

## A dry month for some of the country with near average temperatures for most.

<b>Rainfall</b>	Rainfall was below normal (50-79%) or well below normal (< 50%) for many eastern and northern areas of the South Island, Wellington, Wairarapa, the Kapiti Coast, Hawke's Bay, Gisborne and the Bay of Plenty. Conversely, rainfall was above normal (120-149%) or well above normal (> 149%) for south-western parts of the South Island.
<b>Temperature</b>	October temperatures were near average (within 0.50°C of average) for many parts of New Zealand. Temperatures were below average (-1.20 to -0.51°C) for isolated inland parts of Southland and Otago, Waitomo and the Far North, and above average (+0.51°C to +1.20°C) in parts of Bay of Plenty.
<b>Soil Moisture</b>	As of 1 November 2014, soil moisture levels for most eastern and northern parts of the South Island were below normal for the time of year, while levels for the remainder of the South Island were near normal. Soil moisture levels were above normal in the Far North, Auckland, Hawke's Bay and parts of Manawatu-Wanganui.
<b>Sunshine</b>	A sunny October for the lower half of the North Island as well as northern, central and south-eastern areas of the South Island, with above normal sunshine (110-125%) recorded in many of these areas. Near normal (90-109%) sunshine for most remaining areas of the country.

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

[Overview](#)

[Rain](#)

[Temperature](#)

[Sunshine](#)

[October 2014 climate in the six main centres](#)

[Highlights and extreme events](#)

## Overview

October 2014 was characterised by air pressures which were lower than normal over and to the south-east of the country. This resulted in an anomalous south-westerly flow over New Zealand. This southwest flow anomaly is clearly illustrated by the rainfall anomalies observed across New Zealand for October (see rainfall anomaly map on the last page of this document). Areas exposed to the south-westerlies received rainfall that was above normal (120-149%) or well above normal (> 149%). Indeed, such rainfall anomalies were experienced in south-western Southland and Fiordland. In contrast, areas sheltered from the south-westerlies received below normal (50-79%) or well below normal (< 50%) rainfall, and this was the case for eastern and northern parts of the South Island, as well as the lower

North Island, Hawke's Bay, Gisborne and the Bay of Plenty. Remaining areas of the country typically received near normal rainfall (within 20% of normal) for the month.

Soil moisture levels on the east coast of the South Island were below normal for the time of year at the start of the month, and this remained the case as of 1 November 2014 after a relatively dry October there. Likewise, at 1 November 2014 soils were drier than normal for the time of year in Marlborough and Nelson. Soils were wetter than normal in the Far North, Auckland, and parts of Manawatu-Whanganui. Soils were also wetter than normal in Hawke's Bay despite the region receiving below normal rainfall in October: soil moisture levels have remained relatively high as a result of above normal September rainfall that was received in the region. Soil moisture levels were near normal for the time of year for remaining areas of New Zealand.

October saw near average temperatures (within 0.50°C of average) for most areas of the country overall. However, there was considerable day-to-day variability of temperatures at times as the anomalous south-westerly flow for the month overall (as outlined earlier) shifted between more westerly and southerly variations. Temperatures were much cooler than average during the early part of October, with a cool southerly flow bringing snow to low elevations in both the North and South Islands. The latter half of the month saw warmer than average temperatures across most of New Zealand. This effectively offset the cold start to the month, meaning temperatures were near average across most of New Zealand for the month as a whole. However, October was a cool month for isolated inland parts of Southland and Otago, Waitomo and the Far North, where temperatures were below average (-1.20 to -0.51°C), while above average temperatures (+0.51°C to +1.20°C) were observed in isolated inland parts of Bay of Plenty. The nation-wide average temperature in October 2014 was 12.2°C (0.1°C above the 1971-2000 October average from NIWA's seven station temperature series which begins in 1909)<sup>1</sup>.

October was a sunny month for the lower half of the North Island as well as northern, central and south-eastern areas of the South Island, with above normal sunshine (110-125%) recorded in many of these areas. Balclutha, Dunedin, Cheviot and Martinborough enjoyed near-record high sunshine hours for the month. Sunshine hours were near normal (90-109%) for most remaining areas of the country.

