

National Climate Summary – June 2011: The 3rd-warmest June on record, and very gloomy.

- **Temperatures: The 3rd-warmest June on record. Well above average temperatures in the north and west of both Islands. Near average temperatures in the east and south of the South Island.**
- **Sunshine: A gloomy month, with below normal sunshine totals for most regions.**
- **Rainfall: Very dry across the majority of the South Island. Rather wet in the northern half of the North Island, as well as Nelson.**

It was the 3rd-warmest June on record, using NIWA's seven-station temperature series which began in 1909. Only June 2003 and June 1971 have been warmer. The average temperature in June 2011 was 10.0°C (1.5°C above the 1971–2000 June average). Monthly mean temperatures for June were well above average (at least 1.2°C above June average) across the north and west of both Islands, with several June records broken. Elsewhere in the North Island, mean temperatures were generally above average (between 0.5°C and 1.2°C above June average). In the south and east of the South Island, closer to average temperatures were observed (with temperatures within 0.5°C of June average). Several all-time June temperature records were broken in the North Island and the northern South Island on 5 June, associated with a very mild, northerly airstream brought down from the sub-tropics.

The frequent northeasterly wind flows during June produced a rather gloomy month overall. Sunshine totals were below normal (between 75 and 90 percent of June normal) in most regions of the country. However, around Franz Josef, Taumarunui, and the Central Plateau, sunshine totals were normal or above normal (ranging between 100 and 120 percent of June normal).

It was a very dry month across the majority of the South Island, with rainfall totals typically around half (50 percent) of June normal. Notably, rainfall ranged between 25 and 50 percent of normal in parts of coastal North Canterbury, and throughout South Canterbury and Otago. In contrast, it was rather wet June for the northern half of the North Island, with above normal or well above normal rainfall (at least 120 percent of June normal) in Northland, Auckland, Bay of Plenty, Waikato, and Taranaki; as well as in Nelson. For the remainder of the North Island, rainfall totals were below normal (between 50 and 70 percent of June normal).

Further Highlights:

- The highest temperature recorded was 22.4°C at Whitianga on the 5th (a new June record there).
- The lowest temperature recorded was -6.7°C at Ranfurly on the 17th.
- The highest 1-day rainfall experienced was 122 mm, recorded at Milford Sound on the 4th.
- The highest gust was 165 km/hr recorded at Cape Reinga on the 3rd (the 2nd highest June gust there).
- Of the six main centres in June 2011, Auckland was the warmest but also the wettest, Dunedin the sunniest and driest, and Christchurch the coldest.

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TEMPERATURES: THE 3RD WARMEST JUNE ON RECORD. WELL ABOVE AVERAGE TEMPERATURES IN THE NORTH AND WEST OF BOTH ISLANDS. NEAR AVERAGE TEMPERATURES IN THE SOUTH AND EAST OF THE SOUTH ISLAND.

It was the 3rd-warmest June on record, using NIWA's seven-station temperature series which began in 1909. Only June 2003 and June 1971 have been warmer. The average temperature in June 2011 was 10.0°C (1.5°C above the 1971–2000 June average)¹. Monthly mean temperatures for June were well above average (at least 1.2°C above June average) across the north and west of both Islands, with several June records broken. Elsewhere in the North Island, mean temperatures were generally above average (between 0.5°C and 1.2°C above June average). In the south and east of the South Island, near average temperatures were observed (with temperatures within 0.5°C of June average).

It was the warmest June on record at Whenuapai, Westport, Lake Rotoiti, Reefton, and Dunedin.

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

Location	Mean air temperature (°C)	Departure from normal (°C)	Year records began	Comments
Kerikeri	13.2	1.3	1981	4th-highest
Dargaville	14.0	2.0	1943	2nd-highest
Leigh	14.6	1.4	1966	4th-highest
Whangaparaoa	13.8	1.6	1982	4th-highest
Whenuapai	12.7	1.8	1945	Highest
Paeroa	12.3	2.1	1947	3rd-highest
Tauranga	12.6	2.1	1913	3rd-highest
Te Puke	11.4	1.5	1973	3rd-highest
Whakatane	11.4	2.1	1974	2nd-highest
Port Taharoa	13.2	1.4	1973	4th-highest
Taumarunui	9.6	1.5	1947	4th-highest
Hicks Bay	13.3	1.5	1969	4th-highest
Waipawa	9.1	1.2	1945	3rd-highest
Mahia	12.0	1.5	1990	3rd-highest
Palmerston North	10.8	1.9	1928	4th-highest
Stratford	9.6	1.4	1960	4th-highest
Hawera	10.6	1.5	1977	4th-highest
Ohakune	8.3	2.3	1962	3rd-highest
Wanganui	11.8	1.6	1987	3rd-highest
Farewell Spit	12.0	2.0	1971	4th-highest
Westport	10.8	1.6	1937	Highest
Lake Rotoiti	6.3	2.4	1965	Highest
Hokitika	9.6	1.6	1963	3rd-highest
Reefton	8.6	3.0	1960	Highest
Greymouth	10.0	1.3	1947	4th-highest
Haast	9.7	1.8	1949	3rd-highest
Motueka	9.4	1.9	1956	3rd-highest
Nelson	10.3	2.7	1943	2nd-highest
Blenheim	9.5	1.4	1941	4th-highest
Dunedin	8.6	1.5	1947	Highest

