

## Dry in the northeast North Island, and also south Canterbury

<b>Rainfall</b>	An unusually dry June in the north and east of the North Island, as well as South Canterbury. In contrast, extremely wet over the northern half of the South Island. Elsewhere, near normal rainfall was generally observed.
<b>Temperatures</b>	Unusually cool in eastern and alpine areas of the South Island. Rather cool in Wellington and the Wairarapa, Central Plateau, Waikato, and parts of the Bay of Plenty. Generally near average temperatures elsewhere.
<b>Sunshine</b>	An extremely sunny June for the southern South Island. Rather sunny across much of the North Island, too.
<b>Soil moisture</b>	Below normal soil moisture levels in south Canterbury for the time of year; near normal elsewhere.

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### Overview

Lower pressures than usual affected the area to the southeast of New Zealand during June 2012, resulting in more southwest winds than normal over the country. The month was notable due to several rapidly deepening, intense weather systems in the New Zealand region. In particular, a rapidly deepening low over the Tasman Sea on 5 and 6 June produced heavy precipitation in Tasman and Buller, and snow to sea level in Canterbury, whilst intense lows on 18 and 25/26 June resulted in severe winds across the South Island (and heavy rainfall in some areas).

It was an unusually dry June in the north and east of the North Island, as well as in South Canterbury. Rainfall totals in Northland, Coromandel, Bay of Plenty, Gisborne, Hawkes Bay, and South Canterbury were less than half of June normal, and it was the driest June on record for Whangarei, Rotorua and Whakatane. Below normal totals (between 50 and 79 percent of June normal) were also observed in Auckland, Waikato, Taranaki, Central Plateau and the Wairarapa.

In contrast, it was an extremely wet June over the northern half of the South Island, with totals exceeding 120 percent of normal. Notably, in Christchurch and Nelson, totals were in the order of twice the June normal (i.e. 200 percent of normal). Near normal June rainfall totals were generally observed elsewhere.

June 2012 was notable for an extremely cold event on 6 June, in which afternoon (maximum) temperatures in Canterbury, Blenheim, around Arthurs Pass, and on the West Coast set new low records for the month, and in some cases, broke all-time (any month) records, too. Maximum temperatures on 6 June in Canterbury struggled to reach even 1 degree, with heavy snow falling throughout the daylight hours. In between southerly outbreaks, winter-time ridges of high pressure brought clear skies, and light winds, to the country on 13, 16, 17, and 30 June, producing extremely cold mornings and/or severe frosts for many regions.

For the month as a whole, it was unusually cool in eastern and alpine areas of the South Island. In contrast, near average June temperatures were observed along the Fiordland and Westland coastline, in Central Otago, and for coastal Nelson. Elsewhere in the South Island, as well as Wellington, Wairarapa, Central Plateau and the Waikato, as well as parts of the Bay of Plenty, below average temperatures were observed (between 0.5°C and 1.2°C below June average). For the remainder of the North Island, temperatures were generally near average. The nation-wide average temperature in June 2012 was 7.8°C (0.6°C below the 1971–2000 June average), using NIWA's seven-station temperature series which begins in 1909.

It was an extremely sunny June for the southern South Island, with sunshine totals exceeding 125 percent of June normal. It was the sunniest June on record for Queenstown and Cromwell. Above normal sunshine totals were observed in most other North Island regions, too, except for Wellington and the Wairarapa, where near normal June sunshine was experienced. Sunshine totals were also close to normal across the northern half of the South Island.

Further Highlights:

- The highest temperature was 22.0°C, observed at Wairoa on 6 June.
- The lowest temperature was -11.8°C, at Darfield on 7 June.
- The highest 1-day rainfall experienced was 151 mm at Greymouth on 5 June.
- The highest gust recorded was 161 km/hr at Tairaroa Head on 28 June.
- Of the six main centres in June 2012, Auckland was the warmest, Auckland and Hamilton jointly the sunniest, Christchurch the coolest, Tauranga the driest, and Wellington the wettest and cloudiest.

