

National Climate Summary – August 2008: Another very wet and stormy month (July 2008 was also very wet in many places) for most of the country

- Rainfall: Well above normal rainfall (more than 150% of normal) in Marlborough (especially Kaikoura), Canterbury, Tasman, eastern Southland and the majority of the North Island; below normal rainfall (less than 80% of normal) in Gisborne, Hawkes Bay, parts of the Southern Alps, Central Otago and Fiordland.
- Temperature: Near average (plus or minus 0.5°C) for the North Island; below average for the South Island, particularly inland Canterbury and coastal North Otago (1 to 2°C below average).
- Sunshine: Well above normal (more than 125% of normal) hours of bright sunshine recorded for coastal Gisborne and East Cape; above normal (between 110 and 125% of normal) for Northland, eastern Bay of Plenty, Hawkes Bay, north Canterbury, Fiordland and Southland.

August 2008 was yet another very wet month for many areas, continuing the trend from July. In the North Island from Auckland south with the exception of Gisborne and Hawke's Bay, rainfall totals were greater than one and a half times (150%) their normal values for the month. In the South Island there was a strong northeast to southwest gradient with Marlborough receiving over 300% of normal August rainfall (three times) while the Southern Alps, Fiordland and Central Otago received less than half their normal August allotment. In terms of other extremes, once again (similar to the previous month) there were several storms during the month bringing a mixture of snow, high winds and heavy rainfall to much of the country. In particular, the 126 mm of rain which fell in the 24 hours to 9am on the 26th at Kaikoura (the second highest 1-day August rainfall for this location since 1898) resulted in several landslides, surface flooding, disruption of the clean water supply, road and rail closures, damage to bridges, evacuations of residents (again) and the death of many livestock including newly born lambs. On Mt Ruapehu the recorded 3.5 m of snow pack was the deepest snow base since records began in 1992, with unusually low snowfalls in some other North Island areas occurring.

August temperatures were near average in the North Island but below average in the South Island. The three days from the 9th to the 11th were particularly cold for many locations, with minimum temperatures as low as -5.0°C recorded at Dunedin Airport, -4.0°C at Martinborough and 1.5°C at Kaitaia (all August records). The maximum temperature only reached 5.2°C in Dannevirke on the 9th (the lowest August maximum temperature at this location since records began in 1951), and several other locations also experienced record or near-record low maxima. The national average temperature of 8.9°C was 0.2°C below average for August. The weather system which brought the heavy rains to Kaikoura late in the month also resulted in extremely high temperatures in Haast, which experienced a minimum temperature of 12.9°C on the 25th and a maximum temperature of 19.9°C on the 26th; both values being the highest ever for the month of August for this location.

These extremes and contrasting patterns were caused by many more frequent depressions ('lows') especially just east of the North Island producing stormy westerly winds over the North Island, and south easterlies onto the South Island. Four depressions tracked over the North Island and northern South Island during the month (on 2nd – 3rd, 8th – 10th, 13th – 15th and 23rd – 25th). In contrast, conditions were quiet over the southwest.

Further Highlights:

- The highest 1-day rainfall was 135 mm recorded at Hanmer Forest on the 25th (the highest 1-day total at this location since records began in 1905).
- It rained (at least 1 mm) on 23 days in August in Pukekohe (7 days more than normal). Other high rainfall-days locations were Waiouru (22 days), Auckland (21 days), Kaikohe (20 days) and Palmerston North (20 days).
- The highest temperature during August 2008 was 19.9°C recorded at Haast on the 26th. The lowest temperature during August was recorded at Arthurs Pass on the 20th, where the minimum temperature was -9.5°C.
- The highest wind gust for the month was 128 km/hr at Castlepoint on the 22nd, with a gust of 124

km/hr also recorded at Puysegur Point on the same day.

- Of the five main centres, Auckland was the warmest, Wellington was the wettest and sunniest (an interesting combination), Christchurch the coldest, and Dunedin the driest.

