

Wettest June on record throughout Central Otago and significant snow event for the South Island in late June

Rainfall	June was a relatively wet month for the eastern and northern South Island, as well as the southern and south-eastern North Island. Areas of North Otago, South and mid-Canterbury received more than 400 percent of June normal rainfall. More than 200 percent of June normal rainfall was recorded in parts of South and Central Otago, Mackenzie Country, North Canterbury and Marlborough. In contrast, rainfall was below normal (50 to 79 percent of June normal rainfall) in parts of Fiordland, West Coast, Manawatu, inland Taranaki and eastern Bay of Plenty.
Soil moisture	As at 1 July, soil moisture levels across the majority of New Zealand had reached field capacity. Areas of Otago, Canterbury and Marlborough were wetter than normal for this time of year, and were also observing a soil water surplus. Below normal soil moisture deficit levels were observed in northern parts of the Coromandel and Great Barrier Island.
Temperature	Mean temperatures for June were above average (0.5 to 1.2°C above the June average) across areas of southern and western Southland, Fiordland, Westland, Manawatu, Hawke's Bay, Gisborne and Bay of Plenty. June temperatures throughout inland Canterbury were below average (0.5 to 1.2°C below the June average). In general, June temperatures were near average throughout the remainder of the country (within 0.5°C of June average).
Sunshine	Sunshine hours for June were above normal (110 to 124 percent of June normal) for northern Manawatu and western Southland. Sunshine was well above normal (more than 125 percent of June normal) in Fiordland and southern Westland. Sunshine hours were below normal (75-90 percent of June normal) throughout areas of Otago, Marlborough, Tasman, Nelson, Wellington and coastal Taranaki.

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Overview

June 2013 was characterised by lower pressures than normal across New Zealand and to the north and northeast of the country, with persistent high pressure centres south and southeast of Tasmania. This resulted in an anomalous east-southeasterly flow over the South Island, which contributed to well above normal rainfall totals recorded throughout areas to the east of the Southern Alps. Of particular note was the storm of 19-21 June, which brought the strongest sustained 10-minute winds that Wellington airport has seen since 1985. These strong winds resulted in widespread damage to infrastructure and vegetation in Wellington, and a loss of power for up to 30,000 homes. In addition, cold south-southeasterly winds associated with the storm resulted in a significant snowfall event across the South Island. Areas of the Mackenzie Country and the Maniototo bore the brunt of snowfalls, with unofficial reports of more than half a metre of snow there. Most South Island ski areas received in excess of one metre of new snow by the end of the storm, with Mt Hutt inundated by an estimated new snowfall total approaching three metres.

June was a relatively wet month for eastern and northern parts of the South Island, as well as southern and south-eastern parts of the North Island. Locations throughout Central Otago recorded their wettest June since respective records began, as did Timaru and Lincoln in Canterbury. Areas of North Otago, South and mid-Canterbury received more than 400 percent of June normal rainfall. More than 200 percent of June normal rainfall was recorded in parts of South Otago, Central Otago, Mackenzie Country, North Canterbury and Marlborough. Similarly, Nelson, Wellington and the Wairarapa Coast experienced well above normal rainfall for the month (greater than 150 percent of June normal rainfall), and above normal rainfall (between 120 and 150 percent of June normal rainfall) was recorded in parts of northern Southland and Waikato. In contrast, rainfall was below normal (50 to 79 percent of June normal rainfall) in parts of Fiordland, West Coast, Manawatu, inland Taranaki and eastern Bay of Plenty. As at 1 July, soil moisture levels across the majority of New Zealand had reached field capacity. Areas of Otago, Canterbury and Marlborough were wetter than normal for the time of year, and were also observing a soil water surplus. Below normal soil moisture deficit levels were observed in northern parts of the Coromandel Peninsula and Great Barrier Island.

