

**National Climate Summary - July 2010: Mid winter magic – a very sunny July in many areas**

- **Sunshine:** Extremely sunny in the west and south of the South Island, as well as western areas of the North Island, compared to July normal.
- **Rainfall:** Rather dry overall. Well below normal rainfall in the southwest of the North Island, Otago, and the Tasman District. Well above normal rainfall in Gisborne, northern Hawkes Bay and north Canterbury.
- **Temperatures:** Near average temperatures for most regions; below average temperatures for the Waikato, the Central Plateau, Wellington, Wairarapa, and coastal Otago.

July 2010 was characterised by higher than normal pressures over the country, with lower pressures to the northeast of the North Island. The frequent highs brought clear skies, dry conditions, warmer afternoons but colder mornings to many regions. Southeast winds frequently affected New Zealand over the month, and the effects of these were very clear – western regions of the country were extremely sunny and very dry.

Sunshine totals were well above average (more than 125 percent of normal) on the West Coast, in Fiordland and Southland, and across much of Otago, as well as for the Kaipara, Waikato, Taupo, and Ruapehu districts. In all other regions of New Zealand, July sunshine totals were also up, being above average (more than 110 percent of normal) everywhere except for Gisborne (where they were near normal).

Overall, July 2010 was rather dry in many regions. Well below normal rainfall (less than 50 percent of normal) was recorded in the southwest of the North Island (Taranaki, Manawatu-Wanganui, Taupo, Bay of Plenty), as well as in Otago and the Tasman district. In contrast, rainfall was above normal (between 120 and 150 percent of normal) in Gisborne, northern Hawkes Bay, and parts of north Canterbury. The rainfall in these areas was caused by two storm events, affecting Gisborne and Hawkes Bay on the 6<sup>th</sup>/7<sup>th</sup>, and north Canterbury on the 23<sup>rd</sup>/24<sup>th</sup>. Elsewhere, July rainfall was below normal (between 50 and 80 percent of normal), except for Wairarapa, southern Hawkes Bay, Northland, Auckland, Coromandel, Kaikoura, and Fiordland, where close to normal July rainfall was recorded (80 to 120 percent of normal).

Mean temperatures were close to average (within 0.5°C of average) in many regions. Above average daytime temperatures were offset by below average nighttime temperatures (with both caused by the predominance of clear skies). The exceptions were Waikato, the central Plateau, around Wellington and the Wairarapa, and coastal Otago, where mean temperatures were below average (between 0.5°C and 1.2°C below average). There were very small pockets of above average temperatures in western parts of Northland, Nelson, Westland, and Fiordland (between 0.5°C and 1°C above average). The New Zealand national average temperature was 7.7°C (0.2°C below the 1971-2000 July average).

**Further Highlights:**

- The highest temperature was 19.0°C, recorded at Kaikohe on the 29<sup>th</sup> (a new July record).
- The lowest temperature was -9.6°C, recorded at Hanmer on the 12<sup>th</sup>.
- The highest 1-day rainfall was 140 mm, recorded at Franz Josef on the 31<sup>st</sup>.
- The highest wind gust was 141 km/hr, recorded at Cape Turnagain on the 27<sup>th</sup>.
- Of the six main centres, Auckland was the warmest, Christchurch the coolest, Wellington the wettest, and Dunedin the driest. Tauranga was the sunniest of the six main centres.

**For further information, please contact:**

**Ms Georgina Griffiths – Climate Scientist– NIWA National Climate Centre, Auckland,**  
**Tel. (09) 375 4506 or (027) 293 6545 (mobile)**

**Dr Andrew Tait – Climate Scientist – NIWA National Climate Centre, Wellington,**  
**Tel. (04) 386 0562 (work) or (027) 327 7948 (mobile)**

**SUNSHINE: EXTREMELY SUNNY IN THE WEST AND SOUTH OF SOUTH ISLAND, AS WELL AS WESTERN AREAS OF NORTH ISLAND.**

Sunshine totals were well above average (more than 125 percent of normal) on the West Coast, in Fiordland and Southland, and across much of Otago, as well as for the Kaipara, Waikato, Taupo, and Ruapehu districts. In all other regions of New Zealand, July sunshine totals were also up, being above average (more than 110 percent of normal) everywhere except for Gisborne (where they were near normal). It was the sunniest July on record for Kaitaia, Turangi, and Balclutha, and the highest-equal for Cromwell.

