

A warm and dry month for most of Aotearoa New Zealand

Rainfall	Below normal rainfall (50-79% of normal) or well below normal rainfall (<50% of normal) was observed in parts of the Aupouri Peninsula, Waikato, Taranaki and Wellington, as well the vast majority of the South Island. Near normal rainfall (80-119% of normal) was observed in isolated pockets of coastal Canterbury and central and northern parts of the North Island. Above normal rainfall (120-149% of normal) or well above normal rainfall (>149% of normal) was observed across the eastern North Island and pockets of Northland and Auckland.
Temperature	Temperatures were above average (0.51-1.20°C above average) or well above average (>1.20°C above average) for most of Aotearoa New Zealand, except for areas of near average ($\pm 0.50^\circ\text{C}$ of average) temperatures in the eastern North Island, parts of Wellington, parts of Marlborough, Nelson and northern Canterbury.
Soil Moisture	At the end of March, soil moisture levels were above average normal in the eastern North Island, southern Taranaki, Manawatū-Whanganui, Auckland, eastern Northland, coastal northern Canterbury and the Marlborough Sounds. Soil moisture level were below normal in western Northland, most of Waikato, northern Taranaki, and the western and southern South Island. Elsewhere, soil moisture levels were near normal.

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Overview

March was characterised by anomalously high mean sea level pressure (MSLP) over the South Island and bottom half of the North Island, leading to an easterly flow anomaly for many places, visualised in figure 1. This is consistent with the circulation patterns expected of La Niña, which lingered in the tropical Pacific. Sea surface temperatures in Aotearoa New Zealand's coastal waters remained much higher than average during March, with marine heatwave conditions present in all regions except for the eastern North Island at the end of the month.

The result was a drier-than-normal and warmer than average month, particularly for the South Island. However, a significant heavy rainfall event occurred toward the latter part of March in the North Island, including a record-setting downpour in Northland (see *Highlights and extreme events* section

for more details). The result was over a month's worth of rain in less than a day or two for parts of Northland, Auckland, the Bay of Plenty and Gisborne.

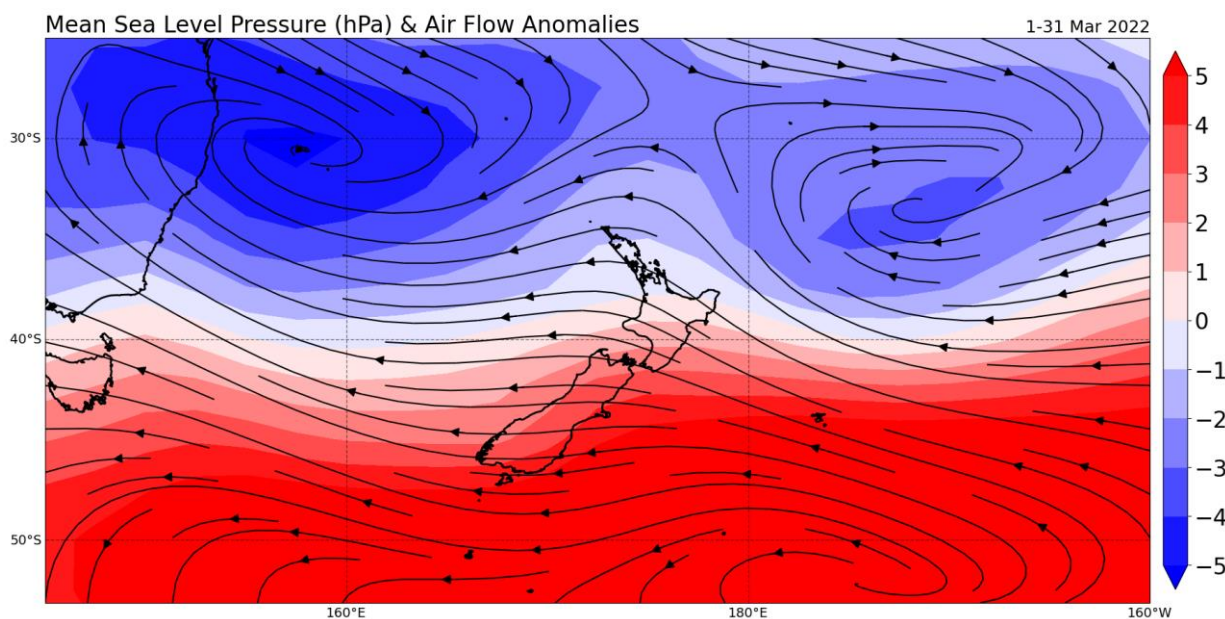


Figure 1: MSLP and air flow anomalies across New Zealand during March (data: NCEP reanalysis).

