

National Climate Summary – April 2008 Extremes: deluges in the north, but dry in the south

- Rainfall: Record high rainfall in Bay of Plenty/Taupo, double average in parts of Northland, Wellington, Nelson and Marlborough, below average over the southern half of South Island
- Soil moisture: Significant deficits remain in inland Otago and eastern Canterbury
- Temperature: Above average in the west of the North Island, below average in inland Canterbury and Otago
- Sunshine: Above average in the west and south of the South Island, below average in Auckland and Waikato

April was a month of extremes with floods in northern New Zealand, while it remained dry in the south. An active trough moved over the North Island and north of the South Island from 14-16 April producing flooding in many parts of the north of the North Island and Nelson. Rainfall rates as high as 40 mm in an hour occurred producing flash floods - one drowning seven people in Tongariro National Park - and lightning which killed a man in Northland. Another trough on 29-30 April produced further heavy rainfall from 29-30 April with flooding in Northland, Taranaki, Kapiti and Wellington. April rainfalls eliminated the severe and significant soil moisture deficits in most of the North Island. However significant soil moisture deficits (more than 100 mm) persisted in Canterbury, north and central Otago.

Rainfall was particularly high in the Bay of Plenty and Taupo where more than double (200 percent) the April totals occurred. Marlborough also had double the normal April rainfall. In contrast it was much drier than normal over the remainder of the South Island with half or less normal rainfall in the southwest.

It was another mild month with the national average temperature of 13. °C being 0.3°C above average. Mean temperatures were between 0.5 and 1°C above average in Coromandel, the Waikato, and from Taranaki to Manawatu, and parts at least 0.5°C below average in inland parts of Canterbury and Otago. It was generally sunny month over Wellington and much of the South Island, especially in the west and south.

There were more depressions ('lows') in the Tasman Sea to the northwest of the North Island than normal for April and more anticyclones than normal to the south and east of the South Island. This produced more frequent moist northeast winds onto the North Island, and drier easterlies on to the South Island compared with usual April airflows.

Further Highlights:

- The highest temperature during April 2008 was 27.0°C recorded at Culverden on the 15th. The lowest air temperatures during the month was -5.1°C recorded at Lauder in the South Island and -4.0 °C recorded at The Chateau, Tongariro on the 20th.
- The highest 1-day rainfall was 132 mm recorded at Takaka on the 14th.
- The highest wind gust for the month was 137 km/h at South West Cape (Stewart Island) on the 21st, in strong southwesterly conditions.
- Two tornadoes occurred, one on the 1st near Westport, and the other on the 30th 60 km north west of Napier.
- Of the five main centres, Auckland was the warmest, Wellington the wettest and sunniest, and Christchurch the driest.

Temperature: Mean temperatures were between 0.5 and 1°C above average in Coromandel, the Waikato, and from Taranaki to Manawatu, and at least 0.5°C below average in inland parts of Canterbury and Otago.

Rainfall: Rainfall was double (200 percent) of normal rainfall in Bay of Plenty and Taupo, the Hauraki Plains, Cape Reinga, the Bay of Islands, Wellington, Nelson and Marlborough. At least one and a half times (150 percent) of normal rainfall was recorded in other parts of Northland, the Central Plateau, North Taranaki, Kapiti Coast and Wairarapa.

Low rainfall occurred over the remainder of the South Island, with only a half (50 percent) of normal rainfall in the southwest of the South Island, Christchurch, and Alpine areas.

Sunshine: Above average sunshine hours (at least 110 percent of normal) occurred in Wellington and over much of the South Island. It was particularly sunny in the west and south of the South Island, where totals were at least 120 percent of normal. Sunshine totals were less than 90 percent of normal in Auckland and the Waikato.