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**Rainfall: Unusually dry in the north and east of the North Island, as well as South Canterbury. In contrast, extremely wet over the northern half of the South Island.**

It was an unusually dry June in the north and east of the North Island, as well as in South Canterbury. Rainfall totals in Northland, Coromandel, Bay of Plenty, Gisborne, Hawkes Bay, and South Canterbury were well below normal for the time of year (less than 50 percent of June normal). It was the driest June on record for Whangarei, Rotorua and Whakatane. Below normal totals (between 50 and 79 percent of June normal) were also observed in Auckland, Waikato, Taranaki, Central Plateau and the Wairarapa.

**Record<sup>1</sup> or near-record June rainfall totals were recorded at:**

Location	Rainfall total (mm)	Percentage of normal <sup>2</sup>	Year records began	Comments
<b>Record high or near-record high</b>				
Greymouth	360	151	1947	2nd-highest
Nelson	175	190	1941	3rd-highest
Appleby	241	270	1941	2nd-highest
Lumsden	89	119	1982	4th-highest
<b>Record low or near-record low</b>				
Kaitaia	72	44	1967	4th-lowest
Kerikeri	66	37	1981	3rd-lowest
Dargaville	56	50	1943	3rd-lowest
Whangarei	25	19	1937	Lowest
Leigh	43	37	1966	2nd-lowest
Whitianga	91	44	1961	4th-lowest
Tauranga	36	31	1898	4th-lowest
Te Puke	64	38	1973	2nd-lowest
Whakatane	36	28	1952	Lowest
Rotorua	36	27	1963	Lowest
Wairoa	42	34	1964	3rd-lowest

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

<sup>2</sup> This is the first climate summary to use the updated 'normal' period, 1981-2010. (A 'normal' period is a 30 year window of time from which the normal (average) and percentage of normal are calculated from). Future climate summaries will also use this updated normal period.

In contrast, it was an extremely wet June over the northern half of the South Island, with above normal June precipitation experienced (exceeding 120 percent of June normal). Notably, in Christchurch and Nelson, totals were in the order of twice June normal (200 percent). Two major events during June caused significant precipitation over the northern South Island: a rapidly intensifying low over the mid Tasman Sea brought heavy precipitation to the Tasman and Buller regions on 5/6 June, with heavy snowfall for Christchurch to Blenheim on 6 June; and another rapidly deepening low produced heavy rainfall in Nelson on 18 June.

Elsewhere, near normal June rainfall totals (between 80 and 119 percent of June normal) were generally observed.

### Temperature: Unusually cool in eastern and alpine areas of the South Island. Rather cool in Wellington and the Wairarapa, Central Plateau, Waikato, and parts of the Bay of Plenty, too.

June 2012 was notable for an extremely cold event on 6 June, in which afternoon (maximum) temperatures in Canterbury, Blenheim, around Arthurs Pass, and on the West Coast set new low records for June, and in some cases, broke all-time (any month) records, too. Maximum temperatures on 6 June in Canterbury struggled to reach even 1 degree, with heavy snow falling throughout the daylight hours. Minimum (morning) temperatures in Canterbury were also extremely low on the following two mornings (7 and 8 June). And in between southerly outbreaks, winter-time ridges of high pressure brought clear skies, and light winds, to the country on 13, 16, 17, and 30 June, producing extremely cold mornings and/or severe frosts for many regions.

For the month as a whole, it was unusually cool in eastern and alpine areas of the South Island (with monthly mean temperatures more than 1.2°C below June average). In contrast, near average June temperatures (within 0.5°C of the June average) were observed along the Fiordland and Westland coastline, in Central Otago, and for coastal Nelson. Elsewhere in the South Island, as well as Wellington, Wairarapa, Central Plateau, the Waikato, and parts of the Bay of Plenty, below average temperatures were observed (between 0.5°C and 1.2°C below June average). For the remainder of the North Island, temperatures were generally near average, too (within 0.5°C of the June average). The nation-wide average temperature in June 2012 was 7.8°C (0.6°C below the 1971–2000 June average), using NIWA’s seven-station temperature series which begins in 1909<sup>3</sup>.