March rainfall was below normal (50-79% of normal) or well below normal rainfall (<50% of normal) for the vast majority of the South Island, portions of western Northland, Waikato, northern Taranaki and Wellington. Meanwhile, above normal (120-149% of normal) or well above normal rainfall (>149% of normal) was observed across the eastern North Island and pockets of Northland and Auckland due to a burst of heavy rainfall, most of which occurred over a day or two. Otherwise, near normal rainfall (80-119% of normal) was observed in isolated pockets of coastal Canterbury, and central and northern parts of the North Island. The lack of rainfall in the lower part of the South Island led to the development of meteorological drought around Tiwai Point and about Rakiura/Stewart Island according to the New Zealand Drought Index (NZDI).

Both the flooding in Gisborne and Hawke's Bay and the drought in the lower South Island were classified as medium-scale adverse events by the Ministry for Primary Industries (see *Highlights and extreme events* section for more details).

March temperatures were above average (0.51-1.20°C above average) or well above average (1.20°C above average) for most of New Zealand, except for areas of near average ($\pm 0.50^\circ\text{C}$ of average) temperatures in the eastern North Island, parts of Wellington, parts of Marlborough, Nelson and northern Canterbury. There were 46 locations that observed record or near-record high mean maximum temperatures during March, with 18 locations recording their highest-ever March mean maximum temperatures. The nationwide average temperature in March 2022 was 16.9°C. This was 1.3°C above the 1981-2010 February average from NIWA's seven station temperature series which begins in 1909, and New Zealand's equal 8th-warmest March on record.

Further Highlights:

- The highest temperature was 30.6°C, observed at Whatawhata on 9 and 15 March.
- The lowest temperature was -0.9°C, observed at Manapouri Airport on 25 March.

- The highest 1-day rainfall was 167 mm, recorded at Tolaga Bay on 22 March.
- The highest wind gust was 152 km/h, observed at South West Cape on 6 March.
- Of the six main centres in March 2022, Tauranga was the sunniest and wettest, Auckland was the warmest, Christchurch was the cloudiest and equal coolest, and Dunedin was the driest and equal coolest.
- Of the available, regularly reporting sunshine observation sites, the sunniest four locations so far in 2022 are Taranaki (867 hours), Wellington (828 hours), Manawatū-Whanganui (823 hours), and West Coast (810 hours).

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Rainfall: Bone-dry for South Island, bursts of rainfall in the North Island

March was a dry month for the South Island. Frontal systems from the Southern Ocean were infrequent and generally lacked the sub-tropical or tropical connection needed to generate significant rainfall. While easterly airflows occasionally brought showers to eastern areas, as these winds traversed the Southern Alps and descended over the western slopes, they dried and led to unusually sunny conditions for the West Coast. Hokitika, Reefton, Greymouth and Milford Sound were among those areas that had their lowest March rainfall on record. Inland Canterbury, Southland and Otago also suffered from a lack of rainfall. Lake Tekapo recorded just 1 mm of rain the whole month, Queenstown just 4 mm and Balclutha just 6mm, all of which equate to less than 10% of the normal March rainfall. All of the 29 locations that observed record or near-record low rainfall were in the South Island. Further emphasising this dryness, 20 locations had 29 or more dry days (daily rainfall totals less than 1 mm) during March in the South Island, including Hokitika, Lake Tekapo, Wānaka, Queenstown, Manapouri and Balclutha.

In the eastern North Island, it was a month of two halves: while Napier recorded just 8 mm of rain from 1-15 March, 179 mm was recorded between from 16-31 March with rain being recorded most days.

Towards the end of the month, a cut-off low pressure system siphoned moisture from the tropics and generated thunderstorms across parts of the North Island which caused flash flooding. On 21 March, Mangatapere near Whangārei in Northland observed 103 mm of rainfall in an hour, qualifying as the wettest hour on record at a low-elevation climate station. New hourly rainfall records were also established in Whangārei and Auckland (North Shore and Māngere) and daily rainfall totals surpassed monthly normals (see the *Highlights and Extreme events section* for more details). If not for this one rainfall event, much of Northland and Auckland would have had a below-normal month; stations around Auckland experienced 24 or more dry days during March.

