				

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

Location	Mean maximum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Kawerau	22.1	2.1	1954	Highest
Whanganui	19.0	1.9	1937	Highest
Dannevirke	18.3	2.4	1951	2nd-highest
Hastings	21.0	1.7	1965	3rd-highest
Palmerston North	18.6	2.1	1928	3rd-highest
Windsor	17.2	1.1	2000	3rd-highest
Chatham Island	15.9	1.4	1878	3rd-highest
Auckland (Airport)	19.1	1.2	1959	4th-highest
Te Kuiti	19.6	1.6	1959	4th-highest
Whakatu	20.9	2.4	1965	4th-highest
Paraparaumu	17.4	1.4	1953	4th-highest
Low records or near-records				
None observed				

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

Location	Mean minimum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Akaroa	9.3	1.6	1978	2nd-highest
Motu	7.4	1.6	1990	3rd-highest
Middlemarch	4.6	1.0	2000	3rd-highest
Mt Ruapehu Chateau	3.0	1.1	2000	4th-highest
Secretary Island	8.9	1.0	1985	4th-highest
Windsor	5.6	1.1	2000	4th-highest
Campbell Island	4.7	0.8	1991	4th-highest
Low records or near-records				
None observed				

Rainfall: Very wet for much of the South Island, dry for eastern North Island

It was a very wet month for many parts of the South Island, with 24 locations observing record or near-record high October rainfall totals. Dunedin and Oamaru each observed their wettest October on record, with 406% and 424% of their normal October rainfall, respectively. Dunedin's monthly rainfall total of 244 mm is approximately one-third of its normal annual rainfall. A large portion of Dunedin's rainfall occurred during a single event at the start of the month, which led to widespread flooding and a local state of emergency (see *Highlights and extreme events* section for further details).

In contrast, it was a dry month for eastern parts of the North Island. Waipawa was New Zealand's driest location compared to normal – the town observing just 16% of its normal October rainfall. The nearby centres of Napier and Whakatū each observed just 18% of their normal October rainfall. By the end of October, parts of coastal Hawke's Bay were "Very Dry" or "Extremely Dry" according to NIWA's New Zealand Drought Index².

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

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
High records or near-records				
Culverden	153	289	1921	Highest
Lake Tekapo	158	351	1925	Highest
Pukaki (Airport)	148	268	1972	Highest
Waimate	149	388	1898	Highest
Windsor	133	327	2000	Highest
Oamaru	235	424	1941	Highest
Dunedin (Airport)	171	287	1962	Highest
Dunedin (Musselburgh)	244	406	1918	Highest
Lumsden	195	226	1982	Highest
Tautuku	260	230	1976	Highest
Timaru	129	271	1881	2nd-highest
Middlemarch	125	169	1896	2nd-highest
Cromwell	77	224	1949	2nd-highest
Balclutha	199	321	1964	2nd-highest
Nugget Point	152	217	1930	2nd-highest
Waiau	141	204	1974	3rd-highest
Orari	148	261	1897	3rd-highest
Tara Hills	107	257	1949	3rd-highest
Lauder	88	247	1924	3rd-highest
Alexandra	92	291	1922	3rd-highest
Waipara West	98	175	1973	4th-highest
Wānaka	164	263	1927	4th-highest
Clyde	75	216	1978	4th-highest
Roxburgh	102	185	1948	4th-highest
Low records or near-records				
Waipawa	11	16	1945	2nd-lowest
Mt Ruapehu Chateau	113	41	2000	3rd-lowest

² <https://niwa.co.nz/hazards/weather-hazards/new-zealand-drought-monitor>

October climate in the six main centres

October temperatures were above average in all main centres. It was a very wet month for Dunedin, with the city observing its wettest October on record. Rainfall was also well above normal in Tauranga and Christchurch. Auckland observed its third-highest sunshine total for October on record. Of the six main centres in October 2024, Auckland was the warmest, Christchurch was the driest, Tauranga was the sunniest, and Dunedin was coolest, wettest, and least sunny.

October 2024 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland ^a	15.1	+0.6	Above average
Tauranga ^b	15.0	+0.7	Above average
Hamilton ^c	13.7	+0.7	Above average
Wellington ^d	13.1	+1.0	Above average
Christchurch ^e	12.1	+0.8	Above average
Dunedin ^f	11.7	+0.7	Above average
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland ^a	92	113	Near normal
Tauranga ^b	120	150	Well above normal
Hamilton ^c	114	116	Near normal
Wellington ^d	155	131	Above normal
Christchurch ^e	76	154	Well above normal
Dunedin ^f	244	406	Wettest October on record
Sunshine			
Location	Sunshine (hours)		
Auckland ^a	242		
Tauranga ^b	248		
Hamilton ^g	205		
Wellington ^d	203		
Christchurch ^e	227		
Dunedin ^f	179		

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

Highlights and extreme events

Temperatures

The highest October temperature was 29.1°C, observed at Whakatu on 24 October.

