

**National Climate Summary – April 2011: Record April rainfall for Hawkes Bay, and cool conditions in eastern areas of both islands.**

- **Rainfall:** Treble normal April rainfall in Hawkes Bay. Well above normal rainfall in Auckland, Waikato, Bay of Plenty, inland Gisborne, Wairarapa, Wellington, Kapiti Coast, Manawatu, south Taranaki, Kaikoura coast, and south Canterbury. In contrast, it was a relatively dry month in the west and south of the South Island.
- **Temperatures:** Below average in most eastern areas. Above average in eastern Northland. Near average elsewhere.
- **Sunshine:** Very cloudy in Bay of Plenty, Kapiti Coast, Nelson and Marlborough. Very sunny for the west and south of the South Island.

In April 2011, New Zealand was affected by more southeast winds than usual. These produced extremely high rainfalls in the east of the North Island, as well as on the Kaikoura coast. The southeast winds also resulted in below average April temperatures in most eastern areas, but gave a very sunny month for the West Coast of the South Island.

Treble normal (more than 300 percent) April rainfall was experienced in Hawkes Bay. Most of this rain fell in two days (between 26 and 28 April), and a State of Emergency was declared there on 28 April, due to flooding and slips. Several coastal Hawkes Bay settlements were evacuated after being completely cut off. Well above normal rainfall (more than 150 percent of April normal) was also recorded in Auckland, Waikato, Bay of Plenty, inland Gisborne, Wairarapa, Wellington, Kapiti Coast, the Manawatu, south Taranaki, the Kaikoura coast, and south Canterbury. In contrast, it was a relatively dry month for the west and south of the South Island (with rainfalls between 50 and 79 percent of normal). At the end of April, soils were unusually wet for the time of year for almost all of the North Island, as well as in many eastern regions of the South Island.

April mean temperatures were below average (between 1.2°C and 0.5°C below April average) in most eastern areas of the country; Hawkes Bay, Wairarapa, Wellington, Kaikoura Coast, much of Canterbury and coastal Otago, as well as some inland sites along the South Island Main Divide. Unusually cold events for the time of year occurred in a southerly airstream on 18 April, and in the wet, southeast event on 27-28 April. The New Zealand national average temperature in April was 13.0°C (0.4°C below the 1971–2000 April average).

Sunshine totals in April were below normal (between 75 and 90 percent of normal) for much of the North Island (except Northland), as well as in Nelson and Marlborough. In contrast, it was a very sunny month for the West Coast of the South Island (with totals around 125 percent of normal), as well as for the far south.

**Further Highlights:**

- The highest temperature recorded was 28.4 °C at Westport on 26 April (a new April record there).
- The lowest temperature recorded was -5.9°C at Ranfurly on 28 April.
- The highest 1-day rainfall of 151 mm was recorded at North Egmont on 24 April.
- The highest gust was 146 km/hr, recorded at Southwest Cape (Stewart Island) on 10 April.
- Of the six main centres, Dunedin was the driest, Auckland the warmest, and Christchurch the coolest. Tauranga was the wettest of the six main centres but conversely also the sunniest – as over half of the monthly rainfall there fell in two days (24-25 April).

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**RAINFALL: TREBLE NORMAL RAINFALL IN HAWKES BAY. WELL ABOVE NORMAL IN AUCKLAND, WAIKATO, BAY OF PLENTY, INLAND GISBORNE, WAIRARAPA, WELLINGTON, KAPITI COAST, MANAWATU, SOUTH TARANAKI, KAIKOURA COAST, AND SOUTH CANTERBURY. IN CONTRAST, IT WAS RELATIVELY DRY IN THE WEST AND SOUTH OF THE SOUTH ISLAND.**

Record or near-record high April rainfall was observed in Hawkes Bay, with more than 300 percent of April normal (treble normal) rainfall experienced in Napier. Most of this rain fell in two days (between 26 and 28 April), and a State of Emergency was declared for Hawkes Bay on 28 April, due to flooding and slips in the region. Several coastal Hawkes Bay settlements were evacuated after being completely cut off. It was the 2nd wettest April in 140 years at Napier (climate records began there in 1870), and it was a record wet April at Wairoa (since records began there in 1964).

Well above normal rainfall (more than 150 percent of April normal) was also recorded in Auckland, Waikato, Bay of Plenty, inland Gisborne, Wairarapa, Wellington, Kapiti Coast, the Manawatu, south Taranaki, the Kaikoura coast, and south Canterbury. In contrast, it was a relatively dry month for the west and south of the South Island (with rainfalls between 50 and 79 percent of normal). At the end of April, soils were unusually wet for the time of year for almost all of the North Island, as well as in many eastern regions of the South Island.

