

A wet month for the North Island, dry for the South Island, and warm almost everywhere.

Rainfall	September rainfall was generally above normal (120-149%) or well above normal (> 149%) for much of the North Island, particularly in Auckland, Bay of Plenty, Gisborne, Hawke's Bay and Wellington, but below normal (50-79%) or well below normal (< 50%) for much of the South Island, particularly in Otago and Southland. An exception for the North Island was in Manawatu where rainfall was below normal.
Temperature	September temperatures were above average (+0.50°C to +1.20°C) or well above average (< +1.20°C) throughout most of New Zealand. Eastern coastal margins of both islands, the north of the South Island and western Northland and Auckland recorded near average temperatures (-0.50 to 0.50°C).
Sunshine	September sunshine was below normal (75-89%) or well below normal (< 75%) for most of the North Island, whereas sunshine was near normal (90-110%) for most of the South Island. Well above normal (> 125%) sunshine was observed in some central and western areas of the South Island.
Soil Moisture	At the end of September 2016, soil moisture levels were much lower than normal for the time of year across middle and northern Canterbury as well as coastal Wairarapa, and slightly lower than normal for southern Canterbury, north Otago and parts of Southland. Soil moisture levels were above normal for the time of year for eastern Gisborne and Hawke's Bay, and near normal for the remainder of the country.

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Overview

During September 2016, mean sea-level pressures were higher than normal over and to the south of New Zealand, and near normal to the north of the country. This pressure pattern resulted in a prevalence of winds from an easterly direction.

September temperatures were above average (+0.51°C to +1.20°C) or well above average (> +1.20°C) throughout most of New Zealand. Due to the prevailing easterly air flow over New Zealand for September, eastern coastal margins of both islands did not observe warm temperatures to the same extent as most other parts of the country – these areas recorded near average temperatures for the

month (-0.50°C to 0.50°C). The north of the South Island and western Northland and Auckland also recorded near average temperatures.

The nationwide average temperature in September 2016 was 11.0°C (0.43°C above the 1981-2010 September average from NIWA's seven station temperature series which begins in 1909¹).

The succession of several low pressure systems and prevalence of winds from an easterly direction contributed to wetter than usual conditions for much of the North Island, especially in the east. Some parts of Auckland and the Bay of Plenty received nearly double their normal September rainfall, and many other locations recorded well above normal (> 149%) or above normal (120-149%) rainfall. One particularly intense storm affected the Kapiti Coast, causing Paraparaumu to receive 115 mm, or 134% of its normal September rainfall, over just two days (16-17 September). Over the month as a whole, more than double the normal September rainfall (216%) was recorded at Paraparaumu. However, it was a drier month for the South Island due to high pressure persisting over the Island and blocking the passage of the storms in the north. Most locations recorded below normal (50-79%) or well below normal (< 50%) rainfall totals for September. It was an especially dry month for Timaru, which recorded only 6 mm of rainfall for the entire month, a mere 17% of normal September rainfall for that location.

At the end of September 2016, soil moisture levels were much lower than normal for the time of year across middle and northern Canterbury as well as coastal Wairarapa, and slightly lower than normal for southern Canterbury, north Otago and parts of Southland. Soil moisture levels were above normal for the time of year for eastern Gisborne and Hawke's Bay, and near normal for the remainder of the country.

Cloudy skies associated with the higher than normal rainfall totals meant that September sunshine was below normal (75-89%) or well below normal (<75%) for most of the North Island. However, sunshine was near normal (90-110%) for most of the South Island. Well above normal (>125%) sunshine was observed in some central and western areas of the South Island.