Record^{1,2} or near-record March rainfall totals were recorded at:

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
High records or near-records				
Wairoa	405	355	1964	Highest
Takapau Plains	215	289	1962	4th-highest
Low records or near-records				
Aoraki / Mt Cook (Airport)	13	4	1928	Lowest
Nugget Point	5	6	1930	Lowest
Queenstown	4	7	1871	Lowest
Tapanui	8	9	1897	Lowest
Balclutha	6	10	1964	Lowest
Tiwai Point	11	11	1970	Lowest

¹ The rankings (1st, 2nd, 3rd.etc) in all Tables in this summary are relative to climate data from a *group* of nearby stations, some of which may no longer be operating. The current climate value is compared against all values from any member of the group, without any regard for homogeneity between one station's record, and another. This approach is used due to the practical limitations of performing homogeneity checks in real-time.

² All normal values in this climate summary are compared to the 1981-2010 normals.

Invercargill (Airport)	14	14	1900	Lowest
Hokitika	31	15	1866	Lowest
Gore	12	15	1907	Lowest
Oban (Stewart Island)	27	19	1975	Lowest
Reefton	24	20	1960	Lowest
Greymouth (Airport)	37	21	1947	Lowest
Okarito	55	22	1981	Lowest
Milford Sound	148	25	1929	Lowest
South West Cape	41	36	1991	Lowest
Lake Tekapo	1	1	1925	2nd-lowest
Dunedin (Musselburgh)	11	17	1918	2nd-lowest
Franz Josef	101	21	1926	2nd-lowest
Manapouri (West Arm Jetty)	82	26	1971	2nd-lowest
Haast	100	27	1941	2nd-lowest
Manapouri (Airport)	33	40	1961	2nd-lowest
Arthurs Pass	39	12	1906	3rd-lowest
Dunedin (Airport)	9	16	1962	3rd-lowest
Clyde	6	17	1978	3rd-lowest
Cromwell	7	16	1949	4th-lowest
Waipounamu	14	18	1917	4th-lowest
Arapito	76	48	1978	4th-lowest

Temperature: Warm everywhere except for the eastern coasts

Anomalous high pressure contributed to summer-like warmth persisting into March for much of New Zealand, with several locations recording maximum temperatures over 30°C well into the month (see *Highlights and extreme events* section). Above average sunshine due to a lack of low pressure systems added to warmer than average conditions. Hokitika recorded 243 hours of sunshine, more than Auckland recorded in March and about the same as Tauranga. Further driving the warmth were SSTs off the New Zealand coast; SST anomalies observed off the west of the South Island were the largest of any of New Zealand’s major six climate regions on record (since at least September 1981) during March (+3.3°C). Warming temperatures (air and sea) and more frequent and intense heatwave events are a feature of New Zealand’s changing climate. The events of March 2022 are consistent with long-term expectations.

Forty-six locations observed record or near-record high mean maximum temperatures during March, with 18 locations recording their highest-ever March mean maximum temperatures. As has become a recurring theme, there were no low temperature records.

The nationwide average temperature in March 2022 was 16.9°C. This was 1.3°C above the 1981-2010 February average from NIWA’s seven station temperature series which begins in 1909, and New Zealand’s equal 8th-warmest March on record.

Record or near-record mean air temperatures for March were recorded at:

Location	Mean air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Secretary Island	17.7	3.8	1985	Highest
Franz Josef	17.2	3.7	1953	Highest
Greymouth	18.4	3.5	1947	Highest
Haast	17.1	3.3	1949	Highest
Hokitika	17.5	3.0	1866	Highest
Queenstown	16.7	3.0	1871	Highest
Milford Sound	16.4	2.9	1934	Highest
Puysegur Point	16.0	2.9	1978	Highest
Okarito	17.3	2.7	1982	Highest
Wānaka	16.9	2.7	1955	Highest
Oban (Stewart Island)	14.7	2.6	1975	Highest
Te Anau	14.9	2.5	1963	Highest
Cromwell	17.0	2.4	1949	Highest
Arapito	17.7	2.2	1978	Highest
Cape Reinga	20.5	1.8	1951	Highest
Campbell Island	9.8	1.2	1991	Highest
South West Cape	14.9	2.8	1991	2nd-highest
Reefton	17.3	2.4	1960	2nd-highest
Kerikeri	20.0	1.7	1945	2nd-highest
Auckland (Whenuapai)	19.7	1.6	1945	2nd-highest
Whangaparāoa	20.5	1.5	1982	2nd-highest
Westport	17.9	2.6	1937	3rd-highest
Leigh	21.5	2.4	1966	3rd-highest
Aoraki / Mt Cook Village	14.6	2.3	1929	3rd-highest
Roxburgh	16.0	2.2	1950	3rd-highest
Mt Ruapehu (Chateau)	12.6	1.9	2000	3rd-highest
Auckland (Western Springs)	20.3	1.8	1948	3rd-highest
Nugget Point	14.3	1.7	1970	3rd-highest
Ranfurly	14.1	1.6	1897	3rd-highest
Tiwai Point	14.7	1.6	1970	3rd-highest
Whatawhata	19.4	2.2	1952	4th-highest
Manapouri (West Arm Jetty)	14.2	2.0	1971	4th-highest
Dunedin (Musselburgh)	15.3	1.6	1947	4th-highest
Auckland (Airport)	20.3	1.5	1959	4th-highest
Lumsden	14.0	1.5	1982	4th-highest
Low records or near-records				
None observed				

