

**National Climate Summary – April 2009: A month of contrasts. Wet in the north and west, dry in the south and east. Cool in the north and east, warm in the south and west**

- Rainfall: Above normal rainfall in Northland and the West Coast; very dry throughout the eastern half of the North Island (particularly southern Hawke’s Bay and northern Tararua District); dry in coastal Canterbury, eastern Otago and along the south coast.
- Temperature: Below average over much of the North Island (especially central and eastern areas); above average in the south and west of the South Island.
- Sunshine: Below normal in Northland and Auckland; above normal in parts of Hawke’s Bay, Tararua District, Tasman District and Southland; near normal elsewhere.

Exceptionally low rainfall for April (less than 20 percent of normal) occurred in southern Hawke’s Bay and Tararua District. This has resulted in significant soil moisture deficits (more than 50 mm below normal levels) throughout this region. Other eastern areas of both islands, around Auckland, and along the south coast of the South Island received below normal rainfall (between 20 and 60 percent of normal) in April. Above normal rainfall (greater than 200 percent of normal, or “double”) for April was recorded in Northland and parts of the West Coast and Southern Alps.

Temperatures were below average (by between 0.5 and 1.5 °C) over most of the central and eastern parts of the North Island for April. In contrast, parts of the West Coast, coastal Fiordland, Southland and south Otago were warmer than average by between 0.5 and 1.5 °C. The national average temperature of 13.4°C was 0.1°C above the long-term average for April.

Well above normal sunshine totals for April (greater than 125 percent of normal) were recorded in Hawke’s Bay, Tararua District, Tasman District, and Southland. The north of the North Island (Northland, Auckland and the Coromandel Peninsula) received below normal sunshine (less than 90 percent of normal) for the month.

The most significant extreme weather event to impact on the country in April was on the 27<sup>th</sup> when heavy rain along the West Coast resulted in flooding. Homes were evacuated in Greymouth and roads became impassable. Trampers were stranded in the Mueller Hut in Aoraki Mt Cook National Park, and about 120 people were evacuated from the Milford Track by helicopter.

April 2009 was dominated by the persistence of anticyclones (“highs”) to the east of the North Island of New Zealand. This pattern resulted in more northerly air flows than normal over New Zealand, which contributed to the higher than normal rainfall in the north and west and the lower than normal rainfall in the east and south.

**Further Highlights:**

- The highest temperature during April 2009 was 28.0°C recorded at Alexandra on the 16<sup>th</sup> and at Hororata on the 27<sup>th</sup>. The lowest temperature during April was recorded at Ranfurly on the 21<sup>st</sup>, where the minimum temperature was -6.2°C.
- The highest 1-day rainfall total for April was 341 mm recorded at Mt Cook on the 27<sup>th</sup> (the highest April 1-day total for this location, since records began in 1928).
- The wind gust of 165 km/hr recorded on Secretary Island (Doubtful Sound, Fiordland) on the 25<sup>th</sup> was the highest gust for April for New Zealand.
- Of the six main centres, Tauranga was the warmest and sunniest, Auckland was the driest and Wellington was the wettest.

**For further information, please contact:**

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

**Tel. (04) 386 0562 (work) or (027) 327 7948 (mobile); or  
 Dr James Renwick – Principal Scientist– NIWA National Climate Centre, Wellington,  
 Tel. (04) 386 0343 (work) or (021) 178 5550 (mobile)**

## **RAINFALL: DRY IN EAST AND SOUTH, WET IN NORTH AND WEST**

Exceptionally low rainfall for April (less than 20 percent of normal) occurred in southern Hawke’s Bay and Tararua District. The 21 mm recorded at Dannevirke for the whole month (7 mm of which fell on the 30<sup>th</sup>) was the lowest ever April total for this location since records began in 1951. This has resulted in significant soil moisture deficits (more than 50 mm below normal levels) throughout this region. Other eastern areas of both islands, around Auckland, and along the south coast of the South Island received below normal rainfall (between 20 and 60 percent of normal) in April. Above normal rainfall (greater than 200 percent of normal, or “double”) for April was recorded in Northland and parts of the West Coast and Southern Alps. The April rainfall total of 1156 mm (1.1 metres) observed at the Mt Cook climate station was the highest April total at this site since records began in 1928.