#### **Further Highlights:**

- The highest temperature was 27.5°C, observed at Christchurch (Riccarton) on 17 October.
- The lowest temperature was -4.9°C, observed at Middlemarch on 25 October.
- The highest 1-day rainfall was 204 mm, recorded at Milford Sound on 5 October.
- The highest wind gust was 196 km/hr, observed at Cape Turnagain on 6 October.
- Of the six main centres in October 2014, Auckland was the warmest, Dunedin was the coolest, Christchurch was the driest, Hamilton was the wettest and cloudiest and Wellington was the sunniest.

---

<sup>1</sup> Interim value

- Of the available, regularly reporting sunshine observation sites, the sunniest four centres<sup>2</sup> so far in 2014 (1 January to 31 October) are: Whakatane (2216 hours), Lake Tekapo (2020 hours), Nelson (2005 hours) and Blenheim (1997 hours).

**For further information, please contact:**

**Mr Chris Brandolino**

NIWA Forecaster – NIWA National Climate Centre

Tel. 09 375 6335, Mobile (027) 886 0014

## Rainfall: Dry for areas sheltered from south-westerlies

October was a dry month for areas of the country sheltered from south-westerly winds. It was especially dry in Nelson and Blenheim, with these locations receiving just 26% and 32% of normal October rainfall respectively. Parts of the Kapiti Coast, Wellington, Christchurch and Central Otago were similarly dry and received less than 50% of normal October rainfall. The Southern Alps of the South Island are a significant barrier to the westerly progression of weather systems typical in the New Zealand region. As a result, a rain-shadow is established whereby rainfall totals (at all time-scales) typically decline considerably as you move east of the mountain range. The rain-shadow effect of the Southern Alps was clearly demonstrated this month, with Mount Cook Village recording 411 mm of rainfall, whereas Lake Tekapo (~30 km south-east of Mount Cook Village) recorded just 42 mm of rainfall. Despite the lack of rainfall observed in many parts of the country, only one location (Motu, see table below) recorded a near-record low rainfall total for the month. Rainfall was above normal for the south-west of the South Island, however no locations observed record or near-record high rainfall totals for the month.

### Record<sup>3</sup> or near-record October rainfall totals were recorded at:

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
Low records or near-records				
Motu	102	49	1990	2nd-lowest

<sup>2</sup> New Plymouth sunshine is still omitted from this ranking while recent instrumentation changes are assessed.

<sup>3</sup> The rankings (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>.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.

## Temperature: Near average for most of New Zealand

Temperatures for the month as a whole were near average across the majority of New Zealand. This is reflected in the following three tables, which show relatively few locations observing record or near-record mean, mean maximum or mean minimum temperatures. Perhaps most notable this month was Wallaceville (Upper Hutt), which observed both its highest mean maximum air temperature on record and its second-lowest mean minimum air temperature on record. This suggests that the area observed relatively clear skies during the month, with a lack of cloud allowing for warm sunny days and cool clear nights. This suggestion is supported when observing the sunshine anomalies of nearby locations: Wellington observed 115% of normal October sunshine hours and Martinborough observed 122% of normal sunshine hours. The nation-wide average temperature in October 2014 was 12.2°C (0.1°C above the 1971-2000 October average from NIWA's seven station temperature series which begins in 1909).

### Record 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				
Te Puke	14.5	1.2	1973	3rd-highest
Low records or near-records				
Kaitaia	13.2	-1.2	1967	3rd-lowest

### 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				
Wallaceville	18.3	2.4	1939	Highest
Low records or near-records				
Secretary Island	12.8	-1.0	1985	2nd-lowest
Kaitaia	16.8	-1.2	1967	3rd-lowest

### 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				
Te Puke	10.1	1.7	1973	4th-highest
Low records or near-records				
Wallaceville	4.9	-2.7	1939	2nd-lowest
Cheviot	4.5	-1.0	1982	3rd-lowest
Lumsden	3.3	-1.2	1982	3rd-lowest
Tiwai Point	5.9	-1.0	1970	3rd-lowest
Hanmer Forest	1.3	-2.3	1906	4th-lowest
Timaru	3.1	-1.6	1885	4th-lowest

---

## Sunshine: Normal or above normal across the country

October was a sunny month for the lower half of the North Island as well as northern, central and south-eastern parts of the South Island. Four locations observed near-record high total sunshine hours for the month. Cheviot observed its third-highest total sunshine hours for October on record. The relatively clear skies observed here are likely to have contributed to cool overnight temperatures: Cheviot also observed its third-lowest mean minimum temperature for October on record. Remaining areas of the country were not quite as bright, and received near normal (90-109%) total sunshine hours. Of the available, regularly reporting sunshine observation sites, the sunniest four centres so far in 2014 (1 January to 31 October) are: Whakatane (2216 hours), Lake Tekapo (2020 hours), Nelson (2005 hours) and Blenheim (1997 hours).

