

A warm autumn; dry and sunny to start with, followed by more unsettled weather

Rainfall	It was a wet autumn for parts of: Auckland, Waikato, Kapiti Coast, Marlborough, Nelson, and Tasman, with almost 150 percent of normal autumn rainfall. Rainfall was below normal (50-80 percent of autumn normal rainfall) in parts of: Hawke's Bay, the West Coast of the South Island, inland Canterbury, and Central Otago. Near normal rainfall totals (between 80 and 120 percent of autumn normal rainfall) were observed elsewhere.
Temperature	A warm autumn, with well above average temperatures (more than 1.2°C above the autumn average) in the Bay of Plenty and parts of Waikato. Above average temperatures (0.5-1.2°C above the autumn average) throughout the rest of the North Island and across the South Island, except for parts of inland Canterbury where mean temperatures were near average (within 0.5°C of the autumn average).
Sunshine	Autumn sunshine was near normal for most of the country (90-110 percent of normal). Below normal sunshine (75-90 percent of autumn normal) for parts of northern and eastern South Island. In contrast, it was very sunny for King Country and west coast of the South Island south of Franz Josef (more than 125 percent of autumn normal sunshine).
Soil moisture	As at 1 June, below normal soil moisture levels for the time of year were observed in Hawke's Bay and Wairarapa, as well as around the Queenstown Lakes district. Near normal soil moisture levels were evident elsewhere, except for Marlborough, Kaikoura Coast, coastal Otago, and coastal southern Canterbury, where soils were much wetter than usual for the time of year.

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

[Overview](#)

[Rainfall](#)

[Temperature](#)

[Sunshine](#)

[Autumn climate in the six main centres](#)

[Highlights and extreme events](#)

Overview

Autumn 2013 as a whole was characterised by lower pressures than normal over New Zealand and the Tasman Sea, which resulted in a predominant northeasterly flow over the country for the season. Early autumn was characterised by high pressure systems which were stationary over the country and kept rain-bearing systems away. As a result, early autumn was very dry and sunny

throughout most of the country. Mid-late autumn was characterised by more unsettled weather associated with low pressure systems, with numerous rain-bearing fronts bringing heavy rainfall to some parts of the country. Notable events include heavy rainfall in the Bay of Plenty on 20 April and Nelson and Tasman on 21 April, and widespread snowfall which affected Canterbury, Otago, and Southland on 28 May.

Overall, it was a wet autumn for parts of: Auckland, Waikato, Kapiti Coast, Marlborough, Nelson, and Tasman, with almost 1.5 times (150 percent) normal autumn rainfall. However, rainfall was below normal (50-80 percent of autumn normal rainfall) in parts of: Hawke's Bay, the West Coast of the South Island, inland Canterbury, and Central Otago. In general, near normal rainfall totals (between 80 and 120 percent of autumn normal rainfall) were observed elsewhere in New Zealand.

As at 1 June, below normal soil moisture levels for the time of year were observed in Hawke's Bay and Wairarapa, as well as around the Queenstown Lakes district. Near normal soil moisture levels were evident elsewhere, except for Marlborough, Kaikoura Coast, coastal Otago, and coastal Canterbury (south of Banks Peninsula), where soils were much wetter than usual for the time of year.

It was a warm autumn for most of the country, with mean temperatures well above average (more than 1.2°C above the autumn average) in the Bay of Plenty and parts of the Waikato region. Temperatures were above average (0.5-1.2°C above the autumn average) throughout the remainder of the North Island and across the South Island, except for parts of Marlborough and inland Canterbury where mean temperatures were near average (within 0.5°C of the autumn average). The nation-wide average temperature in autumn 2013 was 13.9°C (0.7°C above the 1971-2010 autumn average, using NIWA's seven-station temperature series which begins in 1909).

Sunshine was near normal for most of the country for autumn (sunshine hours between 90 and 110 percent of autumn normal). Below-normal sunshine hours were recorded in some areas of the northern and eastern South Island. In contrast, for some areas in the King Country, and on the West Coast of the South Island south of Franz Josef, sunshine hours were well above normal (more than 125 percent of autumn normal). Of the available, regularly reporting sunshine observation sites, the sunniest four centres so far in 2013 (January to May) are: Whakatane (1288 hours), New Plymouth (1272 hours), Blenheim (1162 hours) and Paraparaumu (1160 hours).