Further Highlights:

- The highest temperature was 25.0 °C, observed at Christchurch (Riccarton) on 2 September.
- The lowest temperature was -6.1 °C, observed at Mt Cook Airport on 9 September.
- The highest 1-day rainfall was 154 mm, recorded at North Egmont on 16 September.
- The highest wind gust was 167 km/hr, observed at both Le Bons Bay (Banks Peninsula) and Akitio (Tararua District) on 7 September.
- Of the six main centres in September 2016, Auckland was the warmest, wettest and sunniest, Dunedin was the coolest and driest, and Wellington was the cloudiest.
- Of the available, regularly reporting sunshine observation sites, the sunniest four locations in 2016 so far (1 January – 30 September) were Richmond (2057 hours), Blenheim (1873 hours), Takaka (1809 hours) and Lake Tekapo (1785 hours).

For further information, please contact:

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¹ Interim value. Dunedin (one of the seven stations) missing 3 days.

Rainfall: Large contrast from North Island wetness to South Island dryness

September was a very wet month for parts of the North Island. Although few locations observed near-record high rainfall for September (only two locations, as per the table below), many sites recorded above normal (120-149%) or well above normal (> 149%) rainfall for the month. The prevailing easterly winds brought storms and rainfall to eastern areas of the North Island, in particular Auckland, Coromandel, and the Bay of Plenty. In the west, a significant event brought over 100 mm of rainfall to Paraparaumu (Kapiti Coast) over two days (16-17 September). This was over half of the total September rainfall for this location.

In stark contrast, much of the South Island recorded low rainfall. Although, like for high rainfall records, there were not many low rainfall records or near-records (only two were observed in Fiordland, as per the table below), most of the South Island recorded below normal (50-79%) or well below normal (< 50%) September rainfall. It was an especially dry month for Timaru, which recorded only 6 mm of rainfall for the entire month, a mere 17% of normal September rainfall.

Record or near-record September rainfall totals were recorded at:

Location	Rainfall total (mm)	Percentage of normal	Year records began	Comments
High records or near-records				
Te Puke	224	178	1973	4th-highest
Auckland (Airport)	175	194	1959	4th-highest
Low records or near-records				
Secretary Island	73	21	1985	Lowest
South West Cape	45	41	1991	2nd-lowest

Temperature: Warm for most except for eastern coastal margins

September 2016 was a warm month for many locations across the country. Six locations from Waikato to Southland recorded their highest September mean temperature on record. A further 26 locations across the country observed near record high mean temperatures for September. The large number of mean minimum temperature records or near-records (seen in the third table below) was due to warmer than usual night-time temperatures, a consequence of relatively overcast weather (as seen in the sunshine section) for much of the country. Cloudy skies trap more heat than clear skies, so overcast night skies allow for warmer daily minimum temperatures to persist than clear night skies. Another contribution to the warmer temperatures in September was the warmer than average sea surface temperatures that were present around and to the north of New Zealand during the month. Due to the predominant easterly winds during September, eastern coastal margins of New Zealand recorded near average mean temperatures.

The nationwide average temperature in September 2016 was 11.0°C (0.43°C above the 1981-2010 September average from NIWA's seven station temperature series which begins in 1909²). January-September 2016 is the warmest January-September period in the seven station temperature record with departure from average of +1.02°C. The next warmest January-September period was in 1998, which had a departure from average of +0.91°C.

Record³ or near-record mean air temperatures for September were recorded at:

Location	Mean air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Paeroa	13.7	1.4	1947	Highest
Hamilton	12.7	1.4	1946	Highest
Te Kuiti	12.9	1.5	1959	Highest
Milford Sound	10.5	1.9	1934	Highest
Secretary Island	11.5	1.4	1985	Highest
Wanaka	10.1	1.8	1955	Highest
New Plymouth	12.8	1.3	1944	2nd-highest
Reefton	11.3	1.8	1960	2nd-highest
Cheviot	10.1	0.6	1982	2nd-highest
Manapouri	9.3	1.9	1963	2nd-highest
Kerikeri	14.1	1.0	1981	3rd-highest
Whangarei	14.4	1.0	1967	3rd-highest
Whitianga	13.4	1.2	1962	3rd-highest
Te Puke	12.9	1.1	1973	3rd-highest
Taupo	10.6	1.5	1949	3rd-highest
Auckland (Mangere)	14.0	1.0	1959	3rd-highest
Taumarunui	11.9	1.3	1947	3rd-highest
Puysegur Point	10.6	1.1	1978	3rd-highest
Cromwell	10.6	1.7	1949	3rd-highest
Leigh	14.5	0.8	1966	4th-highest
Whangaparaoa	13.8	0.6	1982	4th-highest
Auckland (Whenuapai)	13.4	1.0	1945	4th-highest
Rotorua	11.2	1.0	1964	4th-highest
Masterton	11.8	1.5	1992	4th-highest
Waipawa	11.1	0.8	1945	4th-highest
Whanganui	13.0	1.1	1937	4th-highest
Westport	11.7	1.0	1937	4th-highest
Waiau	10.6	1.5	1974	4th-highest
Christchurch (Riccarton)	11.8	1.6	1863	4th-highest
Lumsden	9.4	1.4	1982	4th-highest
South West Cape	9.6	0.8	1991	4th-highest
Low records or near-records				

