

National Climate Summary – Autumn 2004

- **Temperature: Below average in many regions**
- **Rainfall: Below average in the far north, the south and west of the North Island, Marlborough, and Fiordland; above average in coastal Southland**
- **Sunshine: Sunny in the North Island and the east of the South Island**

Autumn's climate was cooler than usual, especially in the west of the North Island from Northland to King Country, with average or below average rainfall over much of the country. However, rainfall was above average along the Southland coast. Soil moisture levels were lower than normal in Central Otago. It was sunny in the North Island, as well as the east of the South Island. The climate patterns in autumn were dominated by more frequent southwesterlies in March, anticyclones ("highs") in April, and more frequent northeasterlies in May.

Highlights:

- The highest autumn temperature was 31.7°C, recorded at Kaikoura on 10 March. Temperatures were also unusually high for May in the north and east of the North Island on 2 May, with 27.3°C recorded at Nelson Park, Napier, a new North Island record for May.
- The lowest temperature for the autumn was -8.0°C, recorded at Fairlie on 9 April.
- Events with high rainfall during autumn were: 224 mm at Mt. Cook Village on 10 March, 124 mm at Motueka on 8 April, 207 mm in Tauranga over 17–28 April, and as much as 100 mm in Northland, Auckland, and Coromandel on 1 May.
- A cold southerly outbreak produced snowfall on the Desert Road over the night of 28/29 March. This was the earliest significant snowfall event in the year for the Desert Road since 22 March 1993. Snowfall also occurred in Canterbury, lying at both Oxford and Darfield near the foothills and down to 500 m in the North Island on 6 April. On the same day hail was widespread throughout Wanganui, with a thick layer of hailstones whitening the ground in the city, causing damage to roofs, and disruption to traffic. Snow settled in Methven on 24 May.
- Violent electrical storms occurred over Stanmore Bay, Whangaparoa Peninsula, on 29 April, resulting in power outages.
- Of the four main centres Wellington was the sunniest and Christchurch the driest. Rainfall was near average in Dunedin and below average in the other three centres. Temperatures were below average in all four centres. Sunshine hours were above normal in Wellington and Dunedin, and near normal in the other two main centres.

Temperature

The autumn national average temperature of 12.7°C was 0.6°C below normal, the lowest since 1997. Mean temperatures were below normal in many regions, and at least 1.0°C below normal in parts of Northland, Auckland, Waikato, and King Country. They were near normal in eastern Bay of Plenty, Gisborne, Hawke's Bay, Nelson, north Canterbury, Fiordland, and Central Otago.

Rainfall

Rainfall was below average in the far north, and the west of the North Island from Auckland to Wellington, as well as Tongariro/Ruapehu, Wairarapa, central Marlborough, and Fiordland. Above average rainfall occurred on the Southland coast.

Sunshine

Sunshine totals were above normal throughout much of the North Island, and the east of the South Island from Marlborough to Southland. Totals were below average in the west of the South Island from Buller to Fiordland.

Details follow:

Below average temperatures in many regions

Autumn was cooler than usual over much of the country. Mean temperatures were 0.5 to 0.9°C below normal in many regions, and at least 1.0°C below normal in parts of Northland, Auckland, Waikato, and King Country. However, mean temperatures were near normal in eastern Bay of Plenty, Gisborne, Hawke's Bay, Nelson, north Canterbury, Fiordland, and Central Otago.

Near record low Autumn mean air temperatures were recorded at:

Location	Mean temperature	Departure from average (°C)	Records began	Comments
Kaitaia	15.7	-1.2	1985	3rd lowest
Warkworth	14.2	-1.2	1972	2nd lowest
Auckland, Owairaka	14.9	-1.2	1949	3rd lowest
Pukekohe	14.1	-1.4	1971	2nd lowest
Taumarunui	12.1	-1.2	1947	2nd lowest
Castlepoint	13.4	-1.5	1972	2nd lowest
Tiwai Point	10.0	-1.1	1970	3rd lowest

Below average rainfall in the far north, the southwestern North Island, Marlborough and Fiordland; above average rainfall in coastal Southland

Rainfall was less than 50 percent (half) of average autumn totals in the far north and along the Kaikoura coast, and less than 75 percent (three quarters) of average in the west of the North Island from Auckland to Wellington, as well as Tongariro/Ruapehu, Wairarapa, central Marlborough, and Fiordland. Totals were 125 percent (one and a quarter) of the autumn average along the Southland coast, and near average elsewhere.

