

National Climate Summary – July 2004

- **Rainfall: Extremely wet in eastern Bay of Plenty, with high rainfall and devastating floods; very dry in eastern Otago with below normal rainfall in many other regions**
- **Temperatures: Below average, and very frosty in Canterbury and Otago;**
- **Sunshine: Above normal in most places with some new July records, cloudier in the far north and east of the North Island**

Eastern Bay of Plenty's rainfall deluge during July was in complete contrast to conditions in much of the South Island and many northern and western North Island regions. While eastern Bay of Plenty had more than 250 mm of rainfall between July 15 and July 18, parts of Marlborough, Canterbury and Otago had throughout the full month less than half their average monthly rainfall. The month was very frosty in parts of Canterbury and Otago, where overnight temperatures were well below average. July was sunnier than normal in most places, below average totals prevailed in the north and east of the North Island. More frequent anticyclones ('highs') prevailed in the Tasman Sea and over New Zealand. Northwesterlies were more frequent to the south and easterlies to the north.

Highlights:

- The highest July 2004 temperature was 20.5°C, recorded at Nelson Park, Napier on the 29th. The lowest temperature for the month was -9.1°C, recorded at Lake Tekapo on the 23rd.
- Prolonged heavy rainfall occurred in Bay of Plenty, between the 15th and 18th of July resulting in severe flooding, with a state of emergency in the eastern Bay of Plenty. About 2000 people were evacuated from their homes. The flooding was reported to be the worst in the district in living memory. Whakatane Airport recorded rainfall totalling 246 mm in 48-hours and Opotiki 280 mm.
- The North Island's Desert Road was closed due to heavy snowfall on the 3rd and 4th of July, and several motorists had to be rescued. The Desert Road and Taupo-Napier highway were closed due to further snowfall on the 23rd, with many trucks, and motorists, stranded. Cold southerlies brought further snowfall down to 500 metres in inland high country areas of Canterbury on the 28th.
- Heavy hailstorms occurred in Hokitika on the 5th, and southwest of New Plymouth on the 7th.
- Storm force southerlies occurred, with high seas through Cook Strait on the afternoon of the 22nd, during which time the Aratere endured an 8-hour journey to Wellington.
- Auckland was the sunniest and Dunedin the driest main centre. Rainfall was below average in Auckland, Christchurch, and Dunedin, and above average in Wellington. Temperatures were below average in Wellington, Christchurch, and Dunedin, and near average in Auckland. Sunshine hours were above normal in all four main centres, especially Dunedin.

Rainfall: Rainfall was at least 300 percent of average in eastern Bay of Plenty, and also above average in western Bay of Plenty, Gisborne, and in and around Blenheim. However, below average rainfall occurred in many northern and western North Island regions and throughout the much of the South Island.

Temperatures: The July national average temperature of 7.3°C was 0.6°C below normal. Mean temperatures were below average in most districts, and as much as 1.5°C below average in parts of Buller, Canterbury, and Otago. Overnight minimum temperatures were well below average.

Sunshine: Sunshine totals were above average throughout much of New Zealand, with new July records at Dargaville and Tekapo. However, lower than usual totals occurred in Northland, Gisborne, and Hawke's Bay.

For further information, please contact:

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EXTREMELY WET IN EASTERN BAY OF PLENTY

Rainfall was at least 300 percent of average in eastern Bay of Plenty, and at least 125 percent of average in western Bay of Plenty and Gisborne, due to the severe high rainfall event between the 15th and 18th of July. Rainfall was also above average in and around Blenheim.

Record high rainfall was recorded at:

Location	July rainfall (mm)	Percentage Of normal	Year Records began	Comments
Whakatane Airport	363	345	1975	Highest

BELOW AVERAGE RAINFALL IN MANY OTHER REGIONS

In contrast rainfall was less than 75 percent (three quarters) of average in many northern and western North Island regions and throughout the much of the South Island. Totals were less than 50 percent (half) of average along the Kaikoura Coast, around Banks Peninsula, and throughout much of Otago.

Near or record low July rainfall was recorded at:

Location	July rainfall (mm)	Percentage Of normal	Year Records began	Comments
Kaikoura	16	21	1949	2 nd lowest
Dunedin Airport	6	12	1963	Lowest
Dunedin, Musselburgh	11	16	1918	2 nd lowest
Manapouri Airport	28	30	1991	Equal lowest

BELOW AVERAGE TEMPERATURES THROUGHOUT MUCH OF NEW ZEALAND FROSTS MORE FREQUENT THAN USUAL IN THE EASTERN SOUTH ISLAND

Mean temperatures were about 0.5°C below average throughout much of the North Island, and 0.5 to 1.0°C below average throughout much of the South Island. Temperatures were as much as 1.5°C below average in parts of Hawke's Bay, Wairarapa, and Buller. Mean overnight minima were more than 2.5°C below average, due to more frequent calm, clear, frosty nights than usual, in coastal areas of Canterbury and Otago.