² Interim value

³ 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.

None observed				
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Record or near-record mean maximum air temperatures for September were recorded at:

Location	Mean maximum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Manapouri	14.9	2.1	1963	Highest
Kerikeri	18.9	1.2	1981	2nd-highest
Reefton	17.0	2.4	1960	2nd-highest
Milford Sound	15.3	2.0	1934	2nd-highest
Secretary Island	14.6	1.8	1985	2nd-highest
Cromwell	17.4	2.4	1949	2nd-highest
Puysegur Point	13.4	1.4	1978	3rd-highest
Wanaka	15.9	2.3	1955	3rd-highest
Lumsden	14.8	1.5	1982	4th-highest
South West Cape	12.0	0.7	1991	4th-highest
Low records or near-records				
Takaka	14.3	-1.5	1978	3rd-lowest

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

Location	Mean minimum air temp. (°C)	Departure from normal (°C)	Year records began	Comments
High records or near-records				
Whangarei	10.7	1.3	1967	Highest
Auckland (Whenuapai)	10.0	1.7	1945	Highest
Whitianga	10.1	2.4	1962	Highest
Paeroa	10.8	3.1	1947	Highest
Whakatane	8.8	2.3	1974	Highest
Hamilton (Ruakura)	9.0	2.3	1906	Highest
Port Taharoa	11.0	1.6	1973	Highest
Te Kuiti	9.1	2.6	1959	Highest
Taumarunui	8.0	2.6	1947	Highest
New Plymouth	10.0	1.9	1944	Highest
Masterton	7.6	3.3	1992	Highest
Cheviot	5.3	1.4	1982	Highest
Orari Estate	4.9	1.7	1972	Highest
Oamaru	6.1	1.2	1908	Highest
Auckland (Henderson)	10.5	2.0	1948	2nd-highest
Te Puke	9.3	2.5	1973	2nd-highest
Rotorua	7.9	2.1	1964	2nd-highest
Taupo	7.1	2.7	1949	2nd-highest
Palmerston North	8.9	2.2	1928	2nd-highest
Milford Sound	5.7	1.7	1934	2nd-highest
Culverden	5.1	2.4	1928	2nd-highest
Christchurch (Riccarton)	7.2	2.3	1863	2nd-highest

Auckland (North Shore)	11.2	1.8	1994	3rd-highest
Pukekohe	9.5	1.3	1969	3rd-highest
Dannevirke	8.3	2.2	1951	3rd-highest
Hicks Bay	10.9	1.3	1969	3rd-highest
Waipawa	7.0	1.7	1945	3rd-highest
Stratford	7.1	1.6	1960	3rd-highest
Alexandra	3.9	1.5	1983	3rd-highest
Tauranga	10.2	1.9	1913	4th-highest
Auckland (Mangere)	10.9	1.3	1959	4th-highest
Gisborne	9.1	2.4	1905	4th-highest
Wairoa	8.7	1.8	1964	4th-highest
Farewell Spit	9.5	1.3	1971	4th-highest
Secretary Island	8.4	1.0	1985	4th-highest
Nelson	7.1	1.4	1943	4th-highest
Waiau	5.0	2.3	1974	4th-highest
Waipara West	6.2	1.0	1973	4th-highest
Lincoln	6.4	1.9	1881	4th-highest
Oamaru	5.6	1.9	1908	4th-highest
Ranfurly	2.0	0.9	1975	4th-highest
South West Cape	7.2	0.9	1991	4th-highest
Low records or near-records				
None observed				