### Record or near-record October sunshine hours were recorded at:

Location	Sunshine hours	Percentage of normal	Year records began	Comments
High records or near-records				
Martinborough	236	122	1986	2nd-highest
Cheviot	242	131	1983	3rd-highest
Dunedin (Musselburgh)	208	124	1980	3rd-highest
Balclutha	219	129	1964	3rd-highest

---

## October climate in the six main centres

October temperatures were above average in Auckland and Wellington but near average for the remaining four main centres. It was a relatively dry month in all main centres, but especially in Tauranga, Wellington and Christchurch which all received less than half of their respective normal rainfall. Wellington and Dunedin enjoyed a sunnier than normal month, whereas the remaining main centres observed near normal total sunshine hours. Of the six main centres in October 2014, Auckland was the warmest, Dunedin was the coolest, Christchurch was the driest, Hamilton was the wettest and cloudiest and Wellington was the sunniest.

### October 2014 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland <sup>a</sup>	15.0	+0.6	Above average
Tauranga <sup>b</sup>	14.4	+0.3	Near average
Hamilton <sup>c</sup>	12.9	-0.1	Near average
Wellington <sup>d</sup>	12.6	+0.6	Above average
Christchurch <sup>e</sup>	11.1	-0.3	Near average
Dunedin <sup>f</sup>	10.5	-0.4	Near average
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland <sup>a</sup>	69	76%	Below normal
Tauranga <sup>b</sup>	38	42%	Well below normal
Hamilton <sup>c</sup>	79	80%	Near normal
Wellington <sup>d</sup>	51 <sup>4</sup>	44%	Well below normal
Christchurch <sup>e</sup>	21	42%	Well below normal
Dunedin <sup>f</sup>	46	75%	Below normal
Sunshine			
Location	Sunshine (hours)	% of normal	Comments
Auckland <sup>a</sup>	184	104%	Near normal
Tauranga <sup>b</sup>	192	90%	Near normal
Hamilton <sup>g</sup>	163	92%	Near normal
Wellington <sup>d</sup>	220 <sup>5</sup>	115%	Above normal
Christchurch <sup>e</sup>	203 <sup>5</sup>	108%	Near normal
Dunedin <sup>f</sup>	208	124%	Above normal

<sup>a</sup> Mangere <sup>b</sup> Tauranga Airport <sup>c</sup> Hamilton Airport <sup>d</sup> Kelburn <sup>e</sup> Christchurch Airport <sup>f</sup> Musselburgh <sup>g</sup> Ruakura

<sup>4</sup> Missing two days of data.

<sup>5</sup> Missing one day of data.

---

## Highlights and extreme events

### Wind

On 2 October strong winds bore down on much of the country and flipped a trailer being towed across the Rimutaka Hill Road (SH 2).

On 6 October strong winds hit parts of Wellington, cancelling several *East by West* commuter ferry services. The Fire Service responded to dozens of callouts, including a roof lifting in Miramar and in Upper Hutt. Strong wind gusts knocked trees and vegetation on to power lines, cutting electricity to about 2100 homes in the capital's northern suburbs and areas further north. A fallen tree also knocked out *Tranz Metro's* overhead electrical lines near Taita, cancelling some services on the Hutt Valley and Melling rail lines and delaying services to Wairarapa during the evening rush hour. Farther north, a tree came down on to a house and caravan in Kawerau, and many roofs were lifted off on the east coast from Whangamata to Papamoa. A strong gust blew a truck into a ditch across the Napier-Hastings expressway. In Tauranga, strong winds and rough seas caused boats to break free of their moorings. Power was knocked out in the Auckland suburbs of Green Bay, Riverhead and Titirangi due to the high winds.

On 8 October strong winds in the Mackenzie Country knocked down six power lines, causing a loss of power to twelve homes between Twizel and Omarama.

On 29 October strong winds across Canterbury caused power outages to more than 1700 households in Coalgate, Darfield, Greendale and Homebush.