**Record or near-record July sunshine hours were recorded at:**

Location	Sunshine (hours)	Percentage Of normal	Year records began	Comments
Kaitaia	176	124	1985	Highest
Dargaville	151	137	1943	2nd-highest
Hamilton	163	131	1936	2nd-highest
Te Kuiti	155	150	1962	2nd-highest
Turangi	164	141	1976	Highest
New Plymouth	171	129	1972	4th-highest
Greymouth	157	152	1947	3rd-highest
Lake Tekapo	172	162	1928	2nd-highest
Dunedin	139	138	1947	4th-highest
Cromwell	136	144	1979	Equal highest
Invercargill	128	141	1932	2nd-highest
Balclutha	146	152	1964	Highest

**RAINFALL: RATHER DRY OVERALL. WELL BELOW NORMAL RAINFALL IN SOUTHWEST OF NORTH ISLAND, OTAGO, AND TASMAN DISTRICT. WELL ABOVE NORMAL RAINFALL IN GISBORNE, NORTHERN HAWKES BAY AND NORTH CANTERBURY.**

Overall, July 2010 was rather dry in many regions. Well below normal rainfall (less than 50 percent of normal) was recorded in the southwest of the North Island (Taranaki, Manawatu-Wanganui, Taupo, as well as much of the Bay of Plenty), as well as in Otago and the Tasman district. It was the driest July on record for Taupo, with 20 mm of rainfall recorded (20% of normal, the lowest July total since observations began in 1949). In contrast, rainfall was above normal (between 120 and 150 percent of normal) in Gisborne, northern Hawkes Bay, and parts of north Canterbury. The rainfall in these areas was caused by two storm events, affecting Gisborne and Hawkes Bay on the 6<sup>th</sup>/7<sup>th</sup>, and north Canterbury on the 23<sup>rd</sup>/24<sup>th</sup>. Elsewhere, July rainfall was generally below normal (between 50 and 80 percent of normal), except for the Wairarapa and southern Hawkes Bay, Northland, Auckland, Coromandel, Kaikoura, and Fiordland, where close to normal July rainfall was recorded (between 80 and 120 percent of normal).

**Record or near-record July rainfall totals were recorded at:**

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
Wairoa	202	159	1964	2nd-highest
Te Puke	68	39	1973	3rd-lowest
Rotorua	37	26	1963	2nd-lowest
Taupo	20	20	1949	Lowest
Turangi	59	36	1968	4th-lowest
Paraparaumu	39	39	1945	4th-lowest
Stratford	50	24	1960	2nd-lowest
Hawera	48	37	1977	4th-lowest
Ohakune	49	33	1961	4th-lowest
Wanganui	22	25	1987	3rd-lowest
Lake Rotoiti	30	23	1933	3rd-lowest

Lumsden	20	29	1982	2nd-lowest
Balclutha	15	28	1964	4th-lowest

**TEMPERATURES: NEAR AVERAGE TEMPERATURES FOR MOST REGIONS; BELOW AVERAGE TEMPERATURES FOR WAIKATO, CENTRAL PLATEAU, WELLINGTON, WAIRARAPA, AND COASTAL OTAGO.**

Mean temperatures were close to average (within 0.5°C of average) in many regions; with above average daytime temperatures offset by below average nighttime temperatures (both due to the predominance of clear skies). The exceptions were Waikato, the central Plateau, around Wellington and the Wairarapa, and coastal Otago, where mean temperatures were below average (between 0.5°C and 1.2°C below average). There were small pockets of above average temperatures in western parts of Northland, Nelson, Westland, and Fiordland (between 0.5°C and 1°C above average). The New Zealand national average temperature was 7.7°C (0.2°C below the 1971-2000 July average)<sup>1</sup>.

Mean maximum temperatures were record high at both Kaikohe and Motueka, averaging 15.8°C and 15.4°C, respectively. July mean minimum temperatures were record low at Warkworth, Turangi, and Dunedin.