Mean temperatures for June were above average (0.5 to 1.2°C above the June average) across areas of southern and western Southland, Fiordland, Westland, Manawatu, Hawke's Bay, Gisborne and Bay of Plenty. June temperatures throughout inland Canterbury were below average (0.5 to 1.2°C below the June average). In general, June temperatures were near average throughout the remainder of the country (within 0.5°C of June average). The interim nation-wide average temperature in June 2013, using only six stations (most of the month was missing for Nelson owing to vandalism at the site) from NIWA's seven-station temperature series which begins in 1909 is 8.9°C, an anomaly of +0.4°C. Sunshine hours for June were above normal (110 to 124 percent of June normal) for northern Manawatu and western Southland. Sunshine was well above normal (more than 125 percent of June normal) in Fiordland and southern Westland. Sunshine hours were below normal (75-90 percent of June normal) throughout areas of Otago, Marlborough, Tasman, Nelson, Wellington and coastal Taranaki. Of the available, regularly reporting sunshine observation sites, the sunniest four centres so far in 2013 (January to June) are: Whakatane (1435 hours), New Plymouth (1390 hours), Blenheim (1273 hours) and Paraparaumu (1261 hours).

Further Highlights:

- The highest temperature was 22.1 °C, recorded at Winchmore on 2 June.
- The lowest temperature was -12.1°C, observed at Lake Tekapo on 28 June.
- The highest 1-day rainfall was 187 mm, recorded at Pigeon Creek, Tasman on 3 June.
- The highest wind gust was 202 km/hr, at Mt Kaukau, Wellington, on 20 June.
- In June 2013, Wellington was the wettest, Auckland was the warmest, Tauranga was the sunniest and driest, Christchurch was the coolest, and Dunedin was the cloudiest of the six main centres.
- Of the available, regularly reporting sunshine observation sites, the sunniest four centres so far in 2013 (January to June) are: Whakatane (1435 hours), New Plymouth (1390 hours), Blenheim (1273 hours) and Paraparaumu (1261 hours).

For further information, please contact:

Dr Brett Mullan

Principal Scientist, Climate Variability and Change, NIWA Wellington

Tel. 04 386 0508

Rainfall: Wettest June on record across Central Otago and coastal areas of Canterbury. Well above normal rainfall for many areas east of the Southern Alps, and south-eastern parts of the North Island. Below normal rainfall for Fiordland and the southern West Coast.

June was a relatively wet month for eastern and northern parts of the South Island, as well as southern and south-eastern parts of the North Island. This was especially the case for areas of North Otago, South and mid-Canterbury, which received more than 400 percent of June normal rainfall. More than 200 percent of June normal rainfall was recorded in parts of South Otago, Central Otago, Mackenzie Country, North Canterbury and Marlborough. Similarly, Nelson, Wellington and the Wairarapa Coast experienced well above normal rainfall for the month (between 120 and 150 percent of June normal rainfall), and above normal rainfall (greater than 120 percent of June normal rainfall) was recorded in parts of northern Southland and Waikato. In contrast, rainfall was below normal (50 to 79 percent of June normal rainfall) in parts of Fiordland, West Coast, Manawatu, inland Taranaki and eastern Bay of Plenty.

Locations throughout Central Otago recorded their wettest June since their respective records began, as did Timaru and Lincoln in Canterbury. Christchurch (Riccarton) recorded the highest June rainfall recorded in a group of surrounding stations, since records began in 1863.

As at 1 July, soil moisture levels across the majority of New Zealand had reached field capacity. Much of Otago, Canterbury and Marlborough were wetter than normal for the time of year, which contributed to the observation of a soil water surplus in these areas. Below normal soil moisture deficit levels were observed in northern parts of the Coromandel and Great Barrier Island.