The highest wind gust was 196 km/hr, observed at Cape Turnagain on 6 October.

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

Location	Extreme wind gust (km/hr)	Date of extreme gust	Year records began	Comments
Auckland (Whenuapai)	109	29th	1972	Highest
Rotorua	104	6th	1972	Highest
Paraparaumu	130	6th	1972	Highest
Palmerston North	102	6th	1991	Highest
Wanganui	109	6th	1977	Highest
Farewell Spit	115	3rd	1973	Highest
Kaikohe	102	7th	1986	Equal highest
New Plymouth	106	29th	1972	Equal highest
Tauranga	106	6th	1973	2nd-highest
Auckland (Mangere)	107	29th	1971	2nd-highest
Pukekohe	80	29th	1986	2nd-highest
Hamilton	85	6th	1978	2nd-highest
Napier	107	6th	1973	2nd-highest
Westport	98	6th	1973	2nd-highest
Kaikoura	150	6th	1972	3rd-highest
Taupo	91	29th	1982	Equal 3rd-highest
Levin	91	6th	1971	Equal 3rd-highest

Gisborne	95	6th	1972	4th-highest
----------	----	-----	------	-------------

### Rain and slips

The highest 1-day rainfall was 204 mm, recorded at Milford Sound on 5 October.

**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
Campbell Island	22	7th	1991	Equal 4th-highest

### Temperatures

On 13 October north-westerly winds contributed to warm temperatures for the time of year throughout the lower South Island. Maximum temperatures (and departure from average October daily maximum temperature) observed included: Invercargill 23.0°C (+8.7°C), Manapouri 21.0°C (+6.1°C), Lumsden 22.5°C (+7.3°C), Queenstown 22.0°C (+6.7°C), Dunedin Airport 26.0°C (+9.8°C) and Wanaka 22.2°C (+5.9°C).

The highest daily maximum temperature was 27.5°C, observed at Christchurch (Riccarton) on 17 October. Blenheim was a close second-place, recording 27.4°C on 14 October. Timaru recorded the third-highest daily maximum temperature for the month, with 27.2°C observed on 17 October.

The lowest daily minimum temperature was -4.9°C, observed at Middlemarch on 25 October.

**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
<b>High records or near-records</b>				
Kaikohe	22.9	15th	1973	Highest
Tiwai Point	23.1	13th	1970	Highest
Masterton	25.8	16th	1992	2nd-highest
Nelson	24.6	14th	1943	3rd-highest
Ranfurly	24.1	13th	1975	3rd-highest
Whitianga	23.4	15th	1962	Equal 3rd-highest
Motu	23.4	15th	1990	Equal 3rd-highest
<b>Low records or near-records</b>				
Kerikeri	12.5	10th	1981	Lowest
Cape Reinga	12.9	10th	1971	2nd-lowest
Balclutha	7.3	3rd	1972	2nd-lowest
Te Kuiti	10.9	4th	1959	Equal 2nd-lowest
Westport	11.0	3rd	1966	3rd-lowest
Greymouth	9.6	3rd	1972	3rd-lowest



Campbell Island	4.2	27th	1991	3rd-lowest
Kaitaia	12.6	10th	1971	4th-lowest
Paeroa	12.4	4th	1971	4th-lowest
Hicks Bay	12.0	11th	1972	4th-lowest
Secretary Island	8.9	3rd	1989	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
<b>High records or near-records</b>				
Kerikeri	17.1	29th	1981	Highest
Orari Estate	16.0	23rd	1972	2nd-highest
Warkworth	16.1	29th	1966	Equal 3rd-highest
Te Puke	15.2	29th	1973	Equal 3rd-highest
Campbell Island	9.3	2nd	1991	Equal 3rd-highest
Whangaparaoa	15.0	29th	1982	Equal 4th-highest
<b>Low records or near-records</b>				
Whangaparaoa	0.9	7th	1982	Lowest
Wallaceville	-3.2	5th	1939	Lowest
Te Kuiti	-1.0	25th	1959	2nd-lowest
Martinborough	-1.2	5th	1986	2nd-lowest
Puysegur Point	2.8	4th	1978	Equal 2nd-lowest
Timaru	-3.3	4th	1885	3rd-lowest
Haast	-0.4	4th	1949	Equal 3rd-lowest
Cheviot	-2.2	5th	1982	4th-lowest
Kaitaia	4.7	8th	1985	Equal 4th-lowest
Kerikeri	3.2	8th	1981	Equal 4th-lowest

### **Lightning and Hail**

On 4 October a southerly change brought hail to areas of Wellington in the afternoon including Lower Hutt and the Ngauranga Gorge.