Sunshine: Record-low sunshine for the North Island

In contrast to previous months, September was a cloudier month than usual for many locations. In concert with the wetter than normal conditions for most of the North Island, sunshine totals were much lower than normal for that part of New Zealand in September, as seen in the table below. Four locations in the North Island recorded their cloudiest September on record, including three main centres. In contrast, the drier than usual conditions in the South Island saw near-record high sunshine totals for Cromwell and Balclutha.

Of the available, regularly reporting sunshine observation sites, the sunniest four locations in 2016 so far (1 January – 30 September) were Richmond (2057 hours), Blenheim (1873 hours), Takaka (1809 hours) and Lake Tekapo (1785 hours).

Record or near-record September sunshine hours were recorded at:

Location	Sunshine hours	Percentage of normal	Year records began	Comments
High records or near-records				
Cromwell	223	123	1979	3rd-highest
Balclutha	182	133	1964	4th-highest
Low records or near-records				
Martinborough	99	55	1986	Lowest
Wellington (Kelburn)	80	49	1928	Lowest
Hamilton	85	58	1936	Lowest
Tauranga	100	58	1932	Lowest
Auckland (Mangere)	111	74	1963	2nd-lowest
Turangi	100	73	1976	2nd-lowest
Paraparaumu	99	64	1953	2nd-lowest
Stratford	90	65	1963	2nd-lowest
Dargaville	127	77	1943	3rd-lowest
Te Kuiti	90	72	1962	3rd-lowest
Palmerston North	93	73	1930	4th-lowest
Cheviot	136	94	1983	4th-lowest

September climate in the six main centres

All North Island main centres recorded their lowest or second-lowest sunshine totals for September. Christchurch also observed well below normal sunshine hours (the Dunedin total could not be calculated because of missing data). The North Island main centres experienced above or well above normal rainfall and the South Island main centres recorded near or below normal rainfall. Temperatures were well above average in Hamilton (its highest September mean temperature on record), and above average for Auckland, Tauranga and Christchurch. Dunedin's mean temperature was below average. Of the six main centres in September 2016, Auckland was the warmest, wettest and sunniest, Dunedin was the coolest and driest, and Wellington was the cloudiest.

September 2016 main centre climate statistics:

Temperature			
Location	Mean temp. (°C)	Departure from normal (°C)	Comments
Auckland ^a	14.0	+1.0	Above average (3 rd -highest)
Tauranga ^b	13.5	+1.1	Above average
Hamilton ^c	12.7	+1.4	Well above average (Highest)
Wellington ^d	11.0	+0.2	Near average
Christchurch ^e	10.3	+0.9	Above average
Dunedin ^f	8.9 ⁴	-0.6	Below average
Rainfall			
Location	Rainfall (mm)	% of normal	Comments
Auckland ^a	174	169%	Well above normal
Tauranga ^b	166	197%	Well above normal
Hamilton ^c	142 ⁵	141%	Above normal
Wellington ^d	134	136%	Above normal
Christchurch ^e	37	92%	Near normal
Dunedin ^f	24 ⁵	50%	Below normal
Sunshine			
Location	Sunshine (hours)	% of normal	Comments
Auckland ^a	111	74%	Well below normal (2 nd -lowest)
Tauranga ^b	100	58%	Well below normal (Lowest)
Hamilton ^g	85	58%	Well below normal (Lowest)
Wellington ^d	80	49%	Well below normal (Lowest)
Christchurch ^e	108	64%	Well below normal
Dunedin ^f	-	-	22 days of data missing

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

⁴ Missing 3 days

⁵ Missing 1 day

Highlights and extreme events

Rain and slips

On 7-8 September, parts of SH 6 from Queenstown to Lumsden were affected by flooding.