Record¹ or near-record June rainfall totals were recorded at:

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
High records or near-records				
Masterton	150	148	1992	4th-highest
Wallaceville	224	168	1924	4th-highest
Takaka	345	170	1976	4th-highest
Motueka	299	212	1943	2nd-highest
Winchmore	221	378	1909	3rd-highest
Ashburton	224	388	1909	2nd-highest
Waipara West	151	285	1973	2nd-highest
Christchurch (Airport)	187	324	1863	3rd-highest
Christchurch (Riccarton)	220	376	1863	Highest
Lincoln	209	365	1881	Highest
Orari Estate	214	452	1897	2nd-highest
Timaru	176	482	1881	Highest
Oamaru (Airport)	167	437	1898	4th-highest
Oamaru	186	477	1898	2nd-highest
Dunedin (Musselburgh)	171	296	1918	2nd-highest
Cromwell	105	299	1949	Highest
Ranfurly	116	384	1943	Highest
Lauder	105	335	1924	Highest
Alexandra	99	301	1983	Highest
Lumsden	111	139	1982	Highest
Low records or near-records				
Secretary Island	112	36	1985	Lowest

Temperature: Above average June temperatures across southern and western South Island. Below average temperatures throughout inland Canterbury. Generally near average temperatures elsewhere.

Mean temperatures for June were above average (0.5 to 1.2°C above the June average) across areas of southern and western Southland, Fiordland, Westland, Manawatu and Hawke's Bay, Gisborne and Bay of Plenty. June temperatures throughout inland Canterbury were below average (0.5 to 1.2°C below the June average). In general, June temperatures were near average throughout the remainder of the country (within 0.5°C of June average). Milford Sound recorded its highest June mean maximum air temperature since records began in 1934.

¹ The rankings (1st, 2nd, 3rd.etc) in all Tables in this summary are relative to climate data from a *group* of nearby stations, some of which may no longer be operating. The current climate value is compared against all values from any member of the group, without any regard for homogeneity between one station's record, and another. This approach is used due to the practical limitations of performing homogeneity checks in real-time.

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

Location	Mean air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Dargaville	13.5	1.4	1943	3rd-highest
Motu	7.5	1.0	1990	4th-highest
Masterton	9.3	1.4	1992	3rd-highest
Secretary Island	10.2	0.8	1985	4th-highest

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

Location	Mean maximum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Leigh	17.4	1.4	1966	4th-highest
Motu	12.8	1.8	1990	2nd-highest
Milford Sound	11.2	1.6	1934	Highest
Tiwai Point	11.1	1.1	1970	2nd-highest

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

Location	Mean minimum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Dargaville	10.6	1.7	1943	3rd-highest
Masterton	5.1	2.6	1992	Highest
Wairoa	6.9	1.8	1964	4th-highest
Haast	6.1	1.6	1949	4th-highest
Secretary Island	7.8	0.9	1985	4th-highest
Oamaru	3.7	1.1	1908	Highest
Alexandra	-0.1	1.1	1983	4th-highest

Sunshine: Above normal June sunshine hours for northern Manawatu, western Southland and southern Westland. Below normal sunshine for eastern and northern areas of the South Island, and areas of the lower North Island.

Sunshine hours for June were above normal (110 to 124 percent of June normal) for northern Manawatu and western Southland. Sunshine was well above normal (more than 125 percent of June normal) in Fiordland and southern Westland. Sunshine hours were below normal (75-90 percent of

June normal) throughout areas of Otago, Marlborough, Tasman, Nelson, Wellington and coastal Taranaki.

Of the available, regularly reporting sunshine observation sites, the sunniest four centres so far in 2013 (January to June) are: Whakatane (1435 hours), New Plymouth (1390 hours), Blenheim (1273 hours) and Paraparaumu (1261 hours).

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

Location	Sunshine hours	Percentage of normal	Year records began	Comments
High records or near-records				
Cheviot	113	124	1983	4th-highest
Low records or near-records				
Martinborough	78	73	1986	4th-lowest
Blenheim	111	75	1947	Lowest
Cromwell	62	70	1979	2nd-lowest

June climate in the six main centres

June rainfall was over three-times normal in Christchurch, which (for the airport) was the third-highest June rainfall recorded in a group of surrounding stations, in records which began in 1863. Dunedin recorded nearly three-times normal rainfall, which was the second-highest June rainfall recorded in a group of surrounding stations, in records which began in 1918. June rainfall was at least above normal in the remaining main centres. All main centres had near average mean air temperatures for June. Sunshine was near normal in Auckland, Tauranga and Hamilton, and below normal in Wellington, Christchurch and Dunedin.