For further information, please contact:

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RAINFALL: VERY HIGH IN BAY OF PLENTY AND TAUPO, LOW IN OTAGO, SOUTHLAND AND FIORDLAND

Rainfall was double (200 percent) of normal rainfall in Bay of Plenty and Taupo, the Hauraki Plains, Cape Reinga, the Bay of Islands, Wellington, Nelson and Marlborough. At least one and a half times (150 percent) of normal rainfall was recorded in other parts of Northland, the Central Plateau, North Taranaki, Kapiti Coast and Wairarapa. Normal or slightly below normal rainfall was recorded in other North Island areas. Low rainfall occurred over the remainder of the South Island, with only a half (50 percent) of normal rainfall in the southwest of the South Island, around Christchurch and in the Alpine areas.

Near or record high April rainfall was recorded at:

Location	April Rainfall (mm)	Percentage of normal	Year records began	Comments
Cape Reinga	232	201	1920	3 rd highest
Warkworth	227	202	1972	Highest
Matamata	198	198	1966	4 th highest
Whakatane Airport	256	275	1975	Highest
Rotorua Airport	296	256	1964	Highest
Taupo Airport	156	211	1976	Highest

TEMPERATURE: ABOVE AVERAGE IN WEST OF NORTH ISLAND

The National average temperature of 13.7°C was 0.34°C above average. Mean temperatures were between 0.5 and 1°C above average in Coromandel, the Waikato, and from Taranaki to Manawatu. Mean temperatures were up to 0.5 °C above average in Bay of Plenty, Gisborne, Wellington, Nelson, and parts of Westland. Mean temperatures were at least 0.5°C below average in inland parts of Canterbury and Otago. Daily maximum temperatures were at least 1°C above average in the Waikato, Tongariro, Manawatu, Nelson, Fiordland and Tekapo areas. Average minimum temperatures were 1 to 1.5°C above average over the north of the North Island (Northland, Auckland, Waikato, Bay of Plenty, Ruapehu and Taranaki), and 1 to 1.5°C below average in Fiordland, Nelson and inland Otago.

Near record low mean minimum air temperatures were recorded at:

Location	Mean minimum air temperature (°C)	Departure from Normal	Year Records began	Comments
Manapouri	4.0	-2.4	1962	2 nd lowest

SUNSHINE: SUNNY OVER WELLINGTON AND MUCH OF THE SOUTH ISLAND

Above average sunshine hours (at least 110 percent of normal) occurred in Wellington and over much of the South Island. It was particularly sunny in the west and south of the South Island and inland areas where totals were at least 120 percent of normal. Sunshine totals were less than 90 percent of normal in Auckland and the Waikato. Sunshine totals were closer to average in other parts of New Zealand.

Near or record April sunshine hours were recorded at:

Location	April Sunshine (hours)	Percentage of normal	Year records began	Comments
Tekapo	224	141	1928	3 rd highest

APRIL'S CLIMATE IN THE FIVE MAIN CENTRES

Auckland was the warmest, Wellington the wettest and sunniest, and Christchurch the driest of the five main centres. Rainfall was below normal in Christchurch and Dunedin, and above normal in Hamilton and Wellington. Temperatures were above normal in the North Island centres. Sunshine hours were above normal in Wellington and Dunedin, and below normal in Auckland and Hamilton.

April 2008 main centre climate statistics:

Location	Apr. mean temp. (°C)	Dep. from normal (°C)		Apr. rainfall (mm)	% of normal		Apr. Sunshine (hours)	% of normal	
Auckland	17.2	+0.9	Above average	115 ^a	109	Near normal	130	82	Below normal
Hamilton	15.2	+0.7	Above normal	122	129	Above normal	140	85	Below normal
Wellington	14.3	+0.5	Above normal	210	211	Much above normal	176	114	Above normal
Christchurch ^b	12.0	-0.1	Near normal	28 ^c	55	Well below normal	160	100	Near normal
Dunedin	12.0	+0.1	Near normal	45	77	Below normal	152	125	Well above normal

^a Owairaka ^b Christchurch Airport

HIGHLIGHTS AND EXTREME EVENTS

• Temperature

The highest temperature during April 2008 was 27.0°C recorded at Culverden on the 15th.