**Record or near-record July mean maximum daily air temperatures were recorded at:**

Location	Mean maximum air temperature (°C)	Departure from normal (°C)	Year records began	Comments
Kaikohe	15.8	2.0	1973	Highest
Leigh	16.4	1.4	1966	2nd-highest
Whangaparaoa	14.9	1.1	1982	4th-highest
Westport	13.9	1.3	1937	2nd-highest
Lake Rotoiti	9.9	1.5	1965	3rd-highest
Haast	12.7	1.3	1949	4th-highest
Motueka	15.4	2.8	1956	Highest
Nelson	13.2	1.0	1943	4th-highest
Castlepoint	11.3	-1.4	1972	2nd-lowest

**Record or near-record July mean minimum daily air temperatures were recorded at:**

Location	Mean minimum air temperature (°C)	Departure from normal (°C)	Year records began	Comments
Puysegur Point	6.8	1.1	1978	3rd-highest
Warkworth	5.7	-2.3	1966	Lowest
Turangi	-0.8	-2.7	1968	Lowest
Wanganui	4.7	-1.2	1987	4th-lowest
Dunedin	-2.4	-2.2	1947	Lowest
Queenstown	-3.0	-1.6	1871	2nd-lowest
Lumsden	-1.9	-1.3	1982	3rd-lowest

<sup>1</sup> Interim monthly value.

## JULY CLIMATE IN THE SIX MAIN CENTRES

Of the six main centres, Auckland was the warmest, Christchurch the coolest, Wellington the wettest, and Dunedin the driest. Tauranga was the sunniest of the main centres, with 183 hours of bright sunshine recorded.

### July 2010 main centre climate statistics:

Location	Mean temp. (°C)	Departure from normal (°C)		Rainfall (mm)	% of normal		Sunshine (hours)	% of normal	
Auckland <sup>a</sup>	10.3	-0.6	Below average	102	73%	Below normal	167	128%	Well above normal
Tauranga <sup>b</sup>	10.1	+0.1	Near average	52	40%	Well below normal	183	121%	Above normal
Hamilton <sup>c</sup>	8.3	-0.2	Near average	65	47%	Well below normal	163 <sup>g</sup>	131%	2 <sup>nd</sup> highest
Wellington <sup>d</sup>	8.2	-0.7	Below average	119	87%	Near normal	125	107%	Near normal
Christchurch <sup>e</sup>	5.4	-0.4	Near average	67	94%	Near normal	123	100%	Near normal
Dunedin <sup>f</sup>	6.8	+0.3	Near average	27	40%	Well below normal	139	138%	4 <sup>th</sup> highest

<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

## HIGHLIGHTS AND EXTREME EVENTS

### • Heavy rain, slips and flooding

Heavy rain on 5 July closed SH25 at Whitianga and Manaia on the Coromandel Peninsula. Six people were rescued after two cars became stranded by rising water on Kauaeranga Valley Road in the Coromandel Ranges.

Heavy rain affected Northland on 5 July, causing slips and closing roads in Whangarei, but it did also refill the reservoir.

On 6 July heavy rain on the East Coast cut power to properties in the Gisborne area, affecting the Te Araroa, Waikura Valley and Mata Road areas. People in inland Ruatoria were isolated after the Mata River washed away their sole road access. SH2 between Napier and Wairoa was closed by extensive slips and flooding. SH35 was down to one lane near Te Araroa, and many rural roads were closed by slips and surface flooding. Wharekopae Road residents were cut off when Brunton Road was closed overnight, and many ford crossings in the area were impassable.

On 7 July, SH2 between Napier and Wairoa was closed by major slips at the Devil's Elbow and Waikouau Hill areas. SH2 was also underwater around Tutira and was closed overnight. Many rural roads in the Hastings and Havelock North areas were blocked by flooding and slips. The Napier-Taupo Road was reduced to one lane by a slip near Te Pohue. Travel to and from Rissington was affected by a slip which closed Puketitiri Road. SH2 was blocked during the morning by a fallen tree at Bartletts Hill. Power lines were downed, cutting electricity to Te Araroa, Waikura Valley and Mata Road areas. Some Ngatapa residents could not go home because their only access road was blocked.

On 9 July, a large slip blocked the road to Anaura Bay, north of Gisborne, leaving residents walk-in access only, via the beach.

On 23 and 24 July, heavy rain caused flooding and slips on SH1 between Blenheim and Waipara, and on SH7 between Springs Junction and Waipara. In southern Wairarapa flooding closed the Ponatahi Bridge near Martinborough, and White Rock Road at the intersection with Lagoon Hill Road.

Heavy rain warnings were in effect for the West Coast and the Southern Alps on 31 July. The highest 1-day rainfall total in July was 140 mm, recorded at Franz Josef on the 31<sup>st</sup>.