Further Highlights:

- The highest temperature was 32.9 °C, recorded at Napier on 18 March.
- The lowest temperature was -7.1°C, observed at Motu on 29 May.
- The highest 1-day rainfall was 208 mm, recorded at Milford Sound on 24 March.
- The highest wind gust was 170 km/hr, at South West Cape, on 26 May.
- Of the six main centres in autumn 2013, Tauranga was the warmest, wettest, and sunniest, Dunedin was the coolest and cloudiest, and Christchurch was the driest.

For further information, please contact:

Dr Richard Turner

Research Meteorologist – NIWA National Climate Centre, Wellington

Tel. 04 3860315

Rainfall: A dry start to autumn, with a very wet end for Auckland and Waikato

Overall, it was a wet autumn for parts of: Auckland, Waikato, Kapiti Coast, Marlborough, Nelson, and Tasman, with almost 1.5 times (150 percent) normal autumn rainfall. However, rainfall was below normal (50-80 percent of autumn normal rainfall) in parts of: Hawke's Bay, the West Coast of the South Island, inland Canterbury, and Central Otago. It was the driest autumn on record for Campbell Island. In general, near normal rainfall totals (between 80 and 120 percent of autumn normal rainfall) were observed elsewhere in New Zealand.

As at 1 June, below normal soil moisture levels for the time of year were observed in Hawke's Bay and Wairarapa, as well as around the Queenstown Lakes district. Near normal soil moisture levels were evident elsewhere, except for Marlborough, Kaikoura Coast, coastal Otago, and coastal Canterbury (south of Banks Peninsula), where soils were much wetter than usual for the time of year.

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

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
Record low or near-record low				
Reefton	263	62	1960	Equal 2nd-lowest
Campbell Island	220	58	1992	Lowest

Temperature: A warm autumn throughout New Zealand

It was a warm autumn throughout the country, with mean temperatures well above average (more than 1.2°C above the autumn average) in the Bay of Plenty and parts of the Waikato region. Temperatures were above average (0.5-1.2°C above the autumn average) throughout the remainder of the North Island and across the South Island, except for parts of Marlborough and inland Canterbury where mean temperatures were near average (within 0.5°C of the autumn average). It was the warmest autumn on record for Leigh, Tauranga, Masterton, Stratford, and Ohakune.

The nation-wide average temperature in autumn 2013 was 13.9°C (0.7°C above the 1971-2000 autumn average), using NIWA's seven-station temperature series which begins in 1909¹.

¹ Interim seasonal value

Near-record² mean air temperatures for autumn were recorded at:

Location	Mean air temp. (°C)	Departure from normal (°C) ³	Year records began	Comments
High records or near-records				
Kaikohe	16.8	1.1	1973	3rd-highest
Dargaville	17.9	1.9	1943	4th-highest
Leigh	18.9	1.6	1966	Highest
Whangaparaoa	17.7	0.8	1982	3rd-highest
Tauranga	17.0	1.3	1913	Highest
Rotorua	14.5	1.2	1964	3rd-highest
Motu	12.4	1.1	1990	3rd-highest
Hamilton	16.0	1.5	1906	4th-highest
Masterton	14.4	1.7	1992	Highest
Dannevirke	14.2	1.2	1951	4th-highest
Ngawi	15.7	0.6	1972	4th-highest
Waipawa	14.1	1.0	1945	3rd-highest
Wairoa	16.1	1.3	1964	2nd-highest
Mahia	15.8	0.8	1990	4th-highest
Stratford	13.8	1.3	1960	Highest
Ohakune	12.8	1.9	1962	Highest
Farewell Spit	15.8	1.1	1971	2nd-highest
Arapito	14.1	0.8	1978	4th-highest
Reefton	12.7	0.9	1960	4th-highest
Milford Sound	12.1	1.2	1934	4th-highest
Secretary Island	13.4	0.9	1985	3rd-highest
Puysegur Point	12.4	0.7	1978	2nd-highest
Nelson	14.6	1.0	1943	2nd-highest
Cheviot	12.4	0.6	1982	3rd-highest
Lumsden	10.8	0.9	1982	4th-highest
Gore	11.2	1.1	1971	3rd-highest
Tiwai Point	11.8	0.8	1970	4th-highest
Nugget Point	11.5	0.8	1970	4th-highest
South West Cape	11.2	0.5	1991	4th-highest
Campbell Island	7.9	0.4	1991	3rd-highest

² The rankings (1st, 2nd, 3rd.etc) in 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 because of the practical limitations of performing homogeneity checks in real-time.