The lowest air temperatures during the month was -5.1°C recorded at Lauder in the South Island and -4.0 °C recorded at The Chateau, Tongariro on the 20th, under clear skies.

• High winds and tornadoes

A tornado on 1st April hit Ngakawau, near Westport at 5.10 pm tearing the roof off a workshop, blowing in windows and snapping a power pole. Wind speeds were estimated at 180-200 km/h.

Another tornado on 30th April occurred at 3.30 am across forests and farmlands between Te Haroto and Tarawera about 60 km northwest of Napier. It uprooted some trees and snapped power poles, cutting power to 100 homes for a few hours.

The highest wind gust for the month was 137 km/h at South West Cape (Stewart Island) on the 21st, in strong south westerly conditions.

- **High rainfall**

4 April

A localised deluge of 25 mm between 8.00 and 9.15 pm brought flash flooding in Greymouth.

14-16 April

A low over the Tasman Sea with a front moved over Nelson and the North Island and produced heavy rainfall and flooding in Northland, Bay of Plenty, Central North Island and Nelson. It caused 8 deaths, one from a lightning strike, and seven in a flash flood. On the 14th in the Nelson area 132 mm in 24 hours in Takaka, and 99 mm at Appleby caused isolated slips and floods briefly. On the 15th in Northland 55 mm occurred in an hour in the Hokianga, with 94 mm in 3 hours. A man and his horse were struck by lightning and killed near Dargaville. The Opononi area school was closed and evacuated. A lightning strike near Kaitaia caused the Doubtless Bay area to be without power for 3 hours. Further south, 1-day totals of 126 mm at Matamata, 108 mm at Rotorua Airport and 101 mm at Taupo caused flooding and slips. The deluge caused flooding of some homes in Rotorua and car crashes, with a two metre high wall of water sweeping down an Otonga hillside. The deluge in Tongariro National Park caused a flash flood on the Mangatepopo stream 25 km west of Turangi drowning seven people. Further heavy rainfall in the eastern Bay of Plenty and near East Cape produced 120 to 130 mm in the hill country with minor slips on SH2. The highest 1-day rainfall was 132 mm recorded at Takaka on the 14th.

29-30 April

A trough passing over New Zealand produced further heavy rainfall, with flood damage around coastal in Northland, Taranaki and Kapiti. A 40 mm rainfall occurred at both Paraparaumu and New Plymouth between 10 pm on the 29th and 3 am on the 30th, with 95 mm at North Egmont. A number of houses were severely damaged near Okato when the Stony River burst its banks, with widespread damage to farms to the south. Floodwaters swept through 10 shops and several houses on the Kapiti Coast. In Wellington 94 mm on 30th April occurred with fire fighters being called out 40 times to weather-related incidents, with most incidents involving involving surface flooding.

There were several high rainfall events, with at least 75 mm in 24 hours. These were:

Date	Region	Location	Rainfall (mm)*	Other comments
6 April	Gisborne	Gisborne	86	
14 April	Nelson	Takaka	132	
		Riwaka	93	1 in 2 year event
		Nelson Airport	105	1 in 10 year event
		Appleby	99	1 in 8 year event
15 April	Waikato	Matamata	126	> 100 year event
		Toenipi	95	
15 April	Bay of Plenty	Whakatane Airport	92	Annual event
		Rotorua Airport	108	1 in 4 year event
15 April	Taupo	Taupo Airport	101	1 in 40 year event
		Turangi	77	
16 April	Gisborne	Hicks Bay	79	
27 April	Ruapehu	Waiouru	79	
29 April	Westland	Franz Josef	78	
		Lake Moeraki	107	
30 April	Wellington	Kelburn, Wellington	94	

(9am-9am) rainfall

- **Severe Soil Moisture Deficits**

April rainfall ended the severe and significant soil moisture deficits in much of the North Island. Significant soil moisture deficits (more than 110 mm) persisted in Canterbury, north and central Otago.

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