On 8 September, part of the Milford Sound Visitor Centre building was hit by a landslide which occurred as a result of heavy rain in the area. The landslide debris ruptured some gas tanks next to the building, leading to an evacuation of the visitor centre.

On 11 September, a slip closed SH 6 at Meybille Bay between Westport and Greymouth. The road was closed there for a couple of days with the only detour being via Reefton. The slip took a long time to stabilise and clear - on 28 September, the road was only open to one lane.

On 16 September, poor weather conditions forced flight cancellations at Rotorua Airport, and flights arriving into Rotorua were diverted.

On 17-18 September, heavy rain lashed much of the North Island. Wellington (Kelburn) received 69 mm of rain. This was the wettest two-day period in almost 2.5 years or since April 17-18 2014 when 79.6 mm fell. The rain caused flooding and slips, particularly for the lower North Island. Surface flooding affected the Kapiti Coast, closing roads and public parks. MetLink train services on the Kapiti line were replaced by buses between Plimmerton and Waikanae due to a slip on the track 1 km north of Plimmerton station. SH 3 between Awakino Tunnel and Tongaporutu was closed due to a slip south of Mokau. The alternative route added more than 3.5 hours to motorists' journeys as a slip had also closed SH 43 at the Tangarakua Gorge. A slip closed one lane of SH 2 near Kaitoke.

On 21 September, Taranaki remained cut off from the north by a large slip which occurred on Sunday 18.

On 25 September, a stationary high pressure system to the southeast of New Zealand along with low pressure systems to the north and west caused a moist easterly flow to affect eastern parts of the North Island. Around 30 carloads of holidaymakers spent the night in their cars stranded by rising floodwaters in the Coromandel. SH 25 was closed south of Tairua, forcing the motorists to spend the night at a garage in Hikuai. There was no road access in and out of Pauanui. The occupants of four cars were stranded overnight in the Kauaeranga Valley, Thames, unable to be reached by firefighters. Traffic was also affected by slips on SH 25 between Tairua and Whangamata as well as at Kuaotunu West, Tapu-Coroglen Rd, and Kennedy Bay Rd. In Northland, a man was swept to his death in his car as he tried to cross a flooded creek near Kaeo.

Between 15-26 September, Auckland recorded rain during 10 of 12 days. 115.6 mm total rainfall fell in those 10 days, giving the city 112% of its normal September rainfall in less than half the month.

On 25-26 September, rainfall in Auckland totalled 63.2 mm. This two day rainfall was more rain than Christchurch had received in the previous two months (61.6 mm) from 26 July to 26 September. Numerous garages and basements were flooded around the city.

On September 26, heavy rainfall created a slip blocking SH 35 north of Ruatoria, East Cape. No detours were available.

On September 28, surface water, debris and slips were present on SH 35 from Gisborne to Potaka. Two people were trapped in their vehicle by flood waters near Piroa Falls, near Waipu. Thunderstorms lashed Auckland and Northland and caused surface flooding in some Auckland suburbs.

The highest 1-day rainfall was 154 mm, recorded at North Egmont on 6 September.

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

Location	Extreme 1-day rainfall (mm)	Date of extreme rainfall	Year records began	Comments
Martinborough	73	17th	1924	Highest
Dargaville	56	24th	1943	2nd-highest
Paraparaumu	67	16th	1951	3rd-highest
Alexandra	15	7th	1983	4th-highest

Temperatures

The first few days of September were much warmer than usual for early September, with afternoon (daily maximum) temperatures reaching over 20°C in numerous places across the east of both islands. Christchurch (Riccarton) reached 25°C on 2 September (the highest temperature of the month).

A storm bringing cold temperatures more typical of mid-winter hit the country on 8-9 September. During this period, many low daily maximum temperature records were broken across the country (see tables below).