³ This climate summary uses the updated 'normal' period, 1981-2010, unless otherwise stated. (A 'normal' period is a 30 year window of time from which the normal (average) and percentage of normal are calculated from).

Sunshine: Near normal sunshine for most of the country

Sunshine was near normal for most of the country for autumn (sunshine hours between 90 and 110 percent of autumn normal). Below-normal sunshine hours were recorded in some areas of the northern and eastern South Island. In contrast, for some areas in the King Country, and on the West Coast of the South Island south of Franz Josef, sunshine hours were well above normal (more than 125 percent of autumn normal). It was the sunniest autumn on record for Taumarunui.

Of the available, regularly reporting sunshine observation sites, the sunniest four centres so far in 2013 (January to May) are: Whakatane (1288 hours), New Plymouth (1272 hours), Blenheim (1162 hours) and Paraparaumu (1160 hours).

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

Location	Sunshine hours	Percentage of normal	Year records began	Comments
High records or near-records				
Dargaville	529	105	1943	2nd-highest
Te Kuiti	529	125	1962	4th-highest
Taumarunui	527	134	1947	Highest
New Plymouth	638	119	1972	2nd-highest
Martinborough	506	101	1986	4th-highest
Waipawa	564	122	1945	3rd-highest
Paraparaumu	579	116	1953	4th-highest
Queenstown	512	122	1930	2nd-highest
Cromwell	557	110	1979	4th-highest
Low records or near-records				
Takaka	492	88	1985	3rd-lowest

Autumn climate in the six main centres

Temperatures were above average or well above average in all of the main centres except for Auckland, which experienced near average temperatures during autumn 2013. It was a rather wet autumn for most of the main centres, with Auckland, Tauranga, Hamilton, and Dunedin recording above normal rainfall. Sunshine was near normal for autumn in all of the main centres except for Christchurch, where it was below normal for the time of year.

Of the six main centres in autumn 2013, Tauranga was the warmest, wettest, and sunniest, Dunedin was the coolest and cloudiest, and Christchurch was the driest.

Autumn 2013 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland ^a	16.5	+0.3	Near average
Tauranga ^b	17.0	+1.3	Warmest autumn on record
Hamilton ^c	15.4	+1.2	Well above average
Wellington ^d	14.5	+0.8	Above average
Christchurch ^e	12.7	+0.8	Above average
Dunedin ^f	12.2	+0.6	Above average
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland ^a	408	147%	Above normal
Tauranga ^b	423	129%	Above normal
Hamilton ^c	369	132%	Above normal
Wellington ^d	319	114%	Near normal
Christchurch ^e	149	101%	Near normal
Dunedin ^f	218	121%	Above normal
Sunshine			
Location	Sunshine (hours)	% of normal	Comments
Auckland ^a	530	107%	Near normal
Tauranga ^b	598	106%	Near normal
Hamilton ^g	515	107%	Near normal
Wellington ^d	482	97%	Near normal
Christchurch ^e	407	82%	Below normal
Dunedin ^f	403	106%	Near normal

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

Highlights and extreme events

Rain and slips

The highest 1-day rainfall was 208 mm, recorded at Milford Sound on 24 March.

On 18 March, heavy rain in the Nelson region caused flooding around Dovedale and Wakefield.

On 19 March, heavy overnight rain caused minor slips in the Manawatu Gorge, and the bad weather delayed early morning flights out of Palmerston North Airport. Heavy rain caused surface flooding on SH1 in the Kapiti area, and flooded subways associated with commuter railway stations in the Hutt Valley.

On 9 April, thunderstorms brought flash floods to Hawke's Bay.