#### Record or near-record monthly-average maximum air temperatures for June were recorded at:

Location	Mean max. air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Kaikohe	15.8	1.0	1973	3rd-highest
Leigh	17.4	1.4	1966	4th-highest

<sup>3</sup> Interim monthly value.

**Record or near-record monthly-average minimum air temperatures for June were recorded at:**

Location	Mean min. air temp. (°C)	Departure from normal (°C)	Year records began	Comments
Low records or near-records				
Castlepoint	6.7	-1.5	1972	4th-lowest
Martinborough	2.6	-1.4	1986	3rd-lowest
Waipawa	1.3	-1.5	1945	4th-lowest
Hanmer Forest	-3.3	-2.4	1906	4th-lowest
Cheviot	0.1	-0.8	1982	4th-lowest
Le Bons Bay	4.4	-1.4	1984	Lowest
Timaru	-1.1	-0.9	1990	4th-lowest
Balclutha	0.5	-1.2	1964	4th-lowest

**Sunshine: An extremely sunny June for the southern South Island. Rather sunny across much of the North Island, too.**

It was an extremely sunny June for the southern South Island, with sunshine totals exceeding 125 percent of June normal. It was the sunniest June on record for Queenstown and Cromwell. Above normal sunshine totals (between 110 and 124 percent of June normal) were observed in most other North Island regions, too, except for Wellington and the Wairarapa, where near normal June sunshine was experienced. Sunshine totals were also close to normal (between 90 and 110 percent of June normal) across the northern half of the South Island.

**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				
Kaitaia	162	112	1985	4th-highest
Dargaville	142	104	1943	3rd-highest
Taumarunui	124	182	1947	2nd-highest
Turangi	143	128	1976	4th-highest
Blenheim	174	118	1947	3rd-highest
Cheviot	126	139	1983	2nd-highest
Lake Tekapo	155	114	1928	2nd-highest
Queenstown	142	198	1930	Highest
Cromwell	140	157	1979	Highest
Balclutha	114	147	1964	4th-highest

## June climate in the six main centres

It was a sunny, cool, and very dry June for Auckland, Tauranga, and Hamilton. Wellington recorded near normal June rainfall and sunshine, but below average temperatures. In Christchurch, temperatures were well below average, and rainfall was well above normal. In contrast, Dunedin was very sunny, but it was a cooler and wetter June than usual.

Of the six main centres, Auckland was the warmest, Auckland and Hamilton jointly the sunniest, Christchurch the coolest, Tauranga the driest, and Wellington the wettest and cloudiest.

### June 2012 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland <sup>a</sup>	11.2	-0.6	Below average
Tauranga <sup>b</sup>	10.7	-0.3	Near average
Hamilton <sup>c</sup>	8.9	-0.6	Below average
Wellington <sup>d</sup>	8.8	-0.9	Below average
Christchurch <sup>e</sup>	5.3	-1.2	Well below average
Dunedin <sup>f</sup>	6.3	-1.0	Below average
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland <sup>a</sup>	64	54%	Below normal
Tauranga <sup>b</sup>	36	31%	4 <sup>th</sup> driest June on record
Hamilton <sup>c</sup>	92	73%	Below normal
Wellington <sup>d</sup>	144	104%	Near normal
Christchurch <sup>e</sup>	111	191%	Well above normal
Dunedin <sup>f</sup>	71	122%	Above normal
Sunshine			
Location	Sunshine (hours)	% of normal	Comments
Auckland <sup>a</sup>	140	116%	Above normal
Tauranga <sup>b</sup>	<i>Missing</i>	<i>Missing</i>	<i>Missing</i>
Hamilton <sup>g</sup>	140	136%	Well above normal
Wellington <sup>d</sup>	105	106%	Near normal
Christchurch <sup>e</sup>	128	109%	Near normal
Dunedin <sup>f</sup>	115	121%	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

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## Highlights and extreme events

### Rain and slips

On 5 June, the northwest South Island was affected by record-breaking rain, associated with a rapidly deepening low over the Tasman Sea (see Table below). In the case of Greymouth Airport, this was the highest June daily rainfall total in the record, and the 3rd highest daily rainfall total at this site for any month.