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

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
Napier	247	313	1870	2nd-highest
Waipawa	161	239	1945	3rd-highest
Wairoa	333	230	1964	Highest
Wanganui	113	158	1987	4th-highest

**TEMPERATURES: BELOW AVERAGE IN MOST EASTERN AREAS. ABOVE AVERAGE IN EASTERN NORTHLAND. NEAR AVERAGE ELSEWHERE.**

April mean temperatures were below average (between 1.2°C and 0.5°C below April average) in most eastern areas of the country; Hawkes Bay, Wairarapa, Wellington, Kaikoura Coast, much of Canterbury and coastal Otago, as well as some inland sites along the South Island Main Divide. Unusually cold events for the time of year occurred in a southerly airstream on 18 April, and in the wet, southeast event on 27-28 April. The New Zealand national average temperature in April was 13.0°C (0.4°C below the 1971–2000 April average)<sup>1</sup>.

**Record or near-record high April mean maximum air temperatures were recorded at:**

Location	Mean maximum air temperature (°C)	Departure from normal (°C)	Year records began	Comments
Kaikohe	20.9	1.6	1973	4th-highest
Leigh	22.1	2.0	1966	Highest
Martinborough	17.2	-1.9	1986	3rd-lowest
Ngawi	17.0	-0.9	1972	2nd-lowest

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

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

Location	Mean minimum air temperature (°C)	Departure from normal (°C)	Year records began	Comments
Kaikohe	13.7	1.2	1973	3rd-highest
Dargaville	13.6	2.0	1943	4th-highest

**SUNSHINE: VERY CLOUDY IN BAY OF PLENTY, KAPITI COAST, NELSON AND MARLBOROUGH. VERY SUNNY FOR THE WEST AND SOUTH OF THE SOUTH ISLAND.**

Sunshine totals in April were below normal (between 75 and 90 percent of normal) for much of the North Island (except Northland, where totals were above normal), as well as in Nelson and Marlborough. In contrast, it was a very sunny month for the West Coast of the South Island (with totals around 125 percent of April normal), as well as for the far south of the country.

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

Location	Sunshine (hours)	Percentage Of normal	Year records began	Comments
Lake Tekapo	212	139	1928	4th-highest
Balclutha	149	130	1964	4th-highest
Takaka	150	80	1985	2nd-lowest
Blenheim	160	85	1947	3rd-lowest

**APRIL CLIMATE IN THE SIX MAIN CENTRES**

Of the six main centres in April 2011, Dunedin was the driest, Auckland the warmest, and Christchurch the coolest. Tauranga was the wettest of the six main centres but conversely also the sunniest – as over half of the monthly rainfall there fell in two days (24-25 April).

**April 2011 main centre climate statistics:**

Location	Mean temp. (°C)	Departure from normal (°C)		Rainfall (mm)	% of normal		Sunshine (hours)	% of normal	
Auckland <sup>a</sup>	16.5	+0.2	Near average	158	160%	Well above normal	159	101%	Near normal
Tauranga <sup>b</sup>	16.0	+0.5	Near average	225	200%	Well above normal	161	92%	Near normal
Hamilton <sup>c</sup>	14.0	-0.2	Near average	115	121%	Above normal	151 <sup>g</sup>	92%	Near normal
Wellington <sup>d</sup>	13.2	-0.6	Below average	162	163%	Well above normal	143	92%	Near normal
Christchurch <sup>e</sup>	11.3	-0.8	Below average	51	99%	Near normal	141	88%	Below normal
Dunedin <sup>f</sup>	11.6	-0.3	Near average	44	75%	Below normal	129	106%	Near normal

<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

### Rain and slips

The highest 1-day rainfall in April 2011 was 151 mm, recorded at North Egmont on 24 April.

On 4 April, heavy rain caused a serious land-slip depositing tonnes of debris on the railtracks at Awatuna, north of Hokitika. In New Plymouth, heavy rain delayed the setting of the newly laid cement road surface in Devon Street, causing a sludgy mess for businesses, people and vehicles in the area.

Heavy rain on 5 April caused minor flooding and slips in Wellington and Taumarunui. In Christchurch the rain caused problems with the sewerage system broken in the earthquake.

On 18 April, rain was so heavy in Wainui and Okitu, Gisborne, that drivers were forced to pull over and wait about 20 minutes for conditions to ease.

On 20 April, a large slip blocked the southbound lane and part of the northbound lane of SH3 near Mokau.