Rainfall: Marlborough, Canterbury, coastal Taranaki, Tasman, eastern Southland and the majority of the North Island all received at least 150% (one and a half times) their normal August totals (with over 300% of normal recorded at Kaikoura), while below normal rainfall (less than 80% or normal) fell in Gisborne, Hawkes Bay, the Southern Alps, Central Otago and Fiordland.

Temperature: Mean temperatures were near average for most of the North Island but below average for the South Island.

Sunshine: August totals of bright sunshine were above normal (by more than 110 percent) in Gisborne and East Cape, Northland, eastern Bay of Plenty, Hawkes Bay, north Canterbury, Fiordland and Southland. Sunshine hours were below average (less than 90 of normal) in parts of Taranaki, Manawatu, Westland, South Canterbury and coastal Otago.

For further information, please contact:

Dr Andrew Tait – Climate Scientist – NIWA National Climate Centre, Wellington,

Tel. (04) 386 0562 (work) or (027) 327 7948 (mobile); or

Dr James Renwick – Principal Scientist– NIWA National Climate Centre, Wellington,

Tel. (04) 386 0343 (work) or (021) 178 5550 (mobile)

RAINFALL: WELL ABOVE NORMAL FOR MOST OF COUNTRY

August continued the soggy pattern set in July with rainfall totals which were above normal over most of New Zealand. Parts of Marlborough and Canterbury received more than twice (200%) their normal August totals, while Tasman, eastern Southland and the majority of the North Island received about 150% of normal rainfall. The only areas to escape the high rainfall totals were the east coast of the North Island (which also had a relatively dry July), the Southern Alps, Central Otago and Fiordland.

Extreme (high and low) August rainfall totals were recorded at:

Location	August rainfall total (mm)	Percentage of normal	Year records began	Comments
Whatawhata (Waikato)	284	173	1952	2nd highest
Turangi	228	149	1968	3rd highest
New Plymouth	277	215	1944	Highest
Paraparaumu	159	176	1945	4th highest
Palmerston North	165	219	1928	4th highest
Ohakune	203	180	1961	3rd highest
Waiouru	181	192	1950	2nd highest
Blenheim Aero	162	239	1927	3rd highest
Hanmer Forest	284	231	1905	3rd highest
Kaikoura	240	340	1898	4th highest
Okarito	66	27	1981	Lowest
Arthurs Pass	75	23	1906	2nd lowest

TEMPERATURE: AVERAGE IN NORTH; BELOW AVERAGE IN SOUTH

The national average temperature of 8.9°C for August 2008 is 0.2°C below average for this time of the year. Most locations in the North Island received near average temperatures for the month, while much of the South Island experienced below average temperatures. In the southern half of the South Island, temperatures were at least 1°C below average or more. Alexandra's mean temperature of 3.6°C was 2.1°C below normal for this location for the month of August (the equal largest – with Windsor in north Otago – temperature departure from normal for the country).

Extreme (high and low) August mean daily air temperatures were recorded at:

Location	Mean air temperature (°C)	Departure from normal	Year records began	Comments
Kumeu (Waitakere)	11.3	0.7	1978	3rd highest
Dannevirke	7.1	-1.2	1951	4th lowest
Castlepoint	9.2	-1.1	1972	2nd lowest
Arthurs Pass	2.2	-2.3	1973	3rd lowest
Cheviot	5.7	-1.4	1982	2nd lowest
Le Bons Bay	6.8	-0.6	1984	3rd lowest
Dunedin Aero	5.7	-0.8	1947	2nd lowest
Lumsden	4.6	-1.0	1982	4th lowest
Tiwai Point	6.3	-0.9	1970	4th lowest
Balclutha, Telford	4.1	-2.5	1964	Lowest

Extreme (high and low) August mean maximum daily air temperatures were recorded at:

Location	Mean maximum air temperature (°C)	Departure from normal	Year records began	Comments
Dannevirke	10.4	-1.9	1951	Lowest
Castlepoint	11.4	-1.5	1972	Lowest
Martinborough	12.7	-0.9	1986	3rd lowest
Cape Campbell	11.1	-1.6	1953	4th lowest
Arthurs Pass	6.1	-2.5	1973	2nd lowest
Cheviot	11.1	-1.7	1982	2nd lowest
Le Bons Bay	9.1	-0.9	1984	3rd lowest
Lumsden	9.3	-1.1	1982	3rd lowest
Tiwai Point	9.5	-1.3	1970	3rd lowest
Balclutha, Telford	8.4	-2.7	1964	Lowest

Extreme (high and low) August mean minimum daily air temperatures were recorded at:

Location	Mean minimum air temperature (°C)	Departure from normal	Year records began	Comments
Dargaville	9.1	1.5	1943	3rd highest
Kumeu (Waitakere)	7.5	1.4	1978	3rd highest
Hawera	6.3	1.2	1977	4th highest
Ohakune	3.1	1.3	1962	4th highest
Wanganui	7.4	1.2	1937	4th highest
Whangaparaoa	8.6	-0.8	1982	4th lowest
Cheviot	0.2	-1.2	1982	2nd lowest
Dunedin Aero	0.9	-0.1	1947	2nd lowest
Balclutha, Telford	-0.1	-2.1	1964	Lowest

SUNSHINE: ABOVE AVERAGE IN NORTH AND EAST OF NORTH ISLAND AND NORTHEAST AND SOUTHWEST OF SOUTH ISLAND; BELOW AVERAGE ELSEWHERE

August totals of bright sunshine were well above average (more than 125% of normal) for coastal Gisborne and East Cape and above normal (between 110 and 125% of normal) for Northland, eastern Bay of Plenty, Hawkes Bay, north Canterbury, Fiordland and Southland. Sunshine totals were below average (less than 90 percent of normal) in parts of Taranaki, Manawatu, Westland, south Canterbury and coastal Otago.

Extreme (high and low) August sunshine hours were recorded at:

Location	August sunshine (hours)	Percentage of normal	Year records began	Comments
Kaitaia Observatory	183	117	1985	4th highest
Motueka, Riwaka	128	80	1965	2nd lowest
Balclutha, Telford	142	123	1964	3rd highest

AUGUST'S CLIMATE IN THE FIVE MAIN CENTRES

Rainfall was well above normal for Wellington (the wettest of the main centres – it was the wettest in July as well) and Christchurch, and above normal for Auckland and Hamilton. Dunedin (the driest of the main centres) received below normal rainfall for August. Hamilton received slightly above average temperatures for August, while the other North Island main centres received average temperatures, with Auckland the warmest. Christchurch (the coldest of the main centres) and Dunedin were both colder than normal for the month. All of the main centres received near or slightly above normal sunshine hours for August, with the highest number of bright sunshine hours in Wellington.

August 2008 main centre climate statistics:

Location	August mean temp. (°C)	Dep. from normal (°C)		August rainfall (mm)	% of normal		August Sunshine (hours)	% of normal	
Auckland	11.2 ^a	-0.1	Average	174 ^a	144	Above normal	145 ^c	102	Normal
Hamilton	9.9	0.5	Above average	168	144	Above normal	145 ^d	105	Normal
Wellington	9.2	0.0	Average	205	167	Well above normal	155	114	Above normal
Christchurch ^b	6.0	-1.0	Below average	98	150	Well above normal	150	101	Normal
Dunedin	6.7	-0.9	Below average	55	83	Below normal	127	111	Above normal

^a Owairaka ^b Christchurch Airport ^c Mangere ^d Ruakura

HIGHLIGHTS AND EXTREME EVENTS

• Heavy rain and flooding

By mid-August heavy rain and wind in north Canterbury and Marlborough caused massive landslides, and flattened hundreds of hectares of pine plantations. The cold wet weather came in the middle of lambing and calving, and just after the clean up of the July storms. Sports events, particularly junior matches, were cancelled all over the country, as councils tried to maintain their grounds. Record groundwater levels in Levin caused the town's four sewage containment ponds to overflow, creating one massive pond.