In June 2013, Wellington was the wettest, Auckland was the warmest, Tauranga was the sunniest and driest, Christchurch was the coolest, and Dunedin was the cloudiest of the six main centres.

June 2013 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland ^a	11.5	-0.3	Near average
Tauranga ^b	11.4	0.4	Near average
Hamilton ^c	9.1	-0.3	Near average
Wellington ^d	9.9	0.2	Near average
Christchurch ^e	6.5	0.1	Near average
Dunedin ^f	7.4	0.1	Near average
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland ^a	177	149%	Above normal
Tauranga ^b	140	122%	Above normal
Hamilton ^c	165	131%	Above normal
Wellington ^d	270	196%	Well above normal
Christchurch ^e	187	324%	3 rd -highest June rainfall on record
Dunedin ^f	171	296%	2 nd -highest June rainfall on record
Sunshine			
Location	Sunshine (hours)	% of normal	Comments
Auckland ^a	109	94%	Near normal
Tauranga ^b	123	90%	Near normal
Hamilton ^g	94	91%	Near normal
Wellington ^d	78	79%	Below normal
Christchurch ^e	93	80%	Below normal
Dunedin ^f	75	78%	Below 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 187 mm, recorded at Pigeon Creek, Tasman on 3 June.

On 3 June, wet weather caused flooding in Southland, with the Mataura River peaking on the evening of 3 June. Some roads in Southland were also closed due to flooding on 2-3 June. Motorists were advised to take caution on SH 6 from Harihari to Makarora due to flooding on parts of the road.

On 4 June, flash flooding in the Auckland suburbs of Massey, Glen Eden, Stanmore Bay, and Mt Roskill caused damage to some houses and garages, and a supermarket in Green Bay (west Auckland) was also flooded. Several Southland roads remained closed due to flooding caused by heavy rain and melting snow.

On 9 June, the Tauranga Sports Junior Rugby Club annual tournament was postponed due to heavy rain. Residents near Brightwater and Wakefield in the Tasman Region were advised to boil their drinking water for a number of days due to contamination associated with heavy rainfall.

On 11 June, a heavy deluge caused surface flooding and overflowing drains in parts of Hastings.

Torrential rainfall occurred in the Nelson and Tasman regions on the 15th and 16th of June. A 200 m long slip near Kaiteriteri destroyed a house, and resulted in the death of a 63-year-old woman. The Anatoki Salmon Farm was severely damaged by a landslide, with much of the fish stock destroyed. Numerous roads were closed in the region due to flooding and slips. A number of motorists were trapped and residents were isolated when two landslides blocked a road near Tapawera. Residents of a home in Titirangi, west Auckland, were evacuated after a landslide forced a tree through their roof. Heavy rain caused widespread surface flooding and power cuts in the Auckland region. SH 8 between Cromwell and Clyde was closed for several hours, as heavy rain compromised the integrity of adjacent cliffs, resulting in rocks the size of car bonnets falling onto the road. SH 1 from Blenheim to Kaikoura was closed for a time due to flooding.

On 17 June, another slip damaged a home in the Tasman region. A number of roads in the region were closed due to slips and flooding. In parts of Golden Bay there were minor sewage overflows. In Christchurch, widespread surface flooding occurred in a number of suburbs, causing disruption for motorists and flooding houses. A number of schools, shops, and roads in the Canterbury region were closed due to flooding. Water had to be trucked in to Akaroa, Takamatua, and Duvauchelle on Banks Peninsula where dirty stormwater contaminated supply to the area, and boil water notices were issued in parts of Christchurch. In north Otago, rivers were at or above record levels. Overnight on 16-17 June, a series of slips came down on SH 2 at Rimutaka Hill, blocking the road for a few hours.

On 17 June, transport routes in and out of Dunedin and Oamaru were cut off by flooding for a time. Flooding caused SH 1 to close in Otago, between Waikouaiti and the Karitane turn-off, from Big Kuri Creek to Hampden, from Maheno to Reidston, and from Pukeuri to Waitaki River Bridge. SH 83 from

Seven Mile Rd to Otematata, SH 87 from Hyde to Kyeburn, and SH 82 from Waimate to Kurow were closed due to flooding. In Taranaki, one person died in a car crash attributed to wet roads.