¹ Interim monthly value.

SUNSHINE: A GLOOMY MONTH, WITH BELOW NORMAL SUNSHINE TOTALS IN MOST REGIONS.

The frequent northeasterly wind flows during June produced a rather gloomy month overall. Sunshine totals were below normal (between 75 and 90 percent of June normal) in most regions of the country. However, around Franz Josef, Taumarunui, and the Central Plateau, sunshine totals were normal or above normal (ranging between 100 and 120 percent of June normal).

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

Location	Sunshine (hours)	Percentage Of normal	Year records began	Comments
Kaitaia	104	84	1985	4th-lowest
Takaka	118	87	1985	2nd-lowest
Blenheim	128	88	1947	3rd-lowest

RAINFALL: VERY DRY ACROSS THE MAJORITY OF THE SOUTH ISLAND. RATHER WET IN THE NORTHERN HALF OF THE NORTH ISLAND, AS WELL AS IN NELSON. BELOW NORMAL RAINFALL FOR THE REMAINDER OF THE NORTH ISLAND.

It was a very dry month across the majority of the South Island, with rainfall totals typically around half (50 percent) of June normal. Notably, rainfall ranged between 25 and 50 percent of normal in parts of coastal North Canterbury, and throughout South Canterbury and Otago. In contrast, it was rather wet June for the northern half of the North Island, with above normal or well above normal rainfall (at least 120 percent of June normal) in Northland, Auckland, Bay of Plenty, Waikato, and Taranaki; as well as in Nelson. For the remainder of the North Island, rainfall totals were below normal (between 50 and 70 percent of June normal).

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

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
Whatawhata	267	161	1952	4th-highest
Motueka	251	189	1943	3rd-highest
Lumsden	32	43	1982	3rd-lowest
Alexandra	6	21	1983	3rd-lowest

JUNE CLIMATE IN THE SIX MAIN CENTRES

Of the six main centres in June 2011, Auckland was the warmest but also the wettest, Dunedin the sunniest and driest, and Christchurch the coldest.

June 2011 main centre climate statistics:

Location	Mean temp. (°C)	Departure from normal (°C)		Rainfall (mm)	% of normal		Sunshine (hours)	% of normal	
Auckland ^a	13.5	+1.8	Well above average	167	130%	Above normal	99	89%	Below normal
Tauranga ^b	12.6	+2.1	3 rd highest on record	161	126%	Above normal	96	73%	Well below normal
Hamilton ^c	11.0	+1.8	Well above average	165	134%	Above normal	101 ^g	98%	Near normal
Wellington ^d	10.5	+1.0	Above average	125	85%	Near normal	71	73%	Well below normal
Christchurch ^e	7.6	+1.4	Well above average	41	66%	Below normal	82	69%	Well below normal
Dunedin ^f	8.6	+1.5	Highest on record	22	30%	Well below normal	105	121%	Above 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 experienced in June 2011 was 122 mm, recorded at Milford Sound on the 4th.

On 8 June, heavy rain caused flooding on SH3 south of Waitara, and surface flooding in New Plymouth. The Waitara River undercut its banks near Tarata, causing part of Motukawa Road to slip into the river. On 9 June, a large slip closed SH3, south of Mokau, for several hours.

On 15 June, heavy rain caused surface flooding in Invercargill, and short-circuited a local electricity supply box, cutting power to a group of homes for several hours.

On 18 June, after heavy rain, a slip came down on a house at Ohope Beach, killing a young man. The rain also caused significant flooding in Whakatane town centre. Further north, there was significant surface flooding on SH1 at Mercer.