On 16 April, the occupants of a home in Grey Lynn, Auckland were evacuated after heavy rain caused subsidence, and the collapse of a balcony. Surface flooding was reported across Auckland.

On 17 April, a large slip closed Graham Valley Road, one of the access routes into Kahurangi National Park from the Motueka Valley Highway.

On 20 April, SH2 was closed by flooding near Waihi, and also affected by surface flooding in Tauranga. Waihi Beach Road was impassable and visitors had to be evacuated from two camping grounds. People were rescued from cars caught by floods and slips. Properties were also flooded in Katikati, Omokoroa, Mount Maunganui, and Te Puke, and local roads throughout the western Bay of Plenty were affected by flooding. Power was lost to homes in Otumoetai after a slip damaged a transformer. In Hamilton flash flooding closed streets, including SH1 at Lorne Street, and trapped cars in several suburbs. Many properties were inundated by flood waters.

On 21 April, torrential rain caused flooding in the Nelson and Tasman regions, particularly in Richmond and Stoke. This rainstorm was one of the most intense ever measured in New Zealand, and it was the most intense ever recorded in the Nelson and Tasman regions. The maximum 1-hour rainfall total during the storm was 101 mm in the Roding catchment near Richmond, a rainfall total which has a 500-year return period in this area. The most extreme 1-hour rainfall ever measured in New Zealand is 134 mm in the Cropp River catchment on the west coast of the South Island, a catchment which holds many of New Zealand's extreme rainfall records. The highest 24-hour rainfall total recorded during the 21 April storm was 216 mm, recorded at the Tasman District Council office in Richmond. Slips closed SH60 over Takaka Hill, and many local roads were also closed by slips. Many properties were flooded, and cars abandoned after the occupants were rescued. All sports grounds were closed, and there was significant damage to the aquatic centre and Saxton Stadium. Rainfall data here were sourced from Tasman District Council.

On 30 April, heavy rain, accompanied by hail and thunderstorms, caused flooding in Canterbury, including Christchurch city where a central city mall was closed, after water flooded the centre and power was cut.

On 4 May, heavy rain caused flooding across Auckland.

On 6 May, heavy rain caused flooding and slips on SH1 between Blenheim and Seddon, and reduced the highway to one lane just north of Kaikoura. In Blenheim, many properties were inundated. Christchurch city was also affected with surface flooding on roads, and properties damaged. In Wellington the torrential rain caused flooding throughout the city, with buses diverted around flooded sections of their routes. Many evening commuter bus services were cancelled. Properties were flooded, including a basement car park in Newtown, where cars were reported to be floating. The storm water system in Wellington was overloaded and raw sewage was discharged into Lyall Bay.

On 7 May a slip closed the Johnsonville suburban railway line in Wellington.

On 8 May, heavy rain in Northland caused surface flooding on SH10 near Kerikeri. Farmland near Waimate North was flooded when a tributary of the Waitangi River overflowed.

On 24 May, heavy rain caused minor slips on SH5 between Napier and Taupo.

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
Cambridge	83	Apr-21st	1966	2nd-highest
Masterton	63	Mar-18th	1992	3rd-highest
Waione	53	Mar-18th	1991	3rd-highest
Gladstone	76	Mar-18th	1953	4th-highest
Martinborough	70	Mar-18th	1924	4th-highest
Marton	94	Mar-18th	1962	Highest
Waituna	100	Mar-18th	1984	Highest
Te Horo	59	Mar-18th	1992	3rd-highest
Wanganui	64	Mar-18th	1937	4th-highest
Mapua	106	Apr-21st	1922	2nd-highest
Brightwater	136	Apr-21st	1967	Highest
Nelson	122	Apr-21st	1941	Highest
Kaikoura Plains	102	Mar-18th	1980	3rd-highest
Alexandra	28	Mar-17th	1990	3rd-highest

Temperatures

The highest temperature measured during autumn 2013 was 32.9 °C, recorded at Napier on 18 March. This is the highest autumn temperature recorded in a group of surrounding stations, in records beginning in 1868. Record or near-record high maximum temperatures were observed at a large number of stations across the country on 11 March.