On 6 June, SH94 was closed by a slip between the Lower Hollyford Valley turn-off and The Cavern. Heavy rain caused surface flooding on SH1 at Johnsonville, and SH2 at Petone, and further south in Christchurch. Murchison was flooded, with businesses and homes affected. SH6 from Greymouth to Runanga was closed by flooding, as were many local roads in the region. Families were evacuated from flooded homes. A slip closed one lane of SH60 between Takaka and Collingwood. The heavy rain caused all Tranz Metro trains in the Wellington region to run late in the afternoon.

On 18 June, heavy rain affected the Nelson region, flooding roads and paddocks, and causing slips which closed some minor roads in the region.

Heavy rain on 23 June caused the postponement of the birdman and mountain bike events at the Queenstown Winter Festival.

### 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
Reefton	95	5th	1960	3rd-highest
Greymouth	151	5th	1947	Highest*
Nelson	66	18th	1941	4th-highest
Appleby	87	18th	1941	2nd-highest

\*This is the highest June daily rainfall on record at Greymouth Airport, and the 3rd highest daily rainfall for this site for any month.

### Temperatures

Afternoon (maximum) temperatures on 6 June in Canterbury, Blenheim, around Arthurs Pass, and on the West Coast set new records for June. Maximum temperatures on 6 June in Canterbury struggled to reach even 1 degree, with heavy snow falling throughout the daylight hours. At several stations, the maximum temperatures recorded were both record low for June *and* an all-time (any month) new record low. This was the case at Hokitika, Cheviot and Waipara West (with climate records of approximately 50 years, 30 years, and 40 years, respectively), as well as at Christchurch Airport. On 6 June, Christchurch Airport reached a maximum temperature of only 0.4 °C, a new all-time lowest maximum temperature record at this site since records began there in 1954. This is also a new record when compared to a group of Christchurch climate stations, in which the earliest

record begins in 1863. The previous record low maximum temperature in the group of Christchurch stations was 1.2°C, recorded at Christchurch Gardens on 22 July 1918<sup>4</sup>. Another notable record was at Lincoln, which recorded a maximum temperature of only 0.7 °C on 6 June, the second lowest maximum temperature at that site ever, in records which began in 1881.

Minimum (morning) temperatures in Canterbury were also extremely low on the following two mornings (7 and 8 June). And winter-time ridges of high pressure brought clear skies, and light winds, to the country on 13, 16, 17, and 30 June, producing extremely cold mornings and/or severe frosts for many regions.

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

Location	Extreme maximum (°C)	Date of extreme temperature	Year records began	June ranking (* indicates an all-time/any month ranking)
<b>High records or near-records</b>				
Leigh	20.2	4th	1966	Equal 4th-highest
Mahia	19.6	6th	1990	2nd-highest
Hawera	18.7	6th	1977	3rd-highest
Cheviot	20.7	23rd	1982	3rd-highest
<b>Low records or near-records</b>				
Martinborough	6.5	12th	1986	4th-lowest
Lake Rotoiti	2.1	27th	1972	Lowest
Hokitika	5.1	6th	1964	Equal lowest (*Equal lowest )
Reefton	1.6	27th	1972	2nd-lowest
Greymouth	5.2	6th	1972	Lowest (*2nd lowest)
Milford Sound	2.5	26th	1935	Lowest
Blenheim	5.6	6th	1947	Lowest (*Equal 3rd lowest)
Cape Campbell	6.5	6th	1972	4th-lowest
Hanmer Forest	1.0	15th	1972	Equal 2nd-lowest
Kaikoura	4.0	6th	1972	2nd-lowest
Arthurs Pass	-1.2	6th	1973	Lowest (*=4th lowest)
Cheviot	1.3	6th	1982	Lowest (*Lowest)
Waipara West	2.3	6th	1973	Lowest (*Lowest)
Christchurch (Airport)	0.4	6th	1863	Lowest (*Lowest)
Lincoln	0.7	6th	1881	Lowest (*2nd lowest)
Orari	2.8	6th	1972	2nd-lowest
Lumsden	1.1	16th	1982	4th-lowest