On 20 September, Reefton was the warmest location (where climate observations are recorded) in New Zealand, with a maximum temperature of 19.0°C. This is rather unusual, because eastern areas are usually warmer than western areas in the South Island due to the predominant westerly flow across that part of the country and sheltering of eastern areas by the Southern Alps. In this case, the normal situation was reversed, with the higher temperature in Reefton due to the prevailing easterly wind flow which kept eastern areas cooler than western areas.

The highest temperature was 25.0°C, observed at Christchurch (Riccarton) on 2 September. The lowest temperature was -6.1°C, observed at Mt Cook Airport on 9 September.

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

Location	Extreme maximum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Whanganui	22.9	27th	1937	2nd-highest
Westport	21.3	29th	1937	2nd-highest
Cape Reinga	20.0	29th	1951	3rd-highest
Greymouth	21.4	29th	1947	3rd-highest
Secretary Island	18.7	28th	1985	3rd-highest
Manapouri	19.9	28th	1963	4th-highest
Reefton	21.7	29th	1960	Equal 4th-highest
Low records or near-records				

Dargaville	10.8	8th	1951	Lowest
Whangaparaoa	11.0	8th	1982	Lowest
Auckland (North Shore)	11.1	8th	1995	Lowest
Whitianga	9.8	8th	1971	Lowest
Paeroa	10.0	8th	1971	Lowest
Stratford	7.0	8th	1972	Lowest
Appleby	8.5	8th	1941	Lowest
Arthurs Pass	-0.3	8th	1973	Lowest
Cape Reinga	11.5	9th	1971	2nd-lowest
Auckland (Henderson)	11.0	8th	1971	2nd-lowest
Port Taharoa	10.7	8th	1974	2nd-lowest
Reefton	6.1	8th	1972	2nd-lowest
Takapau Plains	6.2	8th	1972	Equal 2nd-lowest
Ngawi	9.2	9th	1972	Equal 2nd-lowest
Kaitaia	12.5	8th	1971	3rd-lowest
Kaikohe	10.4	8th	1973	3rd-lowest
Warkworth	11.3	8th	1966	3rd-lowest
Auckland (Whenuapai)	10.9	8th	1951	3rd-lowest
Auckland (Mangere)	10.9	8th	1961	3rd-lowest
Cape Campbell	8.0	8th	1972	3rd-lowest
Taumarunui	8.8	8th	1947	Equal 3rd-lowest
Castlepoint	8.0	8th	1972	Equal 3rd-lowest
Paraparaumu	9.0	8th	1972	Equal 3rd-lowest
Levin	8.8	8th	1950	Equal 3rd-lowest
Ohakune	5.4	8th	1972	Equal 3rd-lowest
Whangarei	11.8	8th	1967	4th-lowest
Pukekohe	10.8	8th	1969	4th-lowest
Te Kuiti	10.5	8th	1959	4th-lowest
Mahia	9.0	8th	1990	4th-lowest
Whanganui	9.2	8th	1972	4th-lowest
Waiau	6.1	8th	1974	4th-lowest
Whakatane	11.5	8th	1975	Equal 4th-lowest
Turangi	7.9	8th	1968	Equal 4th-lowest

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

Location	Extreme minimum (°C)	Date of extreme temperature	Year records began	Comments
High records or near-records				
Dannevirke	15.9	17th	1951	Highest
Waione	15.9	17th	1993	Highest
Hawera	14.0	17th	1977	Highest
Kaikoura	14.1	17th	1972	Highest
Masterton	14.6	17th	1992	2nd-highest
Palmerston North	14.3	17th	1940	2nd-highest
Cape Reinga	14.4	17th	1971	Equal 2nd-highest