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

Location	Extreme 1-day rainfall (mm)	Date of extreme rainfall	Year Records Began	Comments
Kumeu	50	21st	1978	4th-highest
Hokitika	76	31st	1963	4th-highest
Okarito	123	31st	1981	2nd-highest
Manapouri	42	31st	1963	3rd-highest

• **Temperature**

The highest temperature recorded in July 2010 was 19.0°C, observed at Kaikohe on the 29<sup>th</sup>. This was the highest July temperature ever recorded there, since records began in 1973. Several other records were broken during the month; Motueka experienced its warmest July day on the 2<sup>nd</sup> of the month, as did Lake Rotoiti on the 25<sup>th</sup>.

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

Location	Extreme maximum temperature (°C)	Date of extreme temperature	Year Records Began	Comments
Kaikohe	19.0	29th	1973	Highest
Westport	17.8	22nd	1937	Equal highest
Lake Rotoiti	13.9	25th	1965	Highest
Motueka	18.7	2nd	1956	Highest
Te Kuiti	7.4	3rd	1959	4th-lowest

The lowest temperature was -9.6°C, recorded at Hanmer on the 12<sup>th</sup>. An extremely cold spell affected New Zealand between July 10<sup>th</sup> and 13<sup>th</sup>, caused by an intense winter anticyclone over New Zealand. The anticyclone produced clear skies, light winds, and severe frosts. Numerous sites experienced record or near-record low minimum temperatures for July during this period. The reading at Taumarunui of -6.8°C on July 12<sup>th</sup> was its lowest July minimum temperature ever, since records began in 1947 – and this was also an all-time record (for any month of the year) for the site.

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

Location	Extreme minimum temperature (°C)	Date of extreme temperature	Year Records Began	Comments
Warkworth	-0.7	11th	1966	Lowest
Port Taharoa	1.1	10th	1973	3rd-lowest
Te Kuiti	-4.3	12th	1959	Lowest
Taumarunui	-6.8	12th	1947	Lowest
Turangi	-7.6	12th	1968	Lowest
Takapau Plains	-3.6	11th	1962	Equal 4th-lowest
Hawera	-4.4	12th	1977	Equal lowest
Wanganui	-2.4	12th	1987	2nd-lowest
Blenheim	-4.9	13th	1932	Equal 2nd-lowest
Dunedin	-6.7	12th	1947	2nd-lowest
Queenstown	-7.2	12th	1871	3rd-lowest
Kaikohe Aws	13.2	22nd	1973	Equal 4th-highest

---

Woodbury	6.0	23rd	1973	Equal 4th-highest
----------	-----	------	------	-------------------

---

- **High winds**

The highest wind gust was 141 km/hr, recorded at Cape Turnagain on the 27<sup>th</sup>. However, the month overall was a settled one with respect to wind, with no near-record or record high gusts observed.

Gales on 4-5 July caused fallen trees and power lines in Northland, Auckland and Waikato, cutting power to thousands of properties, particularly in North Shore, West Auckland and Rodney. In Whangarei, a New Zealand Historic Places Trust-listed house lost its veranda, roof and a brick chimney to the gales.

- **Snow and ice**

A national bonspiel was called at the Idaburn Dam on 7 and 8 July, the first in three years. The dam had 12 -13 cm of strong "black" ice, considered by curlers to be better than snow ice.

On 14 July, for the first time in more than 20 years, a bonspiel was held on the Waikaia natural ice rink in Southland, with many recreational skaters on the ice over the weekend of 17-18 July.

- **Fog**

On 6 July, fog closed Invercargill Airport during the morning.

On 15 July, early morning commuter traffic in central Timaru had to contend with fog.

Fog caused more than a dozen domestic flights in and out of Christchurch Airport to be cancelled, and many others delayed, on 19 July. Several international flights were also affected.

**For further information, please contact:**

**Ms Georgina Griffiths – Climate Scientist– NIWA National Climate Centre, Auckland,**

**Tel. (09) 375 4506 or (027) 293 6545 (mobile)**

**Dr Andrew Tait – Climate Scientist – NIWA National Climate Centre, Wellington,**

**Tel. (04) 386 0562 (work) or (027) 327 7948 (mobile)**

[www.niwa.co.nz/ncc](http://www.niwa.co.nz/ncc)

Copyright NIWA 2010. All rights reserved.