### **Extreme (high and low) April rainfall totals were recorded at:**

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
Kaitaia	253	253	1967	3rd-highest
Milford Sound	1008	170	1929	4th-highest
Mt Cook	1156	318	1928	Highest
Kumeu (Waitakere)	46	42	1978	2nd-lowest
Taupo	21	29	1949	3rd-lowest
Takapau Plains	19	22	1962	2nd-lowest
Dannevirke	21	24	1951	Lowest
Waipawa	16	23	1945	3rd-lowest
Lumsden	46	64	1982	4th-lowest
Invercargill	32	34	1939	4th-lowest
Tiwai Point	30	29	1970	3rd-lowest
Balclutha	24	53	1964	4th-lowest
Nugget Point	28	40	1930	4th-lowest

## **TEMPERATURE: COOLER THAN NORMAL IN NORTH AND EAST, WARMER THAN NORMAL IN SOUTH AND WEST**

The national average temperature of 13.4 °C for April 2009 was 0.1 °C above average for this time of the year. Temperatures were below average (by between 0.5 and 1.5 °C) over most of the central and eastern parts of the North Island for April. Parts of the West Coast, coastal Fiordland, Southland and south Otago were warmer than average by between 0.5 and 1.5 °C.

### **Extreme (high and low) April mean maximum daily air temperatures were recorded at:**

Location	Mean maximum air temperature (°C)	Departure from normal (°C)	Year records began	Comments
Appleby	19.5	1.3	1943	Highest
Dunedin	17.9	1.3	1947	2nd-highest
Cromwell	19.0	1.7	1949	4th-highest
Invercargill	16.5	1.5	1948	4th-highest
Tiwai Point	15.6	1.0	1970	4th-highest
Nugget Point	15.8	1.8	1970	2nd-highest
Kaitaia	19.5	-1.3	1967	2nd-lowest

Kumeu (Waitakere)	19.4	-0.8	1978	3rd-lowest
Cape Campbell	15.6	-2.3	1953	2nd-lowest

**Extreme (high and low) April mean minimum daily air temperatures were recorded at:**

Location	Mean minimum air temperature (°C)	Departure from normal (°C)	Year records began	Comments
Haast	9.7	1.3	1949	4th-highest
Arthurs Pass	4.8	0.9	1978	4th-highest
Takapau Plains	6.0	-2.2	1962	2nd-lowest
Dannevirke	5.8	-2.6	1951	2nd-lowest
Ohakune	4.3	-1.5	1962	4th-lowest
Wanganui	9.4	-1.3	1987	4th-lowest
Cheviot	4.3	-1.2	1982	4th-lowest

**SUNSHINE: ABOVE NORMAL FOR HAWKE'S BAY, TARARUA DISTRICT, TASMAN DISTRICT AND SOUTHLAND**

Well above normal sunshine totals for April (greater than 125 percent of normal) were recorded in Hawke's Bay, Tararua District, Tasman District, and Southland. New records for April were set for Invercargill and Balclutha, where sunshine was close to 150 percent of normal (one and a half times) April values. The north of the North Island (Northland, Auckland and the Coromandel Peninsula) received below normal sunshine (less than 90 percent of normal) for the month.

**Extreme (high and low) April sunshine hours were recorded at:**

Location	Sunshine (hours)	Percentage of normal	Year records began	Comments
Taumarunui	167	131	1947	2nd-highest
Dannevirke	191	137	1963	2nd-highest
Martinborough	178	117	1986	3rd-highest
Waipawa	206	141	1945	4th-highest
Invercargill	163	148	1932	Highest
Balclutha	173	151	1964	Highest
Kaitaia	139	88	1985	3rd-lowest

**APRIL CLIMATE IN THE SIX MAIN CENTRES**

Rainfall was well below normal in Auckland (the driest of the main centres), below normal in Tauranga, Hamilton and Dunedin, near normal in Christchurch and above normal in Wellington (the wettest of the main centres). Auckland had below average temperatures for April, while all the other main centres had near average temperatures (with Tauranga being the warmest). Sunshine totals were near normal everywhere except in Dunedin, which had above normal sunshine. Tauranga received the most sunshine hours for the month.