Record or near-record mean maximum air temperatures for March were recorded at:

Location	Mean maximum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Franz Josef	22.9	4.8	1953	Highest

Secretary Island	21.5	4.7	1985	Highest
Whatawhata	27.0	4.6	1952	Highest
Greymouth	22.9	4.0	1947	Highest
Hokitika	22.6	4.0	1866	Highest
Manapouri (Airport)	22.0	3.9	1963	Highest
Reefton	24.4	3.7	1960	Highest
Haast	21.4	3.5	1949	Highest
Invercargill	20.6	3.5	1905	Highest
Puysegur Point	19.0	3.5	1978	Highest
South West Cape	18.0	3.5	1991	Highest
Okarito	22.2	3.2	1982	Highest
Milford Sound	21.4	3.1	1934	Highest
Wānaka	23.6	3.1	1955	Highest
Arapito	22.7	2.3	1978	Highest
Auckland (Airport)	24.8	2.2	1959	Highest
Cape Reinga	23.7	2.0	1951	Highest
Arthurs Pass	19.5	3.9	1973	2nd-highest
Queenstown	23.0	3.6	1871	2nd-highest
Cromwell	24.8	3.5	1949	2nd-highest
Manapouri (West Arm Jetty)	19.8	3.1	1971	2nd-highest
Mt Ruapehu (Chateau)	18.8	3.1	2000	2nd-highest
Oban (Stewart Island)	18.6	2.8	1975	2nd-highest
Five Rivers	20.8	2.6	1982	2nd-highest
Westport	21.7	2.6	1937	2nd-highest
Tiwai Point	19.0	2.5	1970	2nd-highest
Auckland (Māngere)	24.6	2.2	1959	2nd-highest
Auckland (Whenuapai)	24.7	1.8	1945	2nd-highest
Whangaparāoa	23.8	1.7	1982	2nd-highest
Clyde	24.2	3.1	1978	3rd-highest
Taupō	23.2	2.8	1949	3rd-highest
Matamata	25.1	2.3	1999	3rd-highest
Ranfurly	21.7	2.3	1897	3rd-highest
Paeroa	25.3	1.9	1947	3rd-highest
Campbell Island	11.5	0.6	1991	3rd-highest
Gore	21.4	4.2	1907	4th-highest
Taumarunui	25.0	2.8	1947	4th-highest
Te Anau	20.8	2.7	1963	4th-highest
Te Kuiti	25.4	2.6	1959	4th-highest
Lumsden	20.7	2.5	1982	4th-highest
Hamilton	25.1	2.2	1946	4th-highest
Tūrangi	22.8	2.1	1968	4th-highest
Rotorua	22.5	1.9	1964	4th-highest
Whangārei	24.6	1.5	1967	4th-highest
Porirua	20.9	0.7	1968	4th-highest
Low records or near-records				
None observed				

Record or near-record mean minimum air temperatures for March were recorded at:

Location	Mean minimum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Secretary Island	13.8	2.8	1985	Highest
Puysegur Point	13.0	2.4	1978	Highest
Oban (Stewart Island)	10.8	2.4	1975	Highest
Campbell Island	8.0	1.6	1991	Highest
Greymouth	13.8	2.8	1947	2nd-highest
Dunedin (Musselburgh)	12.3	2.1	1947	2nd-highest
South West Cape	11.8	2.1	1991	2nd-highest
Castlepoint	15.6	1.9	1972	2nd-highest
Leigh	17.8	1.6	1966	2nd-highest
Westport	14.1	2.6	1937	3rd-highest
Okarito	12.4	2.3	1982	3rd-highest
Aoraki / Mt Cook (Village)	8.9	2.2	1929	3rd-highest
Nugget Point	11.1	1.9	1970	3rd-highest
Cape Reinga	17.3	1.5	1951	3rd-highest
Haast	12.7	3.0	1949	4th-highest
Franz Josef	11.5	2.6	1953	4th-highest
Milford Sound	11.3	2.6	1934	4th-highest
Windsor	9.3	1.7	2000	4th-highest
Martinborough	11.9	1.5	1986	4th-highest
Mokohinau	18.6	1.2	1994	4th-highest
Low records or near-records				
None observed				

March climate in the six main centres

March rainfall was above normal or well above normal in Auckland and Tauranga, near normal in Christchurch, and below normal or well below normal in Hamilton, Wellington and Dunedin. Dunedin had its 2nd driest March on record, collecting only a paltry 11 mm. March temperatures were near average in Wellington and Christchurch, but well above average for Auckland, Tauranga, Hamilton and Dunedin. Of the six main centres in March 2022, Tauranga was the sunniest and wettest, Auckland was the warmest, Christchurch was the cloudiest and equal coolest, and Dunedin was the driest and equal coolest.

March 2022 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland ^a	20.0	+1.5	Well above average
Tauranga ^b	19.6	+1.4	Well above average
Hamilton ^c	18.4	+1.5	Well above average
Wellington ^d	16.3	+0.5	Near average
Christchurch ^e	15.3	+0.4	Near average
Dunedin ^f	15.3	+1.6	Well above average (4 th -highest)
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland ^a	108	126	Above normal
Tauranga ^b	163	168	Well above normal
Hamilton ^c	67	79	Below normal
Wellington ^d	53	62	Well below normal
Christchurch ^e	41	89	Near normal
Dunedin ^f	11	17	Well below normal (2nd-lowest on record)
Sunshine			
Location	Sunshine (hours)		
Auckland ^a	241		
Tauranga ^b	243		
Hamilton ^g	235		
Wellington ^d	206		
Christchurch ^e	170		
Dunedin ^f	225		

^a Māngere ^b Tauranga Airport ^c Hamilton Airport ^d Kelburn ^e Christchurch Airport ^f Musselburgh ^g Ruakura

Highlights and extreme events

Rain and flooding

The highest 1-day rainfall was 167 mm, recorded at Tolaga Bay on 22 March.

On 21 March, a sub-tropical low pressure system generated a band of severe thunderstorms which produced flooding in Northland and Auckland. 103 mm of rain was recorded from 4am-5am at Maungatapere near Whangārei, making it the [new national hourly rainfall record](#) for a low elevation station (less than 500 metres above sea level). Whangārei also observed its wettest hour on record (64.4 mm) since at least January 1979.

Elsewhere, Albany on Auckland's North Shore recorded 76.8 mm of rain in an hour between 8am-9am, qualifying as the location's wettest hour on record (since December 2009) as well as the 2nd wettest hour on record in the Auckland region on record (from top-of-hour to top-of-hour). The Auckland region's wettest hour on record stands as 100.6 mm at Whenuapai in February 1996. Auckland (Māngere) also observed its wettest hour on record (56.6 mm) since at least November 1965.

Hourly rainfall rates of 20-60 mm were observed elsewhere in the region. Rainfall rates of this nature are more common in the tropics, and as such there was significant flooding. Within 10 hours, Albany recorded 109 mm, Western Springs 91 mm and Māngere 93 mm, compared to a March monthly normal of 85-90 mm. Parts of the SH1 were blocked and some businesses suffered roof damage and flooding. 3,000 lightning strikes were observed in Northland and immediate offshore waters on Monday morning.