On 18 June, SH 1 between Pukeuri and Seven Mile Road remained closed due to flooding, as was the case for a number of roads in Christchurch. The Ashley Bridge over the Waimakariri River was closed indefinitely when it was discovered that floodwaters had swept away one of its piers, and damage to the Opihi River rail bridge caused the main trunk line to be closed for a week. In Hamilton, heavy rain associated with thunderstorms caused flooding.

On 19 June, a slip caused the cancellation of four trains on the Johnsonville line in Wellington.

On 20 June, slips closed several roads across Dunedin. Additionally, a Dunedin woman was rescued after a slip trapped her inside her house. Several homes were flooded in Leeston, Canterbury, and some schools in the area were closed due to flooding. A number of car crashes in the Canterbury region were attributed to flooding.

On 20-21 June, Wellington was hit by the storm that had been working its way up the country. Surface flooding was recorded in many areas, and train tracks were undermined by high swells. The Hutt Valley line between Wellington and Petone was closed, as was the Melling line from Melling to Petone, and the Wairarapa line from Wellington to Upper Hutt. These rail lines were closed for almost a week. In Kaitaia, minor surface flooding was reported. Severe flooding occurred in the Selwyn District in Canterbury, especially around the town of Leeston. Christchurch's stormwater system struggled to cope with the amount of rain, and the sewer system overflowed in some areas. The worst flooding of Lake Ellesmere in decades caused thousands of hectares of farmland to flood and forced the evacuation of some homes. SH 1 between Blenheim and Kaikoura was closed for a time due to flooding.

On 22 June, 11 houses in Dunedin were evacuated due to a slip. A slip fell onto Lyttelton Museum, which had already been closed due to earthquake damage.

On 25 June, no major roads in Southland, Canterbury and Otago were closed. However, some minor roads in these regions were still closed due to flooding, slips, and tree falls.

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

Location	Extreme 1-day rainfall (mm)	Date of extreme rainfall	Year records began	Comments
Wallaceville	68	20th	1939	4th-highest
Motueka	141	16th	1956	2nd-highest
Ashburton	54	19th	1927	4th-highest
Waipara West	54	16th	1973	2nd-highest
Christchurch (Airport)	56	16th	1873	4th-highest
Christchurch (Riccarton)	69	16th	1873	3rd-highest
Tara Hills	65	2nd	1949	2nd-highest
Wanaka	62	2nd	1927	4th-highest
Ranfurly	33	2nd	1943	Highest
Queenstown	65	2nd	1890	4th-highest

Lumsden	27	1st	1982	Highest
Cromwell	49	2nd	1949	2nd-highest
Lauder	49	2nd	1924	Highest
Alexandra	49	2nd	1983	Highest

Wind

The highest wind gust was 202 km/hr, at Mt Kaukau, Wellington, on 20 June.

On 2 June, high winds in the Mackenzie Country overturned vehicles and downed powerlines. The gusts blew out the windows of a caravan, and a section of SH 8 between Fairlie and Twizel was temporarily closed due to wind gusts. A motorhome was overturned on the Mt Cook Road, and a motorcyclist was blown off his bike in Central Otago.

On 4 June in Wellington, strong gales and high seas forced the Te Matau a Maui sailing waka to anchor in Island Bay instead of entering the harbour. The gales in Wellington caused power cuts in Tawa and Titahi Bay as falling trees downed powerlines. Some flights from Wellington were cancelled due to the wind. Gale force winds cut power and felled trees in Westport and the Buller district, and were of such strength that trampolines were displaced.

Unusually strong gusts brought down trees in Rotorua overnight on 6 June.

On 16 June, high winds in Auckland caused power outages.

On 18 June, high winds felled trees and caused minor power outages in Hamilton.

On 19 June, a tornado touched down near Ohaupo, southwest of Hamilton.

On 20 June, high winds caused cancellation of ferry services in Auckland.