The lowest October temperature was -4.4°C, observed at Mount Cook Airport on 17 October.

From 25-26 October, a warm northerly airflow covered the North Island and upper South Island. Dozens of locations recorded record or near-record high daily minimum temperatures for October. A cold southerly airflow became established over the southern and central South Island during this period, and seven locations set record or near-record low daily maximum temperatures for October. This included Alexandra, where the temperature of 3.4°C was the town's lowest daily maximum for October since records began in 1930.

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

Location	Extreme maximum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Whakatu	29.1	24th	1965	Highest
Chatham Island	21.6	25th	1878	Highest
Masterton	26.4	22nd	1906	3rd-highest
Cheviot	27.9	25th	1982	3rd-highest
Akaroa	28.7	23rd	1978	3rd-highest
Leigh	24.3	25th	1966	4th-highest
Hastings	28.5	24th	1965	Equal 4th-highest
Low records or near-records				
Tara Hills	2.5	26th	1949	Lowest
Clyde	4.1	26th	1978	Lowest
Alexandra	3.4	26th	1930	Lowest
Lake Tekapo	1.4	26th	1928	2nd-lowest
Pukaki (Airport)	3.5	26th	1972	2nd-lowest
Waipounamu	6.9	9th	1980	2nd-lowest
Lumsden	6.2	9th	1982	3rd-lowest
Wānaka	5.7	26th	1972	Equal 3rd-lowest
Puysegur Point	8.3	9th	1978	Equal 4th-lowest
Lauder	5.1	26th	1924	Equal 4th-lowest

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

Location	Extreme minimum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Kaitaia	18.0	26th	1948	Highest
Paraparaumu	15.9	26th	1972	Highest
Hāwera	15.6	26th	1977	Highest
Motueka	16.3	26th	1972	Highest

Appleby	15.3	26th	1941	Highest
Brothers Island	15.0	26th	1997	Highest
Akaroa	17.5	25th	1978	Highest
Port Taharoa	17.1	26th	1974	Equal highest
Upper Hutt (Trentham)	16.1	26th	1972	Equal highest
Dargaville	17.1	26th	1951	2nd-highest
Whangārei	17.8	26th	1967	2nd-highest
Auckland (Whenuapai)	16.3	26th	1951	2nd-highest
Whitianga	17.5	26th	1971	2nd-highest
Motu	13.7	27th	1990	2nd-highest
Arapito	14.6	26th	1978	2nd-highest
Kaikōura	15.4	25th	1972	2nd-highest
Whangaparāoa	16.3	26th	1982	Equal 2nd-highest
New Plymouth	16.1	26th	1944	Equal 2nd-highest
Wellington (Kelburn)	14.9	26th	1931	Equal 2nd-highest
Wellington (Airport)	15.9	26th	1972	Equal 2nd-highest
Le Bons Bay	15.2	25th	1984	Equal 2nd-highest
Purerua	16.5	26th	1983	3rd-highest
Auckland (Western Springs)	17.0	26th	1971	3rd-highest
Tauranga	16.7	26th	1941	3rd-highest
Whakatāne	17.0	26th	1975	3rd-highest
Hicks Bay	16.1	27th	1972	3rd-highest
Waiau	16.7	25th	1974	3rd-highest
Mokohinau Island	16.6	26th	1994	Equal 3rd-highest
Warkworth	16.6	26th	1966	Equal 3rd-highest
Te Puke	15.7	26th	1973	Equal 3rd-highest
Ohakune	13.0	26th	1972	Equal 3rd-highest
Secretary Island	13.7	20th	1988	Equal 3rd-highest
Kaikohe	16.1	26th	1973	4th-highest
Kawerau	16.1	26th	1954	4th-highest
Pukekohe	16.2	26th	1969	4th-highest
Ngawi	17.6	26th	1972	4th-highest
Stratford	13.8	26th	1972	4th-highest
Farewell Spit	14.7	25th	1972	4th-highest
Cheviot	16.1	25th	1982	4th-highest
Kerikeri	17.1	26th	1952	Equal 4th-highest
Leigh	16.1	26th	1966	Equal 4th-highest
Rotorua	14.5	26th	1972	Equal 4th-highest
Auckland (Airport)	16.9	26th	1961	Equal 4th-highest
Nelson	15.4	25th	1862	Equal 4th-highest
Balclutha	12.7	21st	1972	Equal 4th-highest
Low records or near-records				
Mokohinau Island	1.0	15th	1994	Lowest
Cape Reinga	6.3	8th	1951	2nd-lowest
Waipounamu	-1.8	14th	1980	Equal 2nd-lowest

Rain and slips

The highest 1-day rainfall was 292 mm, recorded at Milford Sound on 23 October.