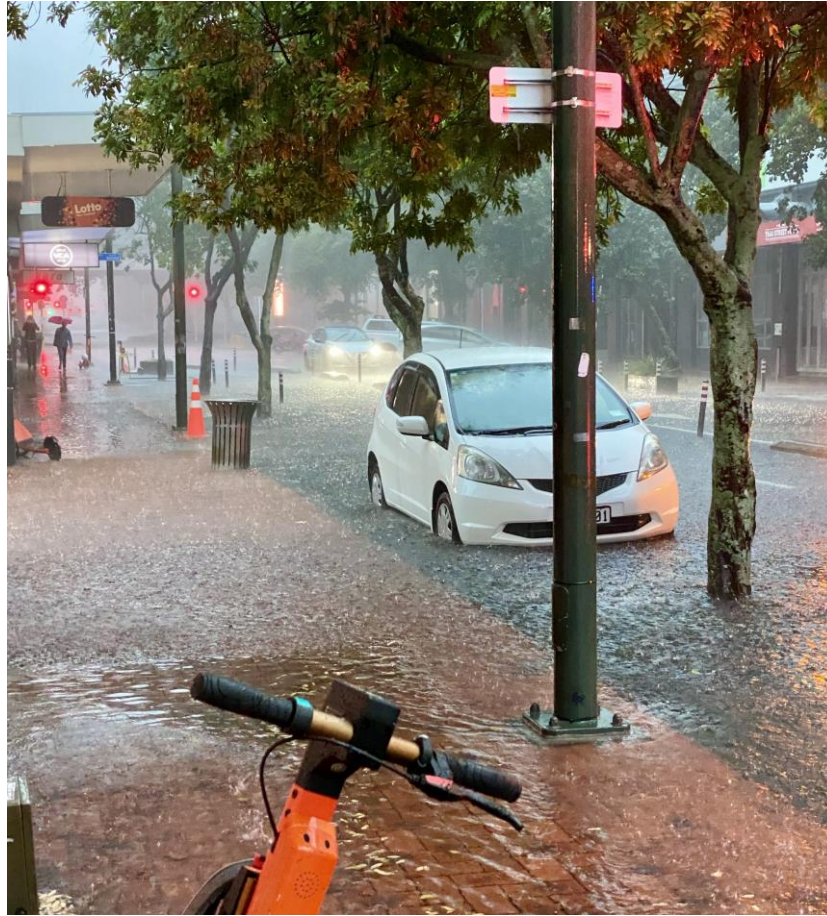


Photo 1: Viaduct in Auckland during the heavy showers on 21 March. (Credit: Nava Fedaeff)

This same system then moved on to produce downpours across parts of the Bay of Plenty, Gisborne and Hawke’s Bay area. Tolaga Bay recorded 35 mm of rain in an hour on 22 March and Rotorua recorded 34 mm in an hour on 23 March. Gisborne received 21 mm in an hour on 24 March. Hikuwai River at No 4 Bridge (weather station operated by Gisborne District Council) observed 275.5 mm on 23 March. Three day rainfall (21-23 March) exceeded 400 mm at both Hikuwai River at No 4 Bridge and Willowflat). A state of emergency was declared in Tairāwhiti on 23 March as river levels rose rapidly. Tairāwhiti Civil Defence have evacuated residents from several areas, including Mangatuna, Tokomaru Bay and Tolaga Bay. Huge slips and flooding caused roads and bridges to be completely destroyed, cutting off some towns.

On 25 March, the Ministry for Primary Industries classified a medium-scale adverse event for the impact of the flooding in Tairāwhiti and Hawke’s Bay, unlocking \$150,000 of funds for affected farmers and growers.

Record or near-record March extreme 1-day rainfall totals were recorded at:

Location	Extreme 1-day rainfall (mm)	Date of extreme rainfall	Year records began	Comments
Māhia	79	23rd	1990	Highest
Takapau Plains	101	23rd	1962	Highest
Auckland (Whenuapai)	93	20th	1943	2nd-highest

Taup	72	23rd	1949	3rd-highest
Auckland (Albany)	103	20th	1966	4th-highest
Castlepoint	95	24th	1907	4th-highest
Gisborne	109	23rd	1937	4th-highest
Kaikohe	114	20th	1956	4th-highest

Drought and dry spells

The impact of a record dry summer and start to autumn led to water restrictions being implemented for the first time since 2018 in Southland. During March, Southland District Council declared a ban on unattended sprinklers and hoses while announcing it would restrict all carting of water from its networks until further notice. Invercargill also banned unattended hosing and sprinklers. On 31 March, Environment Southland issued a “Water Shortage Direction”, with the entire Southland region ordered to stop irrigation for two weeks.

On 30 March, Queenstown Lakes District Council notified residents that they had received numerous reports of extremely low water levels on rivers and lakes in the region, which posed a risk to the health and safety of water users. Issues included the exposure of rocks, sand bars and other obstacles that are typically well under water. On 31 March, the level of Lake Wakatipu was 309.378 metres above sea level, the lake’s lowest level since 12 June 2017. The lowest level measured at Lake Wakatipu was 309.295 metres above sea level on 16 September 1966, with records going back to 1962.