**April 2009 main centre climate statistics:**

Location	Mean temp. (°C)	Departure from normal (°C)		Rainfall (mm)	% of normal		Sunshine (hours)	% of normal	
Auckland <sup>a</sup>	15.6	-0.7	Below average	37	38	Well below normal	148	94	Near normal

Tauranga <sup>b</sup>	15.8	0.3	Near average	57	51	Below normal	189	106	Near normal
Hamilton	14.1	-0.1	Near average	48	51	Below normal	159 <sup>d</sup>	97	Near normal
Wellington	13.5	-0.3	Near average	121	122	Above normal	163	105	Near normal
Christchurch <sup>c</sup>	12.2	0.1	Near average	43	85	Near normal	151	94	Near normal
Dunedin	12.2	0.3	Near average	38	66	Below normal	147	121	Above normal

<sup>a</sup> Mangere <sup>b</sup> Tauranga Airport <sup>c</sup> Christchurch Airport <sup>d</sup> Ruakura

## HIGHLIGHTS AND EXTREME EVENTS

### • Temperature

The highest temperature during April 2009 was 28.0°C recorded at Alexandra on the 16<sup>th</sup> and at Hororata on the 27<sup>th</sup> (not April maximum temperature records for these locations). Nugget Point (South Otago) experienced its highest recorded April maximum temperature on the 26<sup>th</sup> reaching 24.9°C, and Takapau Plains (Hawke's Bay) recorded its highest April maximum temperature of 25.9°C on the 27<sup>th</sup>. Record high minimum temperatures for April were recorded at Cheviot on the 6<sup>th</sup> (17.2 °C) and at Darfield on the 27<sup>th</sup> (19.0 °C).

### Record or near record high extreme daily maximum air temperatures were recorded at:

Location	Extreme maximum temperature (°C)	Date of extreme temperature	Year Records began	Comments
Takapau Plains	25.9	27th	1962	Highest
Castlepoint	24.5	27th	1972	4th-highest
Milford Sound	22.6	25th	1934	Equal 4th-highest
Puysegur Point	20.7	15th	1978	3rd-highest
Woodbury	27.0	4th	1973	Equal 4th-highest
Dunedin	26.8	26th	1947	2nd-highest
Cromwell	27.0	16th	1949	2nd-highest
Nugget Point	24.9	26th	1970	Highest

### Record or near record high extreme daily minimum air temperatures were recorded at:

Location	Extreme minimum temperature (°C)	Date of extreme temperature	Year Records began	Comments
Hawera	16.7	27th	1977	Equal 4th-highest
Wanganui	17.2	28th	1987	4th-highest
Greymouth	16.1	27th	1972	Equal 3rd-highest
Haast	15.2	27th	1949	4th-highest
Puysegur Point	14.9	4th	1978	4th-highest
Blenheim	17.1	28th	1972	4th-highest
Hanmer Forest	16.1	27th	1972	3rd-highest
Kaikoura	16.1	27th	1972	Equal 4th-highest
Cheviot	17.2	6th	1982	Highest
Winchmore	18.2	27th	1928	3rd-highest
Waipara West	18.3	6th	1973	Equal 2nd-highest
Darfield	19.0	27th	1954	Highest
Le Bons Bay	16.0	7th	1984	Equal 3rd-highest
Orari	14.5	27th	1972	2nd-highest
Dunedin	15.4	27th	1947	3rd-highest
Gore	13.2	27th	1972	Equal 4th-highest
Nugget Point	13.8	5th	1972	2nd-highest

The lowest temperature during April was recorded at Ranfurly on the 21<sup>st</sup>, where the minimum temperature was -6.2°C (not a record for this location). The temperature fell to 0.8 °C at Kumeu (Waitakere) on the 10<sup>th</sup>; and to -3.6 °C at Balclutha and -4.0 °C at Dunedin airport on the 21<sup>st</sup>. These minimum temperatures were all record lowest April temperatures for these locations. Record low daily maximum temperatures for April were set at Pukekohe on the 9<sup>th</sup> (13.8 °C) and at Greymouth on the 30<sup>th</sup> (10.1 °C).