Port Taharoa	14.6	17th	1974	3rd-highest
Taumarunui	13.4	17th	1947	3rd-highest
Whanganui	15.3	17th	1972	3rd-highest
Farewell Spit	13.7	17th	1972	3rd-highest
Hicks Bay	15.1	17th	1972	Equal 3rd-highest
Wellington (Airport)	14.1	17th	1972	Equal 3rd-highest
Waipawa	12.6	17th	1945	4th-highest
Ngawi	15.0	17th	1972	Equal 4th-highest
Levin	13.8	17th	1950	Equal 4th-highest
Low records or near-records				
Takaka	-4.3	9th	1978	Lowest
Cape Reinga	5.0	9th	1951	2nd-lowest
Appleby	-3.5	10th	1932	2nd-lowest
Mahia	3.5	8th	1990	Equal 3rd-lowest
Turangi	-4.6	11th	1968	4th-lowest
Le Bons Bay	0.9	9th	1984	Equal 4th-lowest

Wind

On 4 September, strong northerly winds affected eastern parts of the South Island. A number of trees were blown over in central Dunedin, including in the Queens Gardens, and a trampoline went flying. Power was lost to some customers in Dunedin's Northeast Valley. Strong gusts were also recorded in Wellington, and wind warnings were in place for SH 2 at Rimutaka Hill.

On 5 September, a fallen tree and debris caused by high winds created hazards for motorists on SH 67 near Westport.

On 7 September, strong winds were experienced in the South Island. Wind warnings were in place for SH 87 from Kyeburn to Outram, SH 73 from Springfield to Arthur's Pass.

On 7-8 September, the significant storm that affected most of New Zealand brought strong southerly winds, low temperatures, and snow to much of the central and eastern South Island and Wellington regions. Wind gusts of up to 160 km/hr affected Banks Peninsula overnight on the 7th, and thousands of homes were without power in Otago, Canterbury, and Wellington due to wind-blown trees and debris damaging power lines. Two people were injured after a tree toppled onto their car near Tai Tapu, south of Christchurch. Cook Strait ferries and Wellington Harbour ferries were cancelled due to high seas and strong winds. Major roads that were affected by strong winds included: SH 1 from Timaru to Glenavy, SH 8 from Timaru to Omarama, SH 8 from Cromwell to Omarama (Lindis Pass) and SH 80 from Twizel to Mt Cook.

On 9 September, Cook Strait ferry services were cancelled for a second day as up to 7 metre swells were reported.

On 12 September, caution was advised on SH 2 at Rimutaka Hill due to strong winds.

On 18 September, strong winds caused a tree to fall onto a house in Avondale, Auckland.

The highest wind gust was 167 km/hr, observed at both Le Bons Bay (Banks Peninsula) and Akitio (Tararua District) on 7 September.

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

Location	Extreme wind gust (km/hr)	Date of extreme gust	Year records began	Comments
Hawera	102	8th	1986	Highest
Auckland (North Shore)	74	28th	1994	Equal highest
Whanganui	95	8th	1977	2nd-highest
Kaikoura	130	8th	1972	2nd-highest
Westport	100	7th	1973	Equal 2nd-highest
Mt Kaukau	146	8th	1969	3rd-highest
Oamaru	83	7th	1984	4th-highest
Baring Head	143	8th	1991	Equal 4th-highest

Snow and ice

On 7-8 September, a significant snow event affected the South Island and lower North Island. Snow settled in the hill suburbs around Wellington. Heavy snow fell in parts of Otago and Canterbury, and in the central North Island. The Remarkables Ski Field reported 55 cm of new snow overnight on the 7th, Mt Hutt ski field reported up to 1 m of new snow in places, and the snow base at Mt Ruapehu ski fields was also boosted by the storm. Snow settled on Mt Pirongia in the Waikato region. The following State Highways were affected by snow for a time: SH 2 at Rimutaka Hill, SH 49 from Ohakune to Waiouru, SH 1 at the Desert Road, SH 94 from Milford Sound to Te Anau, SH 73 from Arthur's Pass to Otira, SH 7 from Hanmer Turnoff to Springs Junction (Lewis Pass), SH 85 from Omakau to Ranfurly, SH 87 from Kyeburn to Outram, SH 85 from Ranfurly to Palmerston, SH 8 from Cromwell to Omarama (Lindis Pass), SH 73 from Springfield to Arthurs Pass (Porters Pass).