On 29th June, after heavy overnight rain in Napier, a vehicle slid and overturned into a drainage channel when the driver tried to park on a sloping grassed area. The driver escaped through the vehicle window unharmed. Speed restrictions were put in place after a slip came down on SH5, 3 km north of the Tarawera Tavern.

There were no record-high extreme 1-day rainfall totals in June 2011.

- **Temperature**

The highest temperature observed in June 2011 was 22.4°C, recorded at Whitianga on the 5th (a new June record there). Many locations in the North Island and the northern South Island experienced record-high or near-record-high temperatures on this date, associated with an extremely mild, northerly airstream brought down from the sub-tropics.

The lowest temperature recorded in June 2011 was -6.7°C, observed at Ranfurly on the 17th (not a record there).

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

Location	Extreme maximum temperature (°C)	Date of extreme temperature	Year Records Began	Comments
Kerikeri	21.0	18th	1981	Equal 3rd-highest
Leigh	22.2	5th	1966	Highest
Whangaparaoa	21.4	5th	1982	Highest
Whenuapai	20.5	5th	1945	Equal 3rd-highest
Whitianga	22.4	5th	1962	Highest
Te Puke	20.4	5th	1973	2nd-highest
Taupo	17.8	5th	1949	4th-highest
Auckland	21.1	5th	1959	4th-highest
Whatawhata	19.9	5th	1952	4th-highest
Hamilton	20.6	5th	1946	2nd-highest
Port Taharoa	20.2	5th	1973	Highest
Masterton	21.0	5th	1906	4th-highest
Dannevirke	19.8	5th	1951	Equal 4th-highest
Castlepoint	20.1	5th	1972	4th-highest
Palmerston North	20.9	5th	1918	Equal highest
Wanganui	21.2	5th	1937	3rd-highest
Lake Rotoiti	16.4	5th	1965	Highest
Haast	17.1	19th	1949	3rd-highest
Puysegur Point	16.9	4th	1978	2nd-highest
Alexandra	20.2	27th	1983	2nd-highest

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

Location	Extreme minimum temperature (°C)	Date of extreme temperature	Year records began	Comments
Whangaparaoa	14.7	5th	1982	3rd-highest
Whakatane	15.1	5th	1975	4th-highest
Mahia	13.6	5th	1990	Equal 4th-highest
Stratford	12.0	5th	1972	Equal 3rd-highest
Hawera	13.5	5th	1977	Equal 4th-highest
Ohakune	11.4	5th	1972	Equal 2nd-highest
Lake Rotoiti	8.1	5th	1972	2nd-highest
Haast	12.4	5th	1949	2nd-highest
Motueka	12.0	6th	1972	2nd-highest
Dunedin,	12.2	1st	1947	Highest
Lumsden	8.6	15th	1982	Equal 4th-highest
Tiwai Point	11.2	1st	1972	Highest
Balclutha	9.4	1st	1972	Equal 4th-highest

- **Wind**

The highest gust recorded during June 2011 was 165 km/hr, recorded at Cape Reinga on the 3rd (the second-highest June gust recorded there).

On 13 June, wind warnings were issued for high sided vehicles on SH1 between Milford and Balclutha.

On 19 June, New Plymouth central business district and nearby residential areas were struck by two tornadoes, which smashed windows, lifted roofs, sucked furniture out of buildings, pulled up trees by their roots, and tore up streets in their path. At New Plymouth racecourse, winds sucked out barn doors to four stable blocks, destroyed a long section of near-new racetrack running rail, sheared off steel uprights at ground level, and tossed a horse transporter on to its side. Bell Block and Omata were also affected by a swarm of tornadoes, with New Plymouth Clay Target Club clubrooms at Omata reduced to matchsticks. About 300 properties in central New Plymouth lost power for several hours as a result of the tornadoes, with damage to both high-voltage and low-voltage parts of the network.

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

Location	Extreme wind gust speed (km/hr)	Date of extreme gust	Year records began	Comments
Cape Reinga	165	3rd	1974	2nd-highest

- **Snow and ice**

A lack of snow caused the cancellation of some of the events planned for the first week of the Queenstown Winter Festival, in late June.

- **Lightning and hail**

On 18 June, lightning struck a restaurant in Rotorua, cutting power and phone lines for a short time.

On 23 June, lightning struck homes in Whakatane, damaging electrical and telecommunication-linked appliances, and causing smoke damage. Power and telephone connections were cut to several homes.

- **Fog**

On 9 June, heavy fog in Auckland cancelled or delayed about 20 flights, and slowed motorway traffic.

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