On 20-21 June, severe gales associated with a significant storm event hit Wellington, causing widespread damage to infrastructure and vegetation in the region. 30,000 homes were without power, and the Fire Service attended over 900 callouts on the night of the 20 June. Trees were felled, roofs blown off, and windows smashed due to the wind. The airport was closed to all flights during the worst of the storm, with train, harbour ferry and interisland ferry services cancelled. The Interislander ferry Kaitaki broke off its moorings and had to be anchored in Wellington Harbour for the night, with 50 staff on board. A large number of schools were closed in the region. A gust of 202 km/hr was recorded at Wellington's Mt Kaukau, and swells were up to 15m in Cook Strait. On the south coast of Wellington, large waves damaged houses, roads, and sea walls. On the west coast of the South Island, strong winds caused the roof to be lifted off Whataroa Store and a flight from Christchurch to Hokitika had to turn around. In Kaitiaki, trees were felled due to wind. Performances by the NZ Symphony Orchestra and the NZ Royal Ballet were cancelled in Auckland because performers were stuck in Wellington due to the storm.

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

Location	Extreme wind gust (km/hr)	Date of extreme gust	Year records began	Comments
Cape Reinga	156	21st	1974	Equal 3rd-highest
Kaikohe	82	16th	1986	4th-highest
Auckland (Mangere)	120	9th	1971	Highest
Mahia	106	21st	1991	3rd-highest
Mt Kaukau (Wellington)	202	20th	1969	Highest
Wellington (Airport)	143	20th	1972	Highest
Hawera	100	4th	1986	2nd-highest
Wanganui	126	20th	1977	Highest
Westport	109	4th	1973	2nd-highest
Cape Campbell	150	20th	1963	Highest
Christchurch (Airport)	93	20th	1972	Equal 3rd-highest
Tara Hills	106	2nd	1985	Highest
Wanaka	78	2nd	1992	Highest
Lauder	115	2nd	1981	2nd-highest

Temperatures

The highest temperature was 22.1 °C, recorded at Winchmore on 2 June. This was associated with a northwesterly airflow over the South Island which resulted in foehn effect winds for eastern areas of Canterbury, and rain falling along the Southern Alps.

The lowest temperature was -12.1°C, observed at Lake Tekapo on 28 June. Relatively low overnight minimum temperatures occurred in many inland areas after the passage of the 19-21 June storm event. These were associated with enhanced radiative cooling of the near surface atmosphere that resulted from clear skies, and snow lying on the ground surface.

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

Location	Extreme maximum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Leigh	20.7	8th	1966	4th-highest
Whakatane	20	12th	1975	Highest
Motu	16.9	13th	1990	Highest
Turangi	18.6	12th	1968	3rd-highest
Mahia	19.2	18th	1990	Equal 4th-highest
Paraparaumu	19.4	10th	1953	3rd-highest
Motueka	20.6	2nd	1956	3rd-highest
Appleby	19.4	10th	1932	3rd-highest

Cheviot	20.8	2nd	1982	3rd-highest
Lake Tekapo	17.9	2nd	1925	3rd-highest
Ranfurlly	17.1	1st	1975	3rd-highest
Dunedin (Musselburgh)	20.1	1st	1947	2nd-highest
Manapouri	16.2	1st	1963	Equal 2nd-highest
Lumsden	17	1st	1982	Equal highest
Gore	17.7	1st	1971	Highest
South West Cape	14.7	8th	1991	3rd-highest
Low records or near-records				
Cape Reinga	11.5	20th	1971	3rd-lowest
Kaitaia Observatory	11.9	27th	1985	3rd-lowest
Kaitaia	11.7	20th	1971	4th-lowest
Kaikohe	9.3	20th	1973	Equal 2nd-lowest
Port Taharoa	11	27th	1974	Equal 4th-lowest
Takaka	7.9	22nd	1978	3rd-lowest
Puysegur Point	6.3	20th	1978	Equal 4th-lowest
Motueka	5.6	22nd	1972	Lowest
Appleby	5.9	22nd	1941	2nd-lowest
Nelson	6.3	22nd	1943	2nd-lowest
Blenheim	5.4	22nd	1947	Lowest
Hanmer Forest	0.9	22nd	1972	2nd-lowest
Cheviot	3.8	22nd	1982	2nd-lowest
Waipara West	3.8	22nd	1973	4th-lowest
Le Bons Bay	4.8	22nd	1984	4th-lowest
Orari Estate	3.5	22nd	1972	Equal 4th-lowest