<sup>4</sup> At the time of writing this climate summary, no temperature observation had yet come in for 6 June 2012 at Christchurch Gardens, since this is a manual observation which is sent to NIWA monthly.

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

Location	Extreme minimum (°C)	Date of extreme temperature	Year records began	June ranking (* indicates an all-time/any month ranking)
<b>Low records or near-records</b>				
Whangaparaoa	5.8	30th	1982	Equal 4th-lowest
Te Puke	-1.7	30th	1973	4th-lowest
Te Kuiti	-3.6	30th	1959	Equal 3rd-lowest
Taumarunui	-5.5	13th	1947	3rd-lowest
Palmerston North	-3.9	17th	1991	2nd-lowest
Motueka	-4.5	30th	1956	Equal 3rd-lowest
Arthurs Pass	-11.2	7th	1973	Lowest (*3rd lowest)
Culverden	-10.2	8th	1928	Lowest (*2nd lowest)
Cheviot	-5.1	8th	1982	4th-lowest
Christchurch	-5.8	7th	1863	Equal 3rd-lowest
Le Bons Bay	0.0	6th	1984	Equal lowest
Dunedin	-3.2	17th	1947	4th-lowest
Manapouri	-6.4	16th	1963	4th-lowest
Lumsden	-6.9	30th	1982	Equal 4th-lowest
Balclutha	-5.9	17th	1964	4th-lowest
<b>High records or near-records</b>				
Puysegur Point	12.0	23rd	1978	Equal 2nd-highest

**Wind**

On 6 June, wind warnings were issued for SH6 between Harihari and Haast. In Golden Bay and the Nelson region, wind brought down power lines, cutting power across Tasman region, and closing some roads. Some parks and reserves were also closed because of the danger of falling trees. At Runanga on the West Coast, wind lifted the roof from a house, and trees were blown on to power lines at Barrytown. In Richmond, high winds lifted roofing iron from a line of stables at the Richmond Park race track, blew out windows in the stand, and knocked over the winning post.

On 7 June, Akatarawa Road between Upper Hutt and Kapiti was closed after strong winds brought down trees, blocking the road.

Strong winds on 23 June delayed the opening of Ohau Snowfield.

On 27 June, wind warnings were issued for SH1 between Milton and Gore, and SH90 between Gore and Raes Junction.

On 28 June, a campervan was blown off SH1 near Balclutha, injuring the driver.

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

Location	Extreme wind gust (km/h)	Date of extreme gust	Year records began	Comments
Mt. Kaukau	133	23rd	1969	Equal 4th-highest
Hawera	96	27th	1986	2nd-highest
Nelson	89	6th	1972	Equal highest

### **Lightning and hail**

A thunderstorm passed over Wellington in the early hours of 6 June. In Owhiro Bay, lightning struck a power pole knocking out electricity and internet junctions, and closing the local primary school for the day. Lightning and hail were also reported in Marlborough, with the lightning causing intermittent problems with power transmission.

On 19 June a dramatic thunder and lightning storm hit Nelson, setting off property alarms.

### **Snow and ice**

On 5 June, snow closed SH94 from Te Anau to Milford Sound to towing vehicles, and chains had to be carried by other vehicles.