The 126 mm of rain which fell in the 24 hours to 9am on the 26th at Kaikoura (the second highest 1-day August rainfall for this location since 1898) resulted in several landslides, surface flooding, disruption of the clean water supply, road and rail closures, damage to bridges, evacuations of residents (again) and the death of many livestock including newly born lambs.

Specific rain related events were:

Date	Event
2–3 August	Wellington City had more than 20 slips, causing road closures and property damage.
5 August	<ul style="list-style-type: none"> ○ Huntly College was closed when the Waikato River flooded the school grounds. ○ School pupils living on East Cape were prevented from travelling to school in Gisborne when storm damage blocked SH35 at Kemps Hill, north of Ruatoria. A temporary road was opened on 13 August.
7 August	The road to Eastbourne was closed by a major slip. Many people had to leave their vehicles on the Lower Hutt side of the slip and walk home.
13 August	Slips near Te Awamutu reduced SH34 at Aria, and SH37 at Waitomo, to one lane.
14 August	SH1 at Waikanae closed by heavy rain.
15 August	<ul style="list-style-type: none"> ○ The northbound lane of SH1 south of Otaki was blocked by a fallen tree. ○ Both Lower Hutt and Upper Hutt were affected by surface flooding.
19 August	Slip blocked the Lyttelton Tunnel for an hour. Alternative routes had been closed by snow and ice.
24 August	The Clevedon–Kawakawa Bay was closed by a slip.
25 August	<ul style="list-style-type: none"> ○ Roads and paddocks around Cust under water. ○ The main trunk line was closed by a slip at Billy Goat Bay near Kaikoura.
26 August	<ul style="list-style-type: none"> ○ Campers at Picton Camping Ground evacuated to spend the night in Queen Charlotte College. Queen Charlotte Drive was closed by numerous slips, and there was surface flooding south of Picton. ○ Slips closed SH1 from Weld Pass, near Seddon, to Cheviot, and roads around Kaikoura were sandbagged after surface flooding. ○ The main water pipe into Cheviot was broken cutting water supply to the town. ○ Tank water needed for Amberley and other areas of Hurunui District after main supply affected. ○ Mason River, a tributary of the Waiau River, burst its banks, putting the road under 4 m of water and isolating several houses. ○ A raging Eyre River in north Canterbury claimed up to 100 dairy cows when a bridge approach was washed away. ○ The settlement of Peketa, south of Kaikoura, was evacuated after the Kahutara River burst its banks. ○ Hurunui College, Cheviot Area and Greta Valley schools were closed. ○ Several slips blocked the inland road from Waiau to Kaikoura which was passable only through a gated access road. ○ South of Cheviot, a tree partially blocked SH1 at Domett. ○ A road bridge in Blythes Valley, south of Cheviot, was swept away. ○ Rural roads and farmland flooded around Sefton. ○ SH7 from the Hanmer Springs turnoff to Hanmer Springs closed, but open for 10 minutes every hour from 3pm to 6pm. ○ A major slip closed the Petone over-bridge north of Wellington for several hours. ○ Southbound lane of SH2 closed by slip on Featherton side of Rimutaka summit. ○ Flooding and slips in Albany forced the evacuation of several homes.
27 August	In Wellington a slip caused a ruptured gas main.
28 August	Wairarapa sewerage and storm-water systems affected by severe flooding, and forcing evacuation of homes in Masterton. Many roads in the area closed by flooding. High stock losses expected in new born lambs.
30 August	Heavy rain caused one of the four legs of a power pylon tower carrying electricity between the North and South islands to slump with Transpower monitoring its stability.

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
New Plymouth	64	24th	1944	3rd highest
Hanmer Forest	135	25th	1905	Highest
Kaikoura	126	25th	1898	2nd highest
Woodbury	61	25th	1973	3rd highest
Lumsden	24	16th	1982	4th highest

• Temperature

The highest temperature during August 2008 was 19.9°C recorded at Haast on the 26th during a strong easterly air flow. The minimum temperature of 12.9°C at Haast on the 25th was also the highest for the country for August. Both of these temperatures were the highest August temperatures (maximum and minimum) at this location since records began in 1949.