On 6 October a bolt of lightning killed two calves in Featherston. The lightning melted the fence line and carved a two metre trench in the soil.

In the early hours of 29 October, thunderstorms struck across Northland and Auckland. Approximately 16,000 lightning strikes were recorded, including one which struck an *Air New Zealand* flight travelling from Auckland to New Plymouth. The areas of Kaikohe, Kaeo, Omapere and Waipapa were temporarily without power due to faults caused by lightning strikes.

In the late hours of 29 October and early hours of 30 October the Auckland region was hit by a number of thunderstorms. Large hail stones were reported in Auckland, whilst 600 lightning strikes were recorded from Auckland to Taranaki. One home in East Tamaki was struck by lightning, resulting in a 2-metre wide hole in the roof.

**Snow and ice**

On 3 October snow fell to low elevations across the North and South Islands. State Highway 94 was closed from lower Hollyford to The Chasm as a result of snow.

On 4 October a southerly change brought snow to the Rimutaka Hill road north of Wellington.

On 6 October snow fell to approximately 150 metres above sea level in Southland, and settled down to elevations of 300 metres above sea level. The snowfall resulted in lamb losses and the cancellation of two stages of the Junior Tour of Southland cycling event.

On 7 October snow overnight closed Desert Road, with the road reopened just after 8 a.m.

**Cloud and fog**

On 13 October heavy fog was reported in northern parts of Christchurch, prompting a warning for motorists in those areas to exercise caution. Flights at Christchurch Airport were not affected by fog.

---

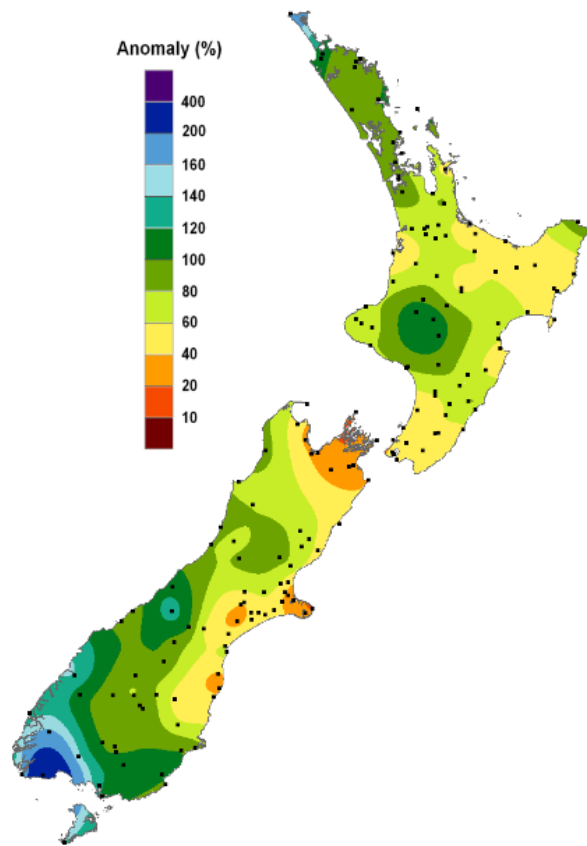
**For further information, please contact:****Mr Chris Brandolino**

NIWA Forecaster – NIWA National Climate Centre  
Tel. 09 375 6335, Mobile (027) 886 0014

For climate data enquiries, please contact:

**Mr Gregor Macara**

Climate Scientist, NIWA Wellington  
Tel. 04 386 0509



*October 2014 total rainfall, expressed as a percentage of the 1981-2010 normal.*

*Rainfall was below normal (50-79%) or well below normal (< 50%) for many eastern and northern parts of the South Island, as well as in Wellington, Wairarapa, the Kapiti Coast, Hawke's Bay, Gisborne and the Bay of Plenty. Conversely, rainfall was at least above normal (120-149%) for the south-west of the South Island (blue colours on the map).*

<http://www.niwa.co.nz/climate> © Copyright NIWA 2014.

All rights reserved.