The lowest temperature was -7.1°C, observed at Motu on 30 May. This is the 2nd-lowest autumn temperature recorded in a group of surrounding stations, in records beginning in 1990. A very cold

southerly airstream affected the country on 27-30 May, causing record or near-record low maximum and minimum temperatures at numerous locations across the country.

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				
Kaitia	27.2	Mar-8th	1985	4th-highest
Kerikeri	27.9	Mar-11th	1981	3rd-highest
Whangarei	29.1	Mar-18th	1967	2nd-highest
Leigh	29.0	Mar-8th	1966	Highest
Whitianga	27.4	Mar-2nd	1962	3rd-highest
Paeroa	29.2	Mar-11th	1947	Highest
Tauranga	30.0	Mar-1st	1913	Equal 2nd-highest
Te Puke	30.1	Mar-1st	1973	Highest
Whakatane	28.6	Mar-10th	1975	2nd-highest
Rotorua	28.3	Mar-1st	1964	Highest
Taupo	28.8	Mar-11th	1949	Equal 2nd-highest
Pukekohe	28.4	Mar-11th	1969	Equal 2nd-highest
Hamilton (Ruakura)	32.6	Mar-11th	1906	Highest
Hamilton (Airport)	30.7	Mar-11th	1946	2nd-highest
Te Kuiti	31.3	Mar-11th	1959	2nd-highest
Taumarunui	32.4	Mar-11th	1947	Highest
Turangi	29.3	Mar-1st	1968	Highest
New Plymouth	29.0	Mar-11th	1944	2nd-highest
Masterton	29.9	Mar-1st	1992	3rd-highest
Dannevirke	29.2	Mar-11th	1951	3rd-highest
Gisborne	31.2	Mar-18th	1905	4th-highest
Napier	32.9	Mar-18th	1868	Highest
Hastings	32.6	Mar-18th	1965	3rd-highest
Wairoa	31.8	Mar-18th	1964	2nd-highest
Mahia	30.9	Mar-18th	1990	Highest
Palmerston North	29.6	Mar-11th	1918	2nd-highest
Hawera	25.7	Mar-18th	1977	2nd-highest
Ohakune	27.5	Mar-11th	1962	3rd-highest
Waiouru	26.3	Mar-11th	1962	Highest
Reefton	30.1	Mar-11th	1960	Highest
Motueka	29.0	Mar-11th	1956	2nd-highest
Arthurs Pass	26.4	Mar-1st	1973	4th-highest
Waiau	32.0	Mar-14th	1974	3rd-highest
Tara Hills	30.3	Mar-15th	1949	2nd-highest
Nugget Point	28.6	Mar-14th	1970	Highest
South West Cape	21.7	Mar-30th	1991	4th-highest
Low records or near-records				

Cape Reinga	11.6	May-28th	1971	Lowest
Kaitaia (Airport)	12.1	May-28th	1948	2nd-lowest
Kaitaia (Observatory)	12.5	May-28th	1985	Lowest
Kerikeri	11.0	May-28th	1981	Lowest
Kaikohe	10.1	May-28th	1973	Lowest
Dargaville	12.3	May-28th	1951	4th-lowest
Whangarei	10.8	May-28th	1967	Lowest
Warkworth	11.7	May-28th	1966	3rd-lowest
Whangaparaoa	11.3	May-28th	1982	Lowest
Whitianga	9.1	May-28th	1971	Lowest
Paeroa	9.3	May-28th	1971	Lowest
Te Puke	10.4	May-28th	1973	2nd-lowest
Rotorua	9.1	May-28th	1972	4th-lowest
Auckland (Mangere)	10.9	May-28th	1961	3rd-lowest
Pukekohe	8.9	May-28th	1969	2nd-lowest
Whatawhata	7.6	May-28th	1952	Lowest
Hamilton	8.1	May-28th	1946	2nd-lowest
Port Taharoa	9.8	May-28th	1974	Lowest
Te Kuiti	9.9	May-28th	1959	4th-lowest
Taumarunui	7.4	May-28th	1947	Equal 3rd-lowest
Masterton	5.9	May-28th	1943	Lowest
Takapau Plains	5.0	May-28th	1972	2nd-lowest
Dannevirke	6.6	May-28th	1951	3rd-lowest
Castlepoint	5.8	May-28th	1972	Lowest
Martinborough	6.6	May-28th	1986	Lowest
Ngawi	8.5	May-28th	1972	Lowest
Hastings	9.8	May-28th	1972	4th-lowest
Paraparaumu	8.5	May-28th	1972	4th-lowest
Palmerston North	8.1	May-28th	1940	4th-lowest
Levin	8.6	May-28th	1950	Equal 3rd-lowest
Wellington	9.6	May-28th	1972	3rd-lowest
Wallaceville	6.3	May-28th	1972	Lowest
Stratford	6.6	May-28th	1972	4th-lowest
Hawera	8.7	May-28th	1977	3rd-lowest
Ohakune	2.8	May-28th	1972	Lowest
Takaka	9.7	May-28th	1978	2nd-lowest
Haast	5.8	May-27th	1949	Lowest
Secretary Island	5.3	May-27th	1989	Lowest
Puysegur Point	7.5	May-27th	1978	2nd-lowest
Cape Campbell	8.1	May-28th	1972	4th-lowest
Le Bons Bay	5.5	May-28th	1984	Equal lowest
Ranfurlly	2.5	May-28th	1975	2nd-lowest
Manapouri	3.4	May-27th	1973	2nd-lowest
Lumsden	3.6	May-28th	1982	Equal 3rd-lowest
Gore	3.3	May-27th	1972	3rd-lowest