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

Location	Extreme minimum (°C)	Date of extreme temperature	Year records began	Comments
Low records or near-records				
Cheviot	-7	12th	1982	Lowest
Ranfurlly	-9.8	23rd	1975	3rd-lowest
High records or near-records				
Motu	11	18th	1990	3rd-highest
Ngawi	15.1	2nd	1972	3rd-highest
Waipawa	12.1	12th	1945	Equal 4th-highest
Paraparaumu	14.7	2nd	1972	Highest
Wellington (Airport)	14.2	2nd	1972	Equal 3rd-highest
Takaka	12.7	3rd	1978	2nd-highest
Farewell Spit	13.9	4th	1972	3rd-highest
Greymouth	13.5	2nd	1972	Highest
Haast	13.1	2nd	1949	2nd-highest
Secretary Island	12.7	17th	1988	3rd-highest
Puysegur Point	12.5	1st	1978	Highest

Blenheim	13.3	3rd	1947	4th-highest
Hanmer Forest	13.2	2nd	1972	Highest
Culverden	14.9	2nd	1930	Highest
Waipara West	15.0	2nd	1973	2nd-highest
Le Bons Bay	14.0	2nd	1984	2nd-highest
Dunedin (Musselburgh)	10.8	2nd	1947	4th-highest
Lumsden	9.2	2nd	1982	3rd-highest
Nugget Point	10.4	2nd	1972	3rd-highest
South West Cape	11.4	1st	1991	Equal 2nd-highest

Snow and ice

On 3 June, Burkes Pass near Tekapo had to be closed due to up to 50 cm of snow on the road, catching out more than 100 motorists.

On 4 June, SH 8 between Fairlie and Twizel was closed to towing vehicles due to snow. Motorists were warned to take extra care on the icy roads, and to carry chains when travelling the alpine passes.

On 4 and 5 June, Arthur's Pass was closed to towing vehicles due to snow.

On 17 June, SH 80 from Pukaki to Mt Cook was closed to towing vehicles due to snow, and chains were essential for all other vehicles.

On 19 June, the occupants of 20 cars were rescued at Jollies Pass in Southland after they were stranded by snow.

On 20-21 June, a severe snow event occurred in the South Island. Relatively little snow settled at isolated sea level locations over the course of the event, however significant accumulations occurred at higher elevations. Heaviest snowfalls occurred in areas including Tekapo, Naseby, Clarks Junction and the Hakataramea Valley, where unofficial snow depths of 60 cm or more were reported. Elsewhere, unofficial snow depths of 30 cm or more were reported in areas of northern Southland, eastern Central Otago, and throughout the foothills and high country of Canterbury. Fairlie and Middlemarch were cut off by snow and with no power, and Naseby was also cut off. The snowfall proved especially challenging for farmers. In some cases, considerable snow clearing efforts were required in order to reach livestock and provide them with feed. By the end of the storm, most ski fields in the South Island had received over a metre of new snow, with accurate measurement of actual snowfall proving difficult by virtue of the considerable amount of snow that fell, combined with drifting caused by strong winds. Staff at Mt Hutt in Canterbury estimated a total of 2.8 m of new snow from the storm, with drifts in excess of 6 m on their access road. Flights from Invercargill, Queenstown, and Dunedin were cancelled or delayed due to snow. A number of state highways were closed due to snow, including: SH 85 from Omakau to Palmerston, SH 87 from Kyeburn to Outram, SH 6 from Kingston to Lumsden, SH 97 from Five Rivers to Mossburn, SH 6 from Queenstown to Kingston, SH 6 from Haast to Wanaka, SH 8 Lindis Pass, SH 80 from Glentanner to Mt Cook, SH 8 from Twizel to Fairlie (Burkes Pass), SH 79 from Geraldine to Fairlie, SH 73 from Springfield to Arthurs Pass (Porters Pass), Arthur's Pass on SH 73, and SH 7 from Hanmer turnoff to