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

Location	Extreme minimum temperature (°C)	Date of extreme temperature	Year Records began	Comments
Warkworth	3.5	10th	1966	2nd-lowest
Kumeu (Waitakere)	0.8	10th	1978	Lowest
Pukekohe	2.1	10th	1969	3rd-lowest
Hamilton	-0.4	10th	1946	4th-lowest
Taumarunui	-2.6	2nd	1947	Equal lowest
Turangi	-3.1	2nd	1968	Equal lowest
Martinborough	-1.8	22nd	1986	2nd-lowest
Ngawi	5.9	22nd	1972	Equal 4th-lowest
Paraparaumu	0.2	22nd	1953	3rd-lowest
Ohakune	-2.7	22nd	1962	4th-lowest
Wanganui	2.2	22nd	1987	3rd-lowest
Appleby	-0.8	21st	1943	4th-lowest
Cheviot	-2.6	22nd	1982	3rd-lowest
Christchurch	-2.2	22nd	1863	Equal 4th-lowest
Lake Tekapo	-5.0	9th	1925	4th-lowest
Dunedin	-4.0	21st	1947	Lowest
Gore	-2.6	21st	1971	2nd-lowest
Balclutha	-3.6	21st	1964	Lowest

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

Location	Extreme maximum temperature (°C)	Date of extreme temperature	Year Records began	Comments
Kaitaia	16.4	21st	1972	Equal 3rd-lowest
Kerikeri	15.4	21st	1981	3rd-lowest
Whangaparaoa	15.5	21st	1982	Equal 2nd-lowest
Kumeu (Waitakere)	16.2	9th	1978	3rd-lowest
Paeroa	14.0	9th	1972	3rd-lowest
Pukekohe	13.8	9th	1972	Lowest
Ruakura	13.0	9th	1940	Equal 3rd-lowest
Hamilton	13.0	9th	1946	4th-lowest
Port Taharoa	13.9	9th	1974	3rd-lowest
Te Kuiti	12.6	9th	1959	Equal 4th-lowest
Hawera	11.2	9th	1977	Equal 4th-lowest
Hokitika	10.3	30th	1964	2nd-lowest
Reefton	8.4	8th	1972	2nd-lowest
Greymouth	10.1	30th	1972	Lowest
Arthurs Pass	5.0	30th	1973	3rd-lowest
Cheviot	8.8	30th	1982	Equal 2nd-lowest
Darfield	8.6	30th	1954	4th-lowest
Fairlie	8.0	29th	1972	3rd-lowest
Dunedin	7.7	8th	1947	3rd-lowest

• **Heavy rain and flooding**

The highest 1-day rainfall total for April was 341 mm recorded at Mt Cook on the 27<sup>th</sup> (the highest April 1-

day total for this location, since records began in 1928).

Homes were evacuated and roads flooded as torrential rain fell in Greymouth on this day. Roads became impassable and at least nine homes were evacuated on the eastern side of town. Flooding also forced the closure of SH6 at Punakaiki, and between Haast and Makarora. Trampers were stranded in the Mueller Hut in Aoraki Mt Cook National Park, and about 120 people were evacuated from the Milford Track by helicopter.

A massive slip blocked Oropi Gorge Road in the Bay of Plenty on the same day after a weekend of heavy rain in the region.

**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
Kaitaia	115	25th	1967	Highest
Mt Cook	341	27th	1928	Highest
Timaru	47	29th	1942	3rd-highest

• **High winds and tornadoes**

The wind gust of 165 km/hr recorded on Secretary Island (Doubtful Sound, Fiordland) on the 25<sup>th</sup> was the highest gust for April for New Zealand, though it was not an April record for this location.

**Record or near record high extreme wind gusts were recorded at:**

Location	Extreme wind gust speed (km/hr)	Date of extreme gust	Year Records began	Comments
Cape Reinga	130	24th	1974	3rd-highest
Rotorua	87	20th	1972	4th-highest
Hicks Bay	120	21st	1975	Equal 4th-highest

• **Snow**

On 8 April, 10 cm of snow fell in the Coronet Peak and Remarkables Ski Areas. Further north, Mt Hutt received 20 cm of snow.

**For further information, please contact:**

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

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

**Dr James Renwick – Principal Scientist– NIWA National Climate Centre, Wellington,**

**Tel. (04) 386 0343 (work) or (021) 178 5550 (mobile)**

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