Tiwai Point	6.9	May-27th	1972	Equal 4th-lowest
Balclutha	3.6	May-27th	1972	Lowest
Nugget Point	3.7	May-27th	1972	Equal 2nd-lowest
South West Cape	5.9	May-27th	1991	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				
Cape Reinga	5.9	May-28th	1951	3rd-lowest
Kaitaia	4.0	May-29th	1985	2nd-lowest
Kerikeri	2.2	May-29th	1981	Equal lowest
Kaikohe	4.3	May-29th	1973	4th-lowest
Whangaparaoa	4.0	May-29th	1982	Lowest
Whakatane	-1.8	May-30th	1975	Equal lowest
Rotorua	-2.8	May-30th	1964	2nd-lowest
Motu	-7.1	May-30th	1990	2nd-lowest
Taumarunui	-3.9	May-30th	1947	Equal 4th-lowest
Turangi	-4.7	May-30th	1968	2nd-lowest
Castlepoint	2.4	May-29th	1972	Lowest
Ngawi	4.1	May-29th	1972	3rd-lowest
Hicks Bay	2.6	May-30th	1969	4th-lowest
Mahia	4.2	May-30th	1990	Equal lowest
Haast	-2.4	May-29th	1949	2nd-lowest
Secretary Island	2.6	May-28th	1985	4th-lowest
Kaikoura	1.6	May-29th	1963	4th-lowest
Le Bons Bay	0.2	May-29th	1984	Equal lowest
South West Cape	2.5	May-28th	1991	Equal 4th-lowest
High records or near-records				
Paeroa	20.3	Mar-18th	1971	4th-highest
Motu	15.9	Mar-18th	1990	Equal 4th-highest
Masterton	18.1	Mar-18th	1992	3rd-highest
Mahia	18.4	Mar-18th	1990	Equal 3rd-highest
Wallaceville	18.6	Mar-18th	1972	4th-highest
Ohakune	18.2	Mar-18th	1972	Highest
Waiouru	15.4	Mar-18th	1972	2nd-highest
Puysegur Point	17.6	Mar-29th	1978	2nd-highest
Cheviot	17.6	Mar-25th	1982	2nd-highest
Lumsden	16.1	Mar-15th	1982	Highest
South West Cape	15.6	Mar-30th	1991	2nd-highest

Wind

The highest wind gust recorded in autumn 2013 was 170 km/hr, at South West Cape, on 26 May.

On 18 March, a tornado damaged property in Carrington Street, New Plymouth. In the Nelson region, strong winds associated with a violent thunderstorm brought down trees, blocking secondary roads.

On 31 March, a tornado swept through Hokitika's central business district, lifting the roofs of the Railway Hotel and Westland District Council buildings.

On 4 April, the Hawke's Bay rescue helicopter was damaged by a wind gust while preparing to take off from the helipad at Wellington Hospital.