On 25 and 26 April, heavy rain and winds caused flooding and slips and brought down trees across central North Island regions. SH5 between Rotorua and Taupo was blocked by downed trees and powerlines. SH25 was affected by surface flooding near Whitianga, and slips near Waihi. Slips also closed SH35 at Maraenui Hill, and SH2 south of Matata. Residents were evacuated from Te Awanga, east of Hastings, after the heavy rain. Many roads in Waikato, Taranaki, Manawatu, Bay of Plenty, the Taupo area, Hawkes Bay and Gisborne were closed by slips and flooding.

On 27 April, more people were evacuated from coastal Hawkes Bay settlements, and more roads were closed by slips, following persistent heavy rain. Problems created by the heavy rain meant all water for drinking and cooking had to be boiled and residents were asked to conserve water and not take showers or baths, do the laundry or flush the toilet. Large slips isolated SH35 between Motu Bluffs and Maraenui Hill around East Cape. SH2 was closed from Bayview to Nuhaka. At Morere Hot Springs heavy rain caused severe damage, with a major slip bursting a main pipe and closing the reserve, possibly for more than a week. In Mt Maunganui, slips closed more of the tracks on Mauao, with some tracks still closed after the January storms.

On 28 April, a large slip in Napier, between Bluff Hill and the port, blocked the railway line as well as the road in both directions, and 18 homes above the slip were evacuated. Mahia was completely cut off by a slip. A group of eight trampers was evacuated by helicopter from Whirinaki Forest Park where they had been trapped for three days by the bad weather.

On 29 April, Aramoana (Hawkes Bay) was still completely cut off, and food parcels were dropped by air. The historic building, Aramoana Woolshed, was reported to have been damaged by a very large slip, which lifted it from its foundations. In Northland, the small two-lane bridge on SH1, 2 km north of Te Kao, was impassable after being damaged by flooding, and the Mangonui waterfront was also flooded.

### 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
Te Puke	116	25th	1973	3rd-highest
Whatawhata	94	25th	1952	3rd-highest
Hamilton	70	25th	1935	3rd-highest
Napier	125	26th	1870	3rd-highest
Wairoa	128	27th	1967	3rd-highest

- **Temperature**

The highest temperature in April was 28.4 °C observed at Westport on 26 April in an easterly air stream. This is a new April record, being the highest April temperature measured at Westport since records began there in 1937. In contrast, an unusually cold southerly for April affected much of the North Island on the 18<sup>th</sup>, with very low afternoon temperatures observed. A ridge of high pressure over the South Island brought frosty conditions during the period 27-29 April to multiple South Island locations, with associated unusually low morning minimum air temperatures. The lowest temperature recorded in April was -5.9°C, measured at Ranfurly on 28 April.

**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	26.6	23rd	1973	Highest
Leigh	24.7	4th	1966	Equal 2nd-highest
Takaka	25.5	30th	1978	Highest
Westport	28.4	26th	1937	Highest
Lake Rotoiti	22.0	30th	1965	3rd-highest
Paeroa	13.7	18th	1971	2nd-lowest
Rotorua	11.6	18th	1972	2nd-lowest
Taupo	9.9	18th	1950	2nd-lowest
Hamilton	12.3	18th	1940	2nd-lowest
Taumarunui	10.7	18th	1947	4th-lowest
Turangi	10.0	18th	1968	4th-lowest
Masterton	9.9	26th	1943	Equal 4th-lowest
Takapau Plains	8.1	18th	1972	2nd-lowest
Dannevirke	8.9	18th	1951	3rd-lowest
Ngawi	11.3	27th	1972	3rd-lowest
Hastings	11.9	18th	1972	3rd-lowest
Palmerston North	10.7	26th	1940	3rd-lowest
Stratford	9.7	26th	1972	3rd-lowest
Ohakune	7.0	18th	1972	Equal 2nd-lowest
Waiouru	4.4	18th	1972	4th-lowest
Wanganui	11.5	26th	1987	2nd-lowest
Farewell Spit	13.0	27th	1972	Equal 3rd-lowest
Kaikoura	9.2	27th	1972	4th-lowest
Le Bons Bay	7.9	27th	1984	4th-lowest

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

Location	Extreme minimum temperature (°C)	Date of extreme temperature	Year records began	Comments
Wanganui	3.1	30th	1987	4th-lowest
Appleby	-1.8	29th	1943	2nd-lowest
Hanmer Forest	-5.2	29th	1906	Lowest
Arthurs Pass	-3.9	28th	1973	4th-lowest
Winchmore	-2.7	28th	1928	3rd-lowest
Christchurch	-2.8	28th	1863	Equal 4th-lowest
Timaru	-2.8	28th	1990	2nd-lowest

Dunedin	0.5	28th	1947	4th-lowest
Manapouri	-4.6	27th	1963	Equal 2nd-lowest
Queenstown	-4.5	28th	1871	Lowest
Lumsden	-4.5	28th	1982	2nd-lowest
Alexandra	-4.4	28th	1983	Equal 2nd-lowest
Invercargill	-3.5	28th	1905	4th-lowest
Balclutha	-3.1	28th	1964	2nd-lowest

- **Wind**

The highest gust observed during April 2011 was 146 km/hr, recorded at Southwest Cape (Stewart Island) on 10 April.