On 8 September, snow fell to near sea level around the Wellington region for the first time in five years. Meanwhile, more than 80 people, including pupils from St Bernard's Primary School in Wellington and Wellington High School, were stranded at Tukino Ski Field on Mt Ruapehu because of poor weather and snow blocking the access road. They were able to leave the ski field lodge on 10 September.

On 9 September, SH 1 at the Desert Road and SH 7 from Hanmer Turnoff to Springs Junction (Lewis Pass) were closed due to snow. Caution was advised on SH 2 at Rimutaka Hill, SH 5 from Napier to Taupo, SH 60 from Riwaka to Takaka, SH 8 from Cromwell to Omarama, SH 63 from St Arnaud to Renwick, SH 6 from Renwick to Rai Valley, SH 73 from Springfield to Arthur's Pass (Porters Pass), and SH 73 from Arthur's Pass to Otira due to snow and ice on the road. Hundreds of homes were without power in the central North Island.

Lightning and hail

On 8 September, hail fell across much of Wellington, associated with the cold southerly winds and snow affecting the region.

On 28 September, thunderstorms brought heavy hail to parts of Northland. In Whangarei, there was so much hail that a snowboarder managed to ride along the hail-covered grass verge.

On the evening of 29 September, thunderstorms were reported in inland parts of Southland. A particularly heavy downpour of rain caused surface flooding in Kingston.

On the evening of 30 September thunder, lightning and heavy downpours of rain were observed in southern parts of Central Otago. Considerable surface flooding was reported on SH 8 between Raes Junction and Roxburgh.

Cloud and fog

On 1 September, Christchurch experienced a foggy morning but no flights were affected.

On 12 September, a string of flights from Hawkes Bay Airport were disrupted due to rolling fog. An inbound flight from Auckland was forced to return having been unable to find a break in the fog after circling for close to an hour.

On 18 September, two international flights were diverted from Wellington to Auckland due to fog.

For further information, please contact:

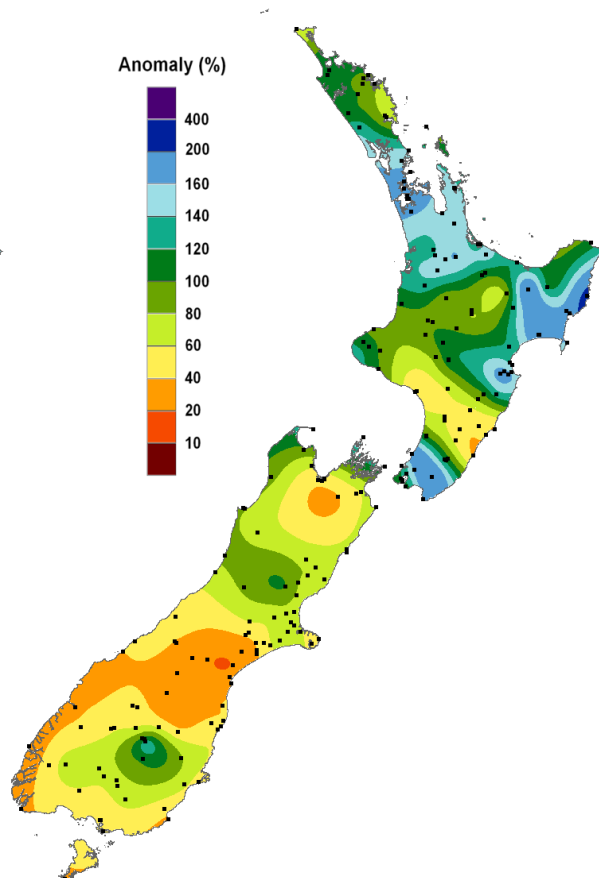
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*September 2016 rainfall,
expressed as a percentage of the
1981-2010 normal.*

*It was a wet month for much of
the North Island, particularly in
eastern areas (blue shades) but
dry for most of the South Island
(yellow and orange shades).*

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

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