On 15 April, power was cut to customers in the Maungatapere area after wind brought down a tree on to power lines, and at nearby Poroti power was lost when the wind broke the cross-arm of a power pole. The strong winds uprooted trees throughout Northland and the upper North Island, and ripped two boats from their moorings at Paihia.

On 16 April, in high winds and rough seas a boat in Tauranga Harbour was ripped from its moorings and washed on to rocks beside The Strand.

On 20 April, a tornado brought down a tree and damaged property in Raglan.

On 5 May, gales in Auckland brought trees down on to power lines, affecting electricity supply, particularly in West Auckland.

On 6 May, wind warnings were issued for SH6 between Harihari and Haast. Further north, strong winds brought down power lines in Hamilton.

On 7 May, strong winds at Wellington Airport grounded all Air New Zealand provincial flights, and caused considerable delays for jet flights. East by West ferry services were also cancelled.

On 10 May, wind warnings were issued for SH6 between Harihari and Haast. In Picton, a strong gust caused one of the Interislander ferries to slam into the dock, damaging it. The ferry returned to Wellington as it could not be secured to the dock in Picton.

On 20 May, two waterspouts were observed over Auckland's Manukau Harbour.

On 26 May, high winds and lightning caused power outages for more than 1200 properties in Colac Bay, Wallacetown, Waimatua, and Mokotua.

On 27 May, wind warnings were issued for SH1 at the Desert Road. In Wellington city, a fifth-floor window was sucked out of an office block, crashing to the footpath below. In Southland, wind caused property damage in Orepuki. High winds caused a roof to lift off a house in Port Waikato.

On 28 May,

Near-record high extreme wind gusts for autumn were recorded at:

Location	Extreme wind gust (km/h)	Date of extreme gust	Year records began	Comments
Cape Reinga	152	May-28th	1974	4th-highest
Cape Campbell	115	May-6th	1963	Equal 4th-highest

Lightning and hail

On 9 April, thunderstorms moved over Manawatu, Wanganui, Taranaki, Hawke's Bay and Bay of Plenty.

On 21 April, thunderstorms crossed the North Island, injuring two people in separate incidents in the Waikato. Both men were wearing gumboots and survived the lightning strikes. A passenger plane en route from Wellington to Auckland was struck by lightning as it approached Auckland Airport, but landed safely.

On 24 April, there was a spectacular lightning storm over Auckland.

On 6 May, a severe thunderstorm crossed the Wellington region. Lightning split a large pine at the Shandon Golf Course in Petone. In Kaikoura, a lack of electricity meant the high school could not open for the start of term.

On 8 May, it was Northland's turn for thunder and lightning, accompanied by heavy rain.

On 21 May, thunder and lightning, accompanied by heavy rain, crossed the Auckland isthmus. Funnel clouds were seen over Manukau Harbour.

On 27 May, hail and sleet fell in Invercargill. A thunderstorm moved through the Wairarapa with lightning strikes visible in Wellington.

On 28 May, hail was reported in central Wellington and in Palmerston North. Thunder and lightning delayed flights at Auckland Airport, and struck a well-known Norfolk Pine in Mission Bay splitting it down the middle, with branches flying into Selwyn Domain. The tree had to be removed.

Cloud and fog

On 15 April, low cloud caused the cancellation of flights into and out of both Blenheim and Invercargill Airports.

On 9 May, thick fog covered Christchurch, causing delays and cancellations of flights into and out of Christchurch Airport until early afternoon.

On 15 May, heavy fog stopped evening flights into and out of Wellington Airport, including an international flight to Sydney.

Snow and ice

On 10 May, snow fell over Otago making chains essential on SH8 at the Lindis Pass, and on the Crown Range between Queenstown and Wanaka. Snow also fell on SH94 to Milford Sound.

On 27 May, snow fell on SH8 at the Lindis Pass and Arthur's Pass making chains essential, and on SH94 at Gorge Hill. All roads remained open to non-towing vehicles. Heavy snow brought down trees on SH94 to Milford Sound, closing the road beyond Knob's Flat. Snow also fell on SH93 at Mataura, and SH6 between Kingston and Lumsden.