Near or record low July mean temperatures were recorded at:

Location	Mean temperature	Departure from average (°C)	Records Began	Comments
Castlepoint	8.6	-1.5	1972	3 rd lowest
Whakatu	6.1	-2.4	1983	Lowest
Westport Airport	7.3	-1.3	1937	Well below average
Dunedin Airport	3.6	-1.5	1963	3 rd equal lowest

Near or record low July mean daily minimum temperatures were recorded at:

Location	Mean temperature	Departure from average (°C)	Records Began	Comments
Christchurch Airport	-1.6	-2.4	1954	Lowest
Timaru Airport	-2.8	-2.6	1967	Lowest
Dunedin Airport	-3.3	-3.3	1963	Lowest

Near or record high July days with air (screen) frost were recorded at:

Location	Days with air frost July 2004	Departure from average (°C)	Records Began	Comments
Christchurch Airport	23	+10	1954	Highest
Winchmore	23	+9	1950	Well above average
Timaru Airport	27	+9	1957	Well above average
Dunedin Airport	26	+10	1963	Highest

SUNNY IN MOST REGIONS

Sunshine totals were above average (at least 110 percent of normal) throughout much of New Zealand. However, cloudier than usual skies prevailed in Northland and the east of the North from Gisborne to Hawke's Bay.

Well above normal July sunshine hours were recorded at:

Location	July sunshine (hours)	Percentage of normal	Year Records began	Comments
Dargaville	153	138	1943	Highest
Hamilton, Ruakura	161	134	1936	2 nd equal highest
Palmerston North	136	132	1930	Well above normal
Mt Cook Village	109	144	1930	Equal highest
Lake Tekapo	200	184	1928	Highest
Dunedin, Musselburgh	145	143	1948	2 nd highest

Well below normal July sunshine hours were recorded at:

Location	July sunshine (hours)	Percentage of normal	Year Records began	Comments
Gisborne Airport	102	78	1905	Well below normal

JULY'S CLIMATE IN THE FOUR MAIN CENTRES

Of the four main centres Auckland was the sunniest and Dunedin the driest. Rainfall was below average in Auckland, Christchurch, and Dunedin, and above average in Wellington. Temperatures were below average in Wellington, Christchurch, and Dunedin, and near average in Auckland. Sunshine hours were above normal in all four main centres, especially Dunedin.

Location	July Mean Temp. (°C)	Dep. from normal (°C)		July rainfall (mm)	% of normal		July Sunshine (hours)	% of normal	
Auckland	10.8 ^a	0.0	Average	97 ^b	66	Below average	167 ^a	128	Above average
Wellington	8.2	-0.6	Below average	163	119	Above average	133	113	Above average
Christchurch	4.7 ^c	-1.2	Below average	51 ^c	71	Below average	163 ^c	132	Well above average
Dunedin	6.1	-0.4	Below average	11	16	Well below average	145	143	2 nd highest

a Mangere b Mt. Albert c Christchurch Airport

HIGHLIGHTS AND EXTREME EVENTS

- The highest July 2004 temperature was 20.5°C, recorded at Nelson Park, Napier on the 29th. The lowest temperature for the month was -9.1°C, recorded at Lake Tekapo on the 23rd.
- Prolonged rainfall, often heavy in intensity, occurred in Bay of Plenty, between the 15th and 18th of July resulting in severe, devastating, flooding, slips and landslides, cuts to water supply, and a state of emergency, throughout the Rangitaiki Plains in the eastern Bay of Plenty. About 2000 people were evacuated from their homes, with a further 2000 people on standby. Edgecumbe, Te Teko, and Whakatane were the worst affected areas, with people also evacuated from part of Opotiki. More than 17,000 people faced shortages of drinking water. Much of SH2 was blocked. The flooding was reported to be the worst in the district in living memory. Whakatane Airport recorded rainfall totalling 246 mm for the 48 hours to 9am on the 18th (the highest 2-day rainfall there, well in excess of the previous maximum, in records back to 1974), and 140 mm in 24-hours. Opotiki recorded even higher rainfall, totalling 280 mm in 48-hours. At least 500 evacuees were still unable to return to their homes and large areas of low-lying farmland remained swamped at the end of the month. The damage bill is expected to be in the tens of millions of dollars.
- The North Island's Desert Road SH1 was closed between Waiouru and Taihape due to snowfall, as much as 20 cm deep, on the 3rd and 4th of July, and several motorists had to be rescued. SH4 at National Park and SH47 from National Park to Turangi were also closed, and about 50 cm of fresh snow was reported on Turoa ski field. The Desert road was closed due to further snowfall on the 23rd. Snowfall also occurred on the Taupo to Napier highway on the same day, with up to 100 trucks, and also motorists, stranded between Rangitaiki and Te Pohue. Cold southerlies brought further snowfall to 500m in inland high country areas of Canterbury on the 28th.
- Extensive damage to shops and stock occurred due to flooding after a heavy hail storm in Hokitika on the 5th. Another heavy hailstorm occurred southwest of New Plymouth affecting roads and traffic near Oakura on SH45 on the 7th.
- Storm force southerlies occurred, with gusts to 115 km/h, high seas and 7 m swells through Cook Strait on the afternoon of the 22nd, during which time the Aratere endured an 8-hour journey to

Wellington when mechanical problems occurred.

For further information, please contact:

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