The coldest temperature during August was recorded at Arthurs Pass on the 20th, where the minimum temperature was -9.5°C. At lower elevations, Alexandra recorded -8.0°C on the 10th (the middle of three very cold days throughout the country – it got down to -7.0°C at Alexandra on the following day as well). Hanmer Forest also recorded -7.3°C on the 20th.

There were several record or near-record low daily maximum temperatures this month (see table below) with Clyde only reaching 2.7°C (the maximum temperature for the day) on the 12th and Balclutha only creeping up to 3.0°C on the 16th (both of these were record low daily maxima for August).

Near record high extreme daily maximum air temperatures were recorded at:

Location	Extreme maximum temperature (°C)	Date of extreme temperature	Year Records began	Comments
Kumeu (Waitakere)	18.6	24th	1978	2nd equal highest
Te Puke	19.8	27th	1973	3rd equal highest
Pukekohe	18.7	25th	1969	4th highest
Turangi	17.1	27th	1968	4th equal highest
Wallaceville	18.2	23rd	1939	4th highest
Takaka	19.3	26th	1978	4th highest
Lake Rotoiti	17.0	27th	1965	Highest
Haast	19.9	26th	1949	Highest
Milford Sound	17.8	26th	1934	4th highest
Appleby	18.6	26th	1943	Highest

Near record low extreme daily maximum air temperatures were recorded at:

Location	Extreme maximum temperature (°C)	Date of extreme temperature	Year Records began	Comments
Warkworth	11.2	9th	1966	4th lowest
Kumeu (Waitakere)	11.1	17th	1978	Lowest
Whakatane Aero	9.9	9th	1975	2nd lowest
Auckland Aero	10.3	17th	1961	4th equal lowest
Pukekohe	9.0	17th	1972	Lowest
Dannevirke	5.2	9th	1951	Lowest
Castlepoint	6.5	9th	1972	Lowest
Martinborough	7.1	9th	1986	Lowest
Hicks Bay	10.0	9th	1972	3rd equal lowest
Gisborne	8.9	9th	1940	4th lowest
Paraparaumu Aero	7.6	9th	1972	2nd lowest
Wellington Aero	7.9	9th	1972	3rd lowest
Wallaceville	7.0	9th	1972	3rd equal lowest
Hokitika	6.0	15th	1866	4th lowest
Reefton	4.3	16th	1972	Lowest
Greymouth Aero	7.5	15th	1972	Lowest
Haast	5.1	15th	1949	Lowest
Milford Sound	3.5	15th	1935	2nd lowest
Kaikoura	5.0	9th	1972	Lowest
Arthurs Pass	0.3	15th	1973	3rd lowest
Cheviot	4.2	9th	1982	3rd lowest
Waipara West	4.8	9th	1973	3rd lowest
Le Bons Bay	4.5	9th	1984	2nd lowest
Tara Hills	1.0	12th	1949	4th lowest
Wanaka Aero	1.8	12th	1972	2nd lowest
Balclutha, Telford	3.0	16th	1972	Lowest

Near record low extreme daily minimum air temperatures were recorded at:

Location	Extreme minimum temperature (°C)	Date of extreme temperature	Year Records began	Comments
Kaitaia Observatory	1.5	10th	1985	Lowest
Kerikeri	-0.3	10th	1981	2nd lowest
Whangarei Aero	0.8	10th	1967	2nd lowest
Warkworth	-0.3	9th	1966	2nd lowest
Kumeu (Waitakere)	-2.0	9th	1978	3rd lowest
Auckland, Owairaka	-0.7	9th	1949	3rd lowest
Te Puke	-1.8	10th	1973	2nd lowest
Turangi	-5.7	19th	1968	2nd lowest
New Plymouth	-0.9	9th	1944	3rd equal lowest
Martinborough	-4.0	20th	1986	Lowest
Hicks Bay	1.8	9th	1969	4th equal lowest
Wairoa, North Clyde	-1.0	10th	1964	4th equal lowest
Stratford	-2.5	19th	1960	3rd lowest
Hawera	-1.9	19th	1977	4th equal lowest
Lake Rotoiti	-8.6	19th	1965	3rd lowest
Hokitika Aero	-2.8	18th	1963	2nd lowest
Haast	-2.5	8th	1949	2nd lowest
Appleby	-4.2	9th	1943	2nd lowest
Arthurs Pass	-9.5	19th	1973	2nd lowest
Woodbury	-6.0	9th	1973	2nd equal lowest
Dunedin Aero	-5.0	9th	1947	Lowest
Queenstown Aero	-5.6	9th	1871	3rd lowest
Tiwai Point	-2.4	9th	1970	3rd equal lowest
Balclutha, Telford	-5.7	9th	1964	3rd lowest