On 6 June, snow closed SH1 between Greta and Waipara, SH7 between Culverden and Springs Junction (the Lewis Pass), SH8 between Fairlie and Twizel, SH73 at both Porter's Pass and Arthur's Pass, and Dansey's Pass. Chains were essential on SH7 between Springs Junction and Reefton, and on SH73 between Arthur's Pass and Otira. Both these sections of road were closed to towing vehicles. Chains had to be carried on SH94 between The Cavern and Milford Sound. Snow fell on the Canterbury Plains, including in Christchurch, Oxford, Rangiora and Ashburton, and further south in Oamaru, Dunedin and Twizel. Many local roads were closed. Power was cut to thousands of homes, mainly because snow-laden trees fell on to power lines. In Hanmer Springs the power cuts closed many businesses, including the hot pools. Pupils were sent home early from schools in Kaikoura and St Arnaud. Flights in and out of Christchurch airport were delayed by the storm, but it was closed for only a short time when power was lost. Buses in Christchurch did not go into the hill suburbs. Christchurch Polytechnic Institute of Technology and the Southern Institute of Technology (Christchurch campus) closed, the University of Canterbury closed at midday, and schools all over central Canterbury closed for the day. Christchurch City Council postponed day three of its draft annual plan hearings because of the weather. A New Zealand Symphony Orchestra concert planned for Christchurch was cancelled because of disrupted flights. Orana Wildlife Park had to close after snow brought down trees on to enclosure fences. Large carnivores, such as lions and tigers, were forced to stay in their dens. New Zealand Post suspended deliveries in Greymouth and central Canterbury, with delays in Westport, Gore and Balclutha. Flights at Dunedin Airport were disrupted by significant black ice on the runway with 10 flights affected. Early morning bus services to Dunedin's hill suburbs were also affected by ice. In Marlborough, snow blocked road access to Wairau Valley, and brought down trees, partially blocking SH6.

On 7 June, the following roads were still closed by snow and ice, or chains were required: SH65 from O'Sullivan's to Shenandoah, SH63 from St Arnaud to Wairau Valley, SH7 from Reefton via Springs Junction to the Hanmer Springs turn-off, SH75 from Springfield via Arthur's Pass to Otira, SH1 from Pukerau to Arthurton and from Greta to Waipara, SH6 from Athol to Five Rivers, and SH73 from Te Anau to Milford. Two trampers were rescued by helicopter after two days in a hut in the Lewis Pass.

On 8 June, the Lewis Pass, Porter's Pass and Arthur's Pass roads remained closed by snow. Chains were required on SH94 from Te Anau to Milford Sound. Some properties in north Canterbury were still without electricity after two days. In Christchurch, morning bus services did not operate in the hill suburbs, and most city schools did not open until mid-morning. Several rural schools remained

closed, and Amberly Golf Club was closed.

On 12 June snow fell on SH2 at the Rimutaka Summit but the road remained open.

On 15 June snow fell in the Port Hills suburbs of Christchurch, closing Summit Road and Dyers Pass Road. It fell on SH2 at the summit of the Rimutaka Hill Road, and closed Danseys Pass in north Otago.

On 16 June, snow closed SH1 at the Desert Road and the Napier-Taupo Road.

On 19 June, black ice affected many roads in inland Otago and Southland. Poolburn and Omakau schools closed for the day because of the dangerous roads, and bus services to Maniototo, Alexandra and Clyde schools could not run until after 10 am.

On 20 June, ice closed SH8 between Alexandra and Roxburgh. It was re-opened after grit had been laid.

On 25 June, snow closed SH94 between Te Anau and Milford Sound, and chains were required on SH8 at Lindis Pass, and SH73 at Arthurs Pass and Porters Pass. Danseys Pass remained closed.

On 26 June, snow closed SH94 between Te Anau and Milford Sound. Chains were required on SH7 at the Lewis Pass, SH8 at Lindis Pass and SH73 at Porters Pass. Ice warnings were issued for SH8 between Fairlie and Twizel, and SH80 from Pukaki to Mt Cook, with both roads closed to towing vehicles. Snow fell on SH6 at the Hope Saddle but the road was not closed. The Crown Range Road was closed overnight, and schools in the Wakatipu area opened later than normal as some school bus services did not run. Snow fell in Invercargill and Winton.