Near record low Autumn rainfall was recorded at:

Location	Autumn rainfall (mm)	Percentage of normal	Year records began	Comments
Cape Reinga	109	42	1920	2nd lowest
Kaikoura	98	40	1949	3rd lowest

Sunny in the North Island and the east of the South Island

Sunshine totals were 105–110 percent of normal throughout much of the North Island, and the east of the South Island from Marlborough to Southland. Totals were slightly below average in the west of the South Island from Buller to Fiordland.

Autumn climate in the four main centres

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

Location	May mean temp (°C)	Dep. from normal (°C)		May rainfall (mm)	% of normal		May sunshine (hours)	% of normal	
Auckland	15.0 ^a	-1.2	Well below average	258 ^b	85	Below average	416 ^d	95	Near average
Wellington	12.8	-0.9	Below average	246	80	Below average	519	109	Above average
Christchurch	11.6 ^c	-0.5	Below average	130 ^c	82	Below average	484 ^c	100	Average
Dunedin	10.9	-0.7	Below average	197	98	Near average	413	114	Well above Average

a Mangere *b* Mt. Albert *c* Christchurch Airport *d* Whenuapai

Highlights and extreme events

- The highest autumn temperature was 31.7°C, recorded at Kaikoura on 10 March. This was Kaikoura's 2nd highest March temperature in measurements that commenced in 1964. Temperatures were unusually high for the time of year in Northland, Coromandel, Waikato, and Hawkes' Bay on 2 May, 27.3°C, being recorded at Nelson Park, Napier, a new May record for the North Island. The lowest temperature for the autumn was -8.0°C, recorded at Fairlie on 9 April, the 2nd lowest there for April since observations started in 1925.
- High rainfall totalling 224 mm occurred in Mt. Cook Village on 10 March. Further high rainfall totalling 124 mm occurred in Motueka on 8 April. Rainfall totalling 207 mm was recorded at Tauranga Airport over 27-28 April (130 mm on the 28th), and exceeded 100 mm in other parts of Bay of Plenty during the same period. This rainfall resulted in flooding. Rainfall totalling as much as 100 mm occurred in Northland, Auckland, and Coromandel on 1 May.
- A cold southerly outbreak produced snow on the Desert Road over the night of 28/29 March, resulting in a temporary closure, with scattered hail in exposed eastern regions. This is the earliest significant snowfall event in the year for the Desert Road since 22 March 1993 when 5 cm was recorded. A cold southerly outbreak produced snow in Canterbury near the foothills on 6 April, with a few centimetres of snow lying at both Oxford and Darfield. The air temperature at Snowden was just 3°C at 3 pm. Snowfall also occurred to about 500 m in the North Island. On the same day, hail was widespread throughout Wanganui, after a 30-minute storm about 3.30 pm produced a thick layer of hailstones (up to 20 cm deep in places), whitening the ground in the city, damaging roofs, and causing disruptions to traffic. Snow settled in Methven on 24 May.
- Violent electrical storms occurred over Stanmore Bay, Whangaparoa Peninsula, on 29 April, resulting in power outages.

For further information, please contact:

Dr Jim Salinger – Senior Climate Scientist
NIWA's National Climate Centre, Auckland
Tel. 0-9-375 2053 (Business) or 025 540 707 (mobile)
Stuart Burgess – Climatologist, NIWA, Wellington, Tel. 0-4-386 0569
Geoff Baird, NIWA Communications Manager, Tel. 0-4-385 0543 or 025 229 6314