Near record high extreme daily minimum air temperatures were recorded at:

Location	Extreme minimum temperature (°C)	Date of extreme temperature	Year Records began	Comments
Haast	12.9	25th	1949	Highest

- **High winds and tornadoes**

The highest gust for the month was 128 km/hr at Castlepoint on the 22nd, with a gust of 124 km/hr also recorded at Puysegur Point on the same day. Neither of these gusts were August records for these locations though (the August record high wind gusts are 164.9 and 183.6 km/hr, respectively). Other notable events in the month were:

Date	Effect
4 August	Property in Kimberley Road, Levin, was severely damaged when a mini-tornado struck in the early hours.
12 August	A double garage in Mt Maunganui lost its roof, and tiles were sheared off houses in several nearby streets.
19 August	A 'twister' east of Opotiki brought down power lines, and electrocuted 16 in-calf cows. Two barns were brought down, hundreds of metres of fencing destroyed, and trees scattered. Nearby properties were also damaged.

Near record high extreme wind gusts were recorded at:

Location	Extreme wind gust speed (km/hr)	Date of extreme gust	Year Records began	Comments
Kaitaia	95	15th	1985	4th equal highest
Kaikohe	80	2nd	1986	4th equal highest
Levin	85	16th	1971	4th highest

- **Snowfall**

Early August (4th – 6th) saw a brief but cold system bring snow to low elevations and close most alpine roads in the east and south of the South Island and the central parts of the North Island. Several ski fields recorded new snowfall totals exceeding 1m over a 48 hour period. Only a few days later on the 9th, Christchurch was blanketed in 2–5cm of snow. This system moved north and closed the Rimutaka Hill road and Desert road on the 10th.

On the 15th – 17th of August a deep low brought heavy snow to the Southern Alps and the western and north western ranges. Arthur's Pass received about 1m of snow, closing the road for 3 days, while Mt Cook Village received about 60cm. This storm was particularly unique as snow fell to low levels (~100m) on the western and north western side of the Southern Alps. Areas not usually associated with heavy snow falls (e.g. Nelson Ranges and behind Buller) were also affected. At one stage during this event, Transit New Zealand reported eight highways closed due to snow. About 600 homes and businesses in Tasman District were without power after a severe dump of snow brought down power lines on 15 August. The RNZAF, taking part in exercises in Marlborough, used helicopters to drop off feed to snow-bound stock in Awatere Valley.

This event was rapidly followed (18th – 19th) by a colder southerly flow which brought snow to Christchurch and closed roads on Banks Peninsula. The Rimutaka road out of Wellington was also blocked by snow and the Desert road was closed for several days. During this event over 1m of snow was recorded at Ruapehu village, with 15–20cm down at the Château at Ruapehu. Snow was also recorded to very low levels in the North Island, with snow observed in Featherston and down to sea level at Paekakariki. Bad weather delayed the rescue of six climbers trapped in Mt Cook National Park. A break in the weather on 18 August allowed a

helicopter to pick them up from their small tent near the Mueller Hut, where they had been trapped for 36 hours.

The large volumes of snow also caused extreme avalanche conditions in many parts of the Southern Alps with the Mountain Safety Council warning back country user to avoid the mountains especially around Arthur's Pass the Craigieburn Range and Mt Cook. These conditions caused the closure of the Milford Road for several days and also saw an avalanche cross SH73 near Arthur's Pass (for the first in almost 20 years). Three large avalanches were also reported in the Tararua Range, north of Wellington – these are the first reports of avalanches in the Tararua Range since 1929.