On 27 June, snow closed SH1 between Waiouru and Rangipo, SH94 from Te Anau to Milford Sound, SH93 from Clinton to Matura, SH87 from Outram to Kyeburn, SH73 from Arthurs Pass to Otira, and SH7 at the Lewis Pass. Chains were required on SH7 at Reefton Saddle and from Reefton to Springs Junction, SH6 at the Hope Saddle and from Haast to Makaroa, SH73 at Porters Pass, and SH80 from Bush Stream Bridge to Mt Cook. Snow and ice warnings were in place for SH60 from Motueka to Upper Takaka, SH6 from Franz Josef to Fox Glacier, SH1 from Waikouaiti to Dunedin, SH99 from Riverton to Tuatapere, SH96 from Winton to Ohai, and SH8 at the Lindis Pass. In Southland, sports grounds and schools were closed, and some flights into and out of Invercargill Airport were cancelled. Snow fell down to sea level on the West Coast, and settled further inland, with 15 cm reported at Reefton. In Taranaki, the road to North Egmont was closed and flights at New Plymouth Airport were delayed.

On 28 June, SH94 from Te Anau to Milford Sound remained closed for the morning. The Napier to Taihape Road was closed overnight.

Ice warnings remained in place on 29 June for SH24 from Te Anau to Milford Sound, and SH87 from Outram to Kyeburn.

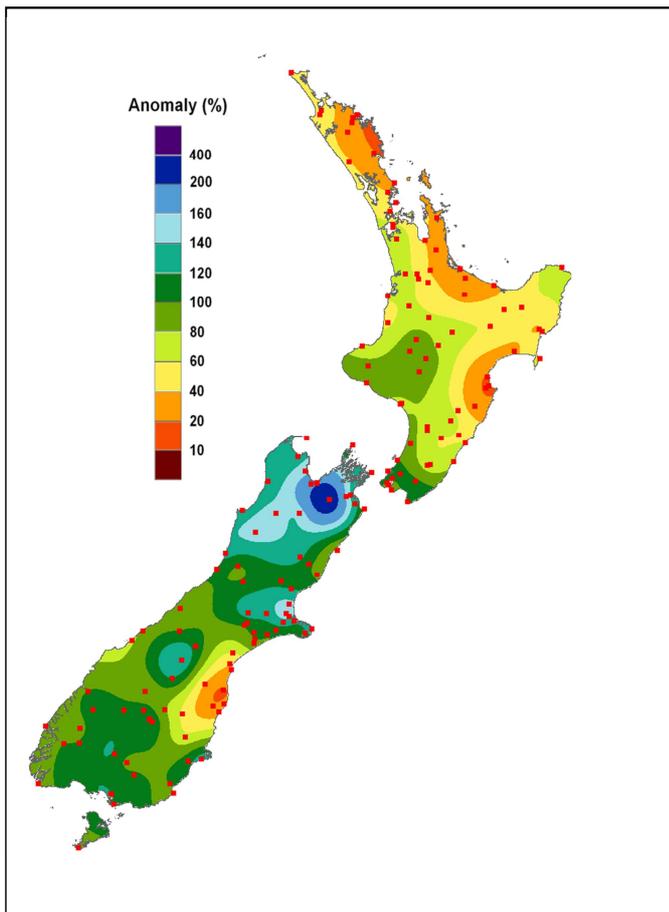
### Cloud and fog

On 19 June, thick fog over Christchurch caused delays for aircraft into and out of Christchurch Airport.

On 20 and 21 June, fog disrupted flights into and out of Queenstown Airport.

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*June 2012 rainfall, expressed as an anomaly from normal June conditions (% of June normal rainfall). Areas which received less than half of usual June rainfall are shown in yellow or orange colours (the north and east of the North Island, as well as South Canterbury). Areas which were unusually wet (experiencing more than one and a half times the usual June rainfall) are shown in blue shades; namely Christchurch, and the area from Westport to Nelson. Dots are climate station locations.*