According to NIWA’s [New Zealand Drought Monitor](#), meteorological drought conditions were present in southern parts of Southland and Stewart Island throughout the second half of March. On 31 March, the Ministry for Primary Industries classified a medium-scale adverse event for the drought conditions in Southland, Clutha and Queenstown Lakes District, unlocking \$100,000 of funds for affected farmers and growers until October 2022.

By the end of March, Lake Tekapo was in the midst of an exceptional dry spell, lasting 40 days from 20 February to 31 March 2022. Many lower South Island locations had experienced prolonged dry spells during March (with many ongoing at the end of the month), including:

- Alexandra: 24 days from 8-31 March
- Balclutha: 16 days from 16-31 March
- Clyde: 24 days from 8-31 March
- Cromwell: 24 days from 8-31 March
- Five Rivers: 23 days from 8-30 March
- Lauder: 24 days from 8-31 March
- Middlemarch: 16 days from 16-31 March
- Queenstown: 24 days from 8-31 March
- Tapanui: 16 days from 8-23 March
- Wānaka: 24 days from 8-31 March

Furthermore, Lake Te Anau in Southland observed its lowest inflow on record (since at least 1926) during March. Inflows (to 27 March) at Clutha lakes and Lake Te Anau were 66% and 44% of normal, respectively.

Temperatures

The highest temperature was 30.6°C, observed at Whatawhata on 9 and 15 March.

The lowest temperature was -0.9°C, observed at Manapouri Airport on 25 March.

Unseasonable warmth was particularly pronounced in Canterbury and Otago on 6 March. Akaroa, Timaru and Oamaru recorded daytime maximums above 30°C. This was the hottest March day since 2016 in Oamaru and their 3rd-highest March temperature on record.

Record or near-record daily maximum air temperatures for March were recorded at:

Location	Extreme maximum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Windsor	30.0	6th	2000	2nd-highest
Oban (Stewart Island)	25.7	8th	1975	2nd-highest
South West Cape	25.9	11th	1991	2nd-highest
Auckland (Airport)	28.5	13th	1959	2nd-highest
Secretary Island	25.7	20th	1985	2nd-highest
Haast	25.9	22nd	1949	2nd-highest
Whatawhata	30.6	9th	1952	Equal 2nd-highest
Oamaru	30.2	6th	1967	3rd-highest
Reefton	28.4	10th	1960	3rd-highest
Manapouri (Airport)	27.6	11th	1963	3rd-highest
Puysegur Point	24.0	11th	1978	3rd-highest
Levin	29.1	22nd	1895	3rd-highest
Mt Ruapehu (Chateau)	23.0	9th	2000	Equal 3rd-highest
Okarito	24.8	20th	1982	Equal 3rd-highest
Stratford	25.6	8th	1960	4th-highest
Porirua	27.0	22nd	1968	4th-highest
Cape Reinga	26.2	12th	1951	Equal 4th-highest
Low records or near-records				
None observed				

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

Location	Extreme minimum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
South West Cape	15.6	31st	1991	Equal 3rd-highest
Low records or near-records				
None observed				

Wind

The highest wind gust was 152 km/h, observed at South West Cape on 6 March.

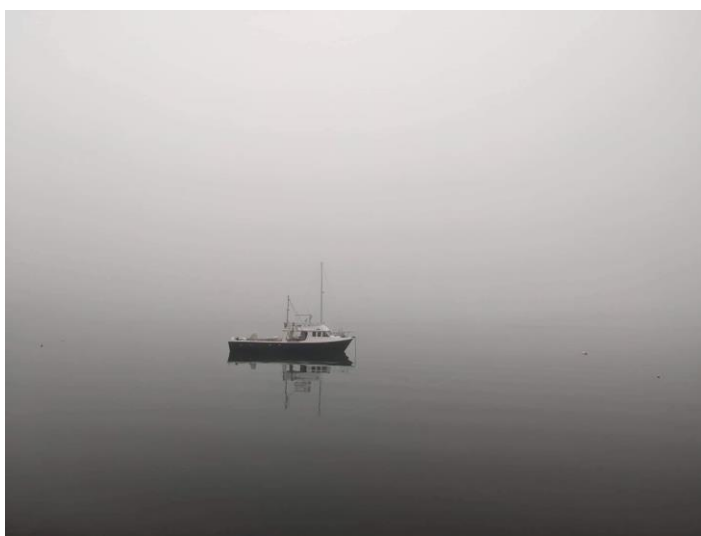
Record or near-record March extreme wind gusts were recorded at:

Location	Extreme wind gust (km/h)	Date of extreme gust	Year records began	Comments
Māhia	93	25th	1991	Highest

Mt Ruapehu (Chateau)	107	24th	2000	2nd-highest
Puysegur Point	152	6th	1986	2nd-highest
Alexandra	76	11th	2001	3rd-highest
Mokohinau	109	24th	1994	4th-highest
Secretary Island	132	11th	1994	4th-highest
Clyde	65	11th	1983	Equal 4th-highest
Auckland (Western Springs)	67	25th	1994	Equal 4th-highest

Fog and low visibility

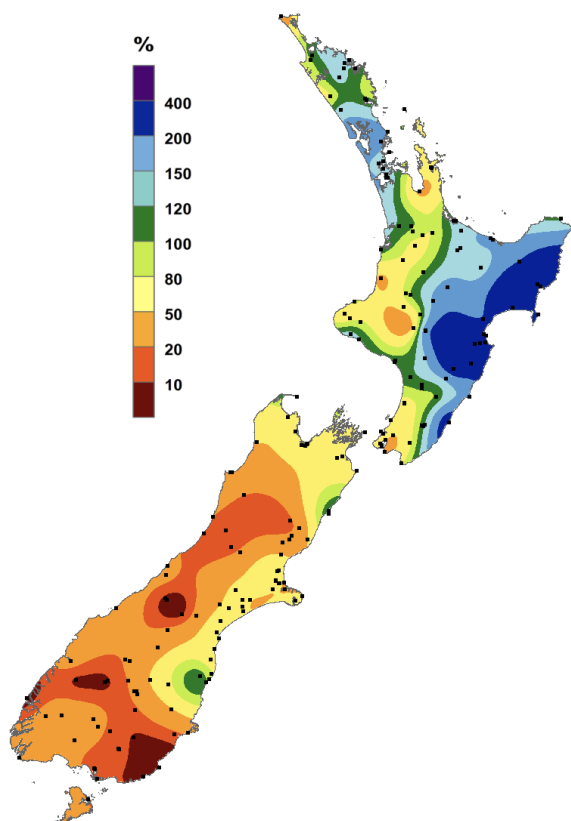
Warmer than average SST's combined with cool southeasterly air to bring several days of very low cloud, fog and drizzle from 28-31 March. Hundreds of flights to Wellington were cancelled. Some flights circled the city for as long as 40 minutes waiting for visibility to clear, before returning to their origin.



*Photo 2: Low cloud and fog seen in Wellington Harbour on 31 March.
(Credit: Luke Henry).*

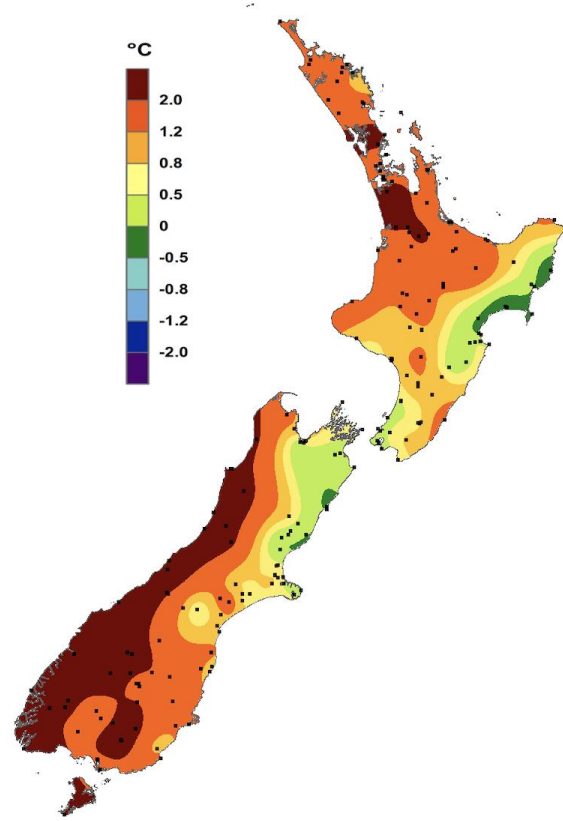
For further information, please contact:

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Meteorologist, NIWA
Tel. 022 677 6902



March rainfall

Expressed as a percentage of the 1981-2010 normal.



March temperature

Expressed as a departure from the 1981-2010 average in degrees Celsius.

<https://www.niwa.co.nz/our-science/climate>

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