Whakapapa ski field on Mt Ruapehu recorded 3.5 m of snow pack, the deepest snow base since records began in 1992.

Date	Effect
8 August	Snow and strong south-westerlies hit Dunedin, stranding about 100 vehicles on SH1 at Waitati for up to an hour.
9 August	<ul style="list-style-type: none"> ○ SH2 closed along Rimutaka Hill Road. ○ Roads in Christchurch hill suburbs closed until cleared by graders. Chains required on Summit Road.
10 August	<ul style="list-style-type: none"> ○ SH2 over Rimutaka Ranges closed by snow and sleet ○ Several Christchurch and Banks Peninsula roads closed
14 August	<ul style="list-style-type: none"> ○ SH47 between The Chateau and National Park only accessible by 4-wheel drive. ○ Lewis Pass, Arthurs Pass and Milford Road affected by snow. ○ Heavy snow storm at 4pm brought traffic to a stop in Queenstown.
15 August	<ul style="list-style-type: none"> ○ Travellers stranded in Murchison. ○ SH6 closed from Otupiko to Murchison closed ○ SH63 closed from Wairau Valley to Howard ○ SH65 closed from Shenandoah to Maruia ○ SH6 closed near Inangahua ○ SH73 closed from Springfield to Otira. Snow about 1 m deep in Arthurs Pass village, and a massive snow slide just south of the village completely covering SH73. ○ SH6 closed from Haast to Makarora ○ SH8 closed from Omarama to Tarras ○ SH49 closed from Fiordland National Park to Milford Sound
16 August	<ul style="list-style-type: none"> ○ Roads re-opened with caution in Nelson-Tasman after heaviest snow in decades. Single lane opened on Hope Saddle, with traffic sent through once an hour in convoy. ○ Flights in and out of Queenstown Airport cancelled or delayed. ○ Severe snow warning issued for South Island's West Coast, for the first time in 10 years. ○ Lewis Pass, Arthurs Pass closed, plus SH6 from Franz Josef to Fox Glacier, sections of the highway around Milford Sound, Haast Pass, Hope Saddle, and St Arnaud
17 August	<ul style="list-style-type: none"> ○ SH1 between Rangipo and Waiouru closed for third night in a row. ○ Heli-skier rescued from avalanche near Glenorchy. He was buried under 2 m of snow.
19 August	<ul style="list-style-type: none"> ○ Snow reported in Paekakariki, and Featherston. ○ Overnight snow in Christchurch closed hill roads, and schools, with many Banks Peninsula roads also closed. ○ SH87 closed between Outram and Middlemarch ○ SH94 closed between Te Anau and Milford Sound ○ SH73 between Arthurs Pass and Otira only open to vehicles with chains, and traffic delays of an hour experienced. ○ SH1 closed on Desert Road. ○ Streets of Dannevirke coated in snow. ○ Ice and snow made roads slippery and driving conditions difficult in the Shannon area. ○ Heavy frosts reported in Wellington and Hutt Valley. One plane leaving

Wellington was delayed because of problems de-icing the wings.

- **Thunder and lightning**

More than 1500 lightning strikes were recorded over the Auckland Waikato region on 14 August, with most strikes over the Tasman Sea. Wellington also experienced a spectacular electrical storm, complete with booming thunder and torrential rain.

- **Fog**

Fog disrupted flights in and out of Auckland Airport in the morning of 25 August. It then rolled in to Wellington Airport about mid-day, causing the cancellation of at least 20 domestic flights, and the disruption of international flights.

For further information, please contact:

Dr Andrew Tait – Climate Scientist – NIWA National Climate Centre, Wellington,

Tel. (04) 386 0562 (work) or (027) 327 7948 (mobile); or

Dr James Renwick – Principal Scientist– NIWA National Climate Centre, Wellington,

Tel. (04) 386 0343 (work) or (021) 178 5550 (mobile)

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