From 3-4 October, persistent and heavy rain fell over southeastern parts of the South Island. A state of emergency was declared in Dunedin and the Clutha District. In Dunedin, two welfare centres opened for about 70 residents who evacuated their properties due to flooding. Eleven properties were red-stickered (i.e. access was prohibited), with a further 31 properties yellow-stickered (i.e. access was restricted). Residents of West Harbour and the Peninsula were asked to conserve water due to a break in the main water supply pipe, while boil water notices were in place in other areas. Surface flooding was reported in many parts of the city, and was particularly significant for Green Island, Caversham, Musselburgh, St Kilda, St Clair, and Kaikorai Valley. Approximately 40 Dunedin roads were closed due to flooding. Numerous State Highways were closed in Otago due to flooding and slips including SH1 from Hampden to Evansdale and Waihola to Milton, SH85 from Kyeburn to Palmerston, SH87 from Kyeburn to Hyde, SH88 from Forsyth Barr Stadium to Port Chalmers, and SH90 from Waikoikoi to Tapanui. Areas of surface flooding also impacted Southland, with 13 road closures near Gore, and other closures including the Otautau Bridge due to rising floodwaters.

On 4 October, the Government announced a medium-scale adverse event classification for Southland and the Clutha District, after persistently wet conditions over the previous five weeks caused considerable challenges for farmers.

From 23-24 October, the Milford Road (SH94) was closed because persistent heavy rain to high elevations caused an increased risk of avalanches impacting the road.

On 25 October, SH6 was closed between Whataroa and Harihari due to rockfalls induced by heavy rain.

On 26 October, heavy rainfall caused slips and surface flooding that forced the closure of roads in the upper South Island. SH6 was particularly impacted, with closures in several areas including between Murchison and O'Sullivan's Bridge, near Dellows Bluff, between Kawatiri and Kohatu, and between Pelorus Bridge and Havelock. Other road closures included SH63 in Renwick, and SH60 between Pupu Valley Rd and Waitapu Wharf Rd (near Tākaka).

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

Location	Extreme 1-day rainfall (mm)	Date of extreme rainfall	Year records began	Comments
Culverden	54	25th	1921	Highest
Waipara West	64	25th	1973	Highest
Dunedin (Musselburgh)	131	3rd	1918	Highest
Mokohinau Island	45	2nd	1994	2nd-highest
Ngawi	114	13th	1930	2nd-highest
Secretary Island	171	23rd	1985	2nd-highest
Waiau	49	25th	1974	2nd-highest
Rangiora	55	25th	1965	2nd-highest
Windsor	36	26th	2000	2nd-highest
Oamaru	82	3rd	1950	2nd-highest
Dunedin (Airport)	55	3rd	1962	2nd-highest
Balclutha	73	3rd	1964	2nd-highest
Nugget Point	43	3rd	1930	2nd-highest
Tautuku	89	3rd	1976	2nd-highest
Milford Sound	292	23rd	1929	3rd-highest
Lumsden	42	3rd	1982	3rd-highest
Clyde	27	26th	1978	3rd-highest

Campbell Island	26	8th	1991	3rd-highest
Rotorua	81	2nd	1964	4th-highest
Wellington (Kelburn)	72	13th	1928	4th-highest
Hanmer Forest	57	25th	1905	4th-highest
Mt Cook Village	195	24th	1928	4th-highest
Winchmore	47	25th	1947	4th-highest
Pukaki (Airport)	40	25th	1972	4th-highest
Waimate	52	3rd	1898	4th-highest
Middlemarch	38	3rd	1896	4th-highest
Cromwell	30	2nd	1949	4th-highest

Wind

The highest wind gust was 185 km/h, observed at Cape Turnagain on 24 October.

On 9 October, a flight from Wellington attempted to land twice in Dunedin, but was unable to do so due to severe turbulence caused by wind shear. A second Wellington to Dunedin flight was cancelled on this day.

From 24-25 October, strong northerly winds impacted Wellington. Over 150 homes in Johnsonville were without power due to damaged power lines, while at least 24 flights at Wellington airport were delayed or cancelled.

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

Location	Extreme wind gust (km/h)	Date of extreme gust	Year records began	Comments
Māhia	102	3rd	1991	Equal 3rd-highest

Lightning, hail, and tornadoes

From 2-3 October, squally rain and thunderstorms struck parts of the upper North Island. Approximately 100 properties in Whitianga were without power after a fallen tree downed power lines.