On 5 April, a mini tornado in South Auckland blew the roof off a storage unit, trapping a man in a nearby vehicle.

On 18 April, high winds brought down power lines in Gisborne. It was also windy over Northland in the same southerly air stream (see Table below).

On 26 April, strong winds in Te Awamutu brought down power lines and trees, including an avenue of about 20 trees up to 6 m high, cut power to Cambridge and Te Awamutu, and damaged buildings. One business had a 6 m square window blown out and lost part of its roof. SH1 near Cambridge, and SH30 from Whakamaru to Atiamuri, were blocked by several downed trees. SH33 near Okere Falls, Te Puke was blocked by a fallen tree. SH3 was blocked between New Plymouth and Waitara after a roof was blown onto the road. Downed trees and power lines completely blocked SH5 north of Taupo, and the Napier-Taupo section of SH5 was also blocked by fallen trees. The whole of Taupo and some surrounding areas lost power mid-afternoon after power lines were brought down. In Taranaki, the drill ship, Noble Discoverer, which had been drilling on the Maui gas field, was disconnected from its well-head as a precautionary measure before forecast heavy winds hit the area. Only two flights were able to leave New Plymouth Airport because of the conditions. High winds around Shannon caused a vehicle towing a boat to jack-knife, with the wind lifting the boat clear of the trailer, throwing it into a nearby paddock. At Paraparaumu, a rail barrier was blown into the live overhead train wires and lodged there. In Wellington, the Bluebridge ferry collided with a fishing boat while trying to berth the ship in strong winds. The ferry was damaged and out of service for repairs. At Waikawa near Picton, a twister tore the roof off at least one house and left iron lying metres up a nearby hillside. Further south, high winds made driving difficult on SH6 between Harihari and Haast.

On 27 April, a Jetstar plane was damaged at Wellington Airport when a wind gust blew a container into the tail of the plane. In Tauranga, McLaren Falls Park was closed for a few hours because of high winds and tree damage. All flights in and out of New Plymouth Airport were cancelled because of the high winds. At Rotorua Airport an incoming trans-Tasman flight was diverted to Auckland. One of Pukekura Park's Fernery and Display Houses was closed after wind smashed 18 small glass panes, leaving shards among the plants. In Okato storm-force winds severed the town's power supply, and a huge kowhai tree was blown over on to a house. The lack of power meant the water treatment plant was out of action, and residents were asked to conserve water. Day one of the Subaru Proworld surfing tour event off the coast of Taranaki was abandoned. In Napier, a large gum tree was completely uprooted in the slushy ground and crashed, roots and all, on to a neighbouring property. The corner of the house was compressed, sections of the roof were badly damaged, and a decking area smashed. Telecommunication was lost to coastal Hawke's Bay areas like Waimarama. At the Pelorus Bridge campground, high winds blew a big black birch tree on to a caravan where an elderly couple were trying to sleep. Power to the area was also cut. Wind warnings were issued, particularly for high sided vehicles, for SH6 between Westport and Greymouth, and Hokitika and Haast.

**Near-record high extreme wind gusts for April were recorded at:**

Location	Extreme wind gust speed (km/hr)	Date of extreme gust	Year records began	Comments
Kaitaia	82	18th	1985	4th-highest
Kaikohe	85	18th	1986	Highest
Whangarei	80	18th	1973	Equal 3rd-highest
Rotorua	95	26th	1972	3rd-highest
Taupo	89	26th	1982	3rd-highest
Hawera	89	26th	1986	Highest

• **Snow and ice**

On 19 April, Arthur's Pass received about 5 cm of snow, closing SH73 for about an hour from 6 am. Snow was also reported on the Kaikoura Ranges.

• **Lightning and hail**

On 4 April, a huge lightning storm lit up northeastern and coastal Wairarapa with massive flashes every two or three minutes for about half an hour. An even bigger thunder storm affected White Island, accompanied by a massive downpour.

On 28 April, the 110kV Transpower line, feeding power to the Far North, was hit by lightning between Maungatapere and Kaikohe, cutting power to more than 30,000 customers for a short time.

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