On 28 May, snow closed SH1 near Dunedin, SH8 between Roxburgh and Alexandra, and SH94 from Te Anau to Milford Sound. SH93 was blocked when a truck slid on ice. Snow also fell on the Lindis Pass, Lewis Pass, Arthur's Pass, and Porter's Pass, closing them to towing vehicles, and making chains necessary for other vehicles. Chains were also required on SH85 between Alexandra and Kyeburn, and cautions were in place for SH1 between Dipton and Lumsden, and SH6 between Lumsden and Queenstown. Snow caused delays at Dunedin Airport, and most flights into and out of Queenstown Airport were cancelled. Snow was reported in Queenstown, Invercargill, and Dunedin, where many local roads were closed with local bus services cancelled. Schools from kindergartens to secondary schools had a late start, and Otago Polytechnic closed for the day. Outpatient clinics were cancelled at Dunedin Hospital. Schools were closed in Alexandra, Wakatipu, Palmerston and parts of Southland. Snow and icy road conditions prevented mail deliveries across large parts of Otago. Black ice was a hazard in the Kawarau Gorge. In northern Southland, McLean Road was closed after trees weighed down by snow fell onto the road. In Christchurch, blizzard-like conditions closed several Banks Peninsula roads and restricted others to 4WD vehicles with chains. There was snow on SH1 at the Desert Road, but it remained open. SH2 was closed at the Rimutaka Hill late in the afternoon, and a caution was issued for SH2 between Wairoa and Gisborne. In Wellington two evening train services between the city and Johnsonville were cancelled because of icy tracks. Snow was reported on Mt Pirongia in the Waikato, and closed roads in central and southern Taranaki.

On 29 May, SH2 at the Rimutaka Hill Road, SH1 at the Desert Road, SH4 west of Ruapehu, and SH49 between Waiouru and Ohakune were closed by snow. In Otago, SH87 from Middlemarch to Outram and some Dunedin hill-suburb roads remained closed, and warnings were in place for SH8 between Milton and Raes Junction, and SH94 between Te Anau and Mossburn, with chains required to be carried.

For further information, please contact:

Dr Richard Turner

Research Meteorologist – NIWA National Climate Centre, Wellington

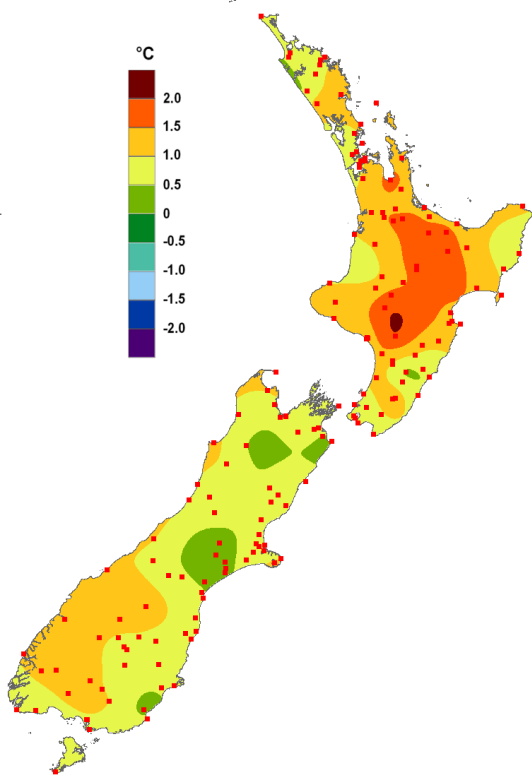
Tel. 04 3860315

For climate data enquiries, please contact:

Ms Petra Chappell

Climate Analyst – NIWA National Climate Centre, Auckland

Tel 09 375 2052



Autumn 2013 mean temperatures, expressed as a difference from average (°C).

Red and dark orange colours indicate temperatures more than 1.5°C above the autumn average, which was recorded in the central and eastern North Island. Above average mean temperatures (0.5 to 1.5°C above the autumn average) were observed across most of the rest of New Zealand (light orange and yellow shades), except for parts of Marlborough and Canterbury, where mean temperatures were near average (green shades).

www.niwa.co.nz/ncc

© Copyright NIWA 2013

All rights reserved.