On 9 October, a flight from Auckland to Queenstown was struck by lightning near Taranaki, and returned to land safely at Auckland Airport.

Snow and ice

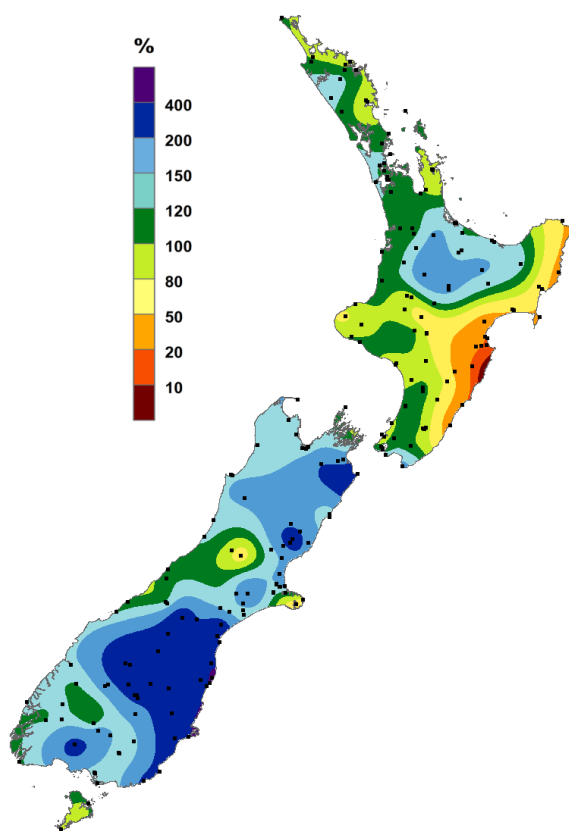
From 2-3 October, snow fell to approximately 700 metres above sea level in parts of the South Island. Snow had settled on the Crown Range Road, Lindis Pass (SH8) and Burke's Pass (SH8), with the Lindis Pass closed for a time. Cardrona ski area reported 40 cm of new snow on the morning of 3 October, while The Remarkables ski area reported 18-25 cm of new snow.

On 26 October, heavy snow fell in the South Island's high elevation terrain, with snow settling to relatively low elevations in parts of inland Otago such as Alexandra, Clyde, and Wānaka. The heaviest snowfalls occurred about inland parts of Canterbury, with NIWA's climate stations measuring 56 cm of snow depth at Mt Cook Village, and 27 cm at Arthur's Pass. Other settlements that received settled snow included Castle Hill Village, Lake Tekapo, Twizel, and Lake Ōhau Village. Several roads were closed including SH73 from Otira to Springfield, the Mount Cook Highway (SH80), and Lindis Pass

(SH8). A large avalanche ran on Ben Ōhau/Te Ruataniwha to the valley floor (beside Lake Ōhau), with debris piled up to six metres deep reported on the Glen Lyon Road.

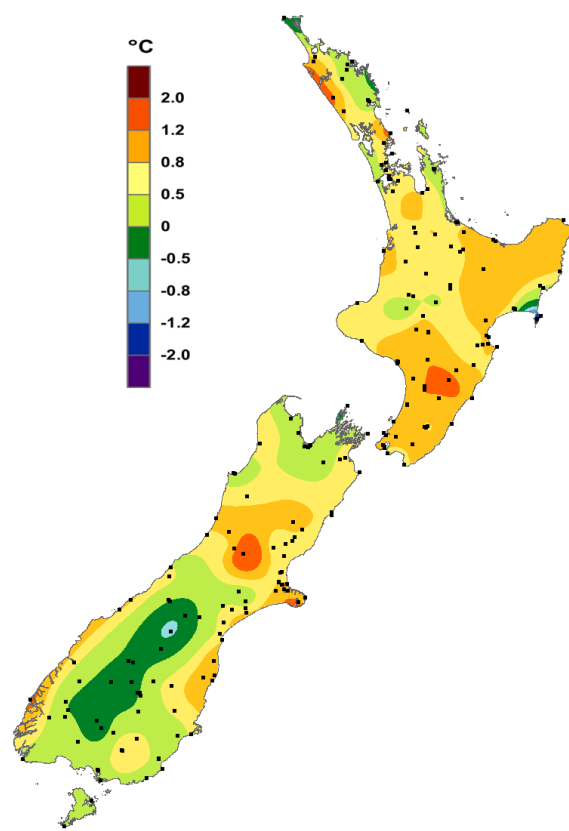
For further information, please contact:

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October rainfall

Expressed as a percentage of the 1991-2020 normal.



October temperature

Expressed as a departure from the 1991-2020 average in degrees Celsius.

<https://niwa.co.nz/climate-and-weather>

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