Springs Junction (Lewis Pass). Chains had to be carried on SH 94 from Te Anau to Milford Sound. Numerous schools were closed throughout the South Island. The Southland finals of the Smokefree Rockquest were cancelled due to poor weather conditions. Snow also affected the central North Island, where National Park Primary School was closed, and the following state highways were closed: SH 1 Rangipo to Taihape (Desert Road), SH 46 Rangipo to Tongariro, SH 48 Tongariro National Park, SH 47 Turangi to National Park, and SH 4 and 49 National Park to Waiouru.

In central Otago on 22 June, three hunters were rescued by helicopter from a remote hut after they became trapped by snow on 20 June.

On 23 June, a large avalanche triggered during snow safety operations by staff at Mt Hutt severely damaged the Towers Triple Chair. Porters ski area also suffered damage to infrastructure as a result of avalanche activity.

On 25 June, ice caused a truck to crash off the road near Mangakino. No major roads in Southland, Canterbury and Otago were closed on 25 June but a number of state highways required chains due to snow, or required caution due to icy roads. The inland Kaikoura Road between Waiau and SH 1 was closed to all traffic after a 15-tonne avalanche blocked the road.

Lightning and hail

On 17 June, an Air New Zealand plane flying from Christchurch to Auckland was struck by lightning, giving passengers a fright.

On 20 June, lightning strikes caused the evacuation of a number of homes in west Auckland. Intense hail storms struck west Auckland, where the accumulation of hail on roads made for treacherous driving conditions.

Cloud and fog

On 14 June, fog at Hamilton airport caused disruption to flights, resulting in at least one flight being diverted to Rotorua.

On 24 and 26 June, thick fog covered Hamilton so some flights were delayed or diverted to Tauranga.

For further information, please contact:

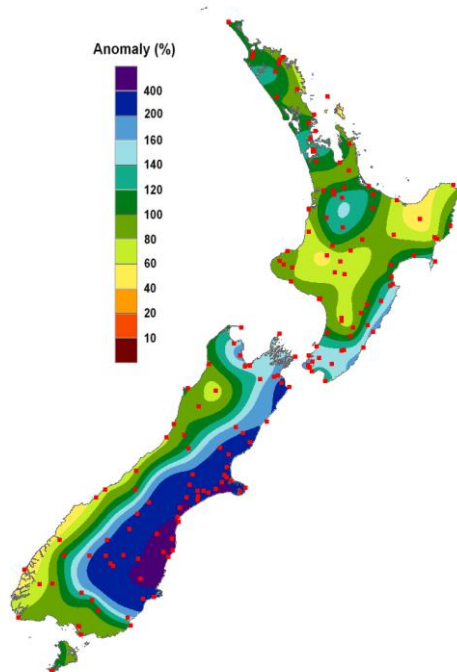
Dr Brett Mullan

Principal Scientist, Climate Variability and Change, NIWA Wellington
Tel. 04 386 0508

For climate data enquiries, please contact:

Ms Petra Chappell

Climate Analyst – NIWA National Climate Centre, Auckland
Tel. 09 375 2052



Rainfall Anomaly,
9am 01/06/2013 to 9am 01/07/2013

June 2013 rainfall totals, expressed as a difference from normal (%).

Purple colour indicates more than 400 % of June normal rainfall occurred in eastern areas of Otago and Canterbury. Dark blue colour indicates more than 200 % of June normal rainfall was recorded throughout Central Otago, areas of inland and North Canterbury, and Marlborough. Notably, it was the wettest June on record across Central Otago. Well above normal rainfall (more than 150 % of normal June rainfall) was recorded in parts of Nelson, Wellington and the Wairarapa Coast (lighter blue shades). Yellow shades indicate below normal and well below normal rainfall totals for June (less than 80 % of normal June rainfall) in parts of Fiordland, West Coast, Manawatu, inland Taranaki and eastern Bay of Plenty.