



SIGNIFICANT WEATHER – March 2009

SUMMARY

There were four tropical cyclones during the month, Hamish and Jasper off the Queensland coast, Gabrielle and Ilsa both in the Indian Ocean off Western Australia.

Thunderstorms with hail and heavy rainfall were reported in all states.

Strong winds were reported in all states and there were dust storms reported in New South Wales.

The bushfires which devastated parts of Victoria in February were finally contained in early March.

TROPICAL CYCLONES

Queensland

Tropical cyclone *Hamish* tracked parallel to the east coast of Queensland, reaching category 5. A fishing trawler capsized in the Swains Reef area as tropical cyclone *Hamish* passed nearby with the loss of two crew. A bulk carrier off Stradbroke Island lost its cargo of containers in large waves, and leaking oil from its ruptured fuel tanks left an oil slick on southeast Queensland beaches from the Sunshine Coast to Bribie and Moreton Islands. Dangerous surf conditions also affected southeast Queensland beaches.

The track map and report can be found on the [Bureau's web site](#).

Tropical cyclone *Jasper* was located about 1,000 kilometres northeast of Mackay on the 24th of March, but posed no threat to Queensland. It tracked southeast and weakened to a low pressure system by the 26th.

Western Australia

An Indian Ocean low formed in the monsoon trough in late February and was named tropical cyclone *Gabrielle* on the 2nd, approximately 370 kilometres south-southeast of Christmas Island. However, upon reanalysis the system was deemed not to have reached cyclone intensity, though gales were apparent in some sectors for many days as the low meandered to the south and southwest of Christmas Island, and shipping warnings continued until early on the 6th. There was no known impact from this low.

A tropical low passed westward north of Australia and close to Timor before heading into the Indian Ocean. The low intensified and was named tropical cyclone *Ilsa* early on the 18th, over 800 kilometres north of Exmouth. Tropical cyclone *Ilsa* was a small and intense cyclone, reaching category 3 intensity, that moved in a general west-southwest direction eventually weakening near 90°E by the 24th. There were no known impacts.

THUNDERSTORMS/TORNADOES

Queensland

On the 16th there were media reports of large amounts of small hail destroying crops and netting at Stanthorpe during the afternoon.

New South Wales

On the 4th a thunderstorm and heavy rain was reported at Gloucester on the Mid North Coast. Severe electrical storms were reported in many parts of the Mid North Coast, especially around Nambucca Heads.

On the 12th a freight train was derailed at Darnick, between Ivanhoe and Menindee (Lower Western) after severe thunderstorms and heavy rain caused flash flooding, washing away part of the rail line.

On the 13th a thunderstorm and heavy rain was reported at Coonabarabran Airport.

On the 14th a thunderstorm with 2cm diameter hail was reported at Hay in the Riverina. Heavy rain caused gutters to overflow.

On the 15th a thunderstorm with 2cm diameter hail was reported at Cassilis on the northern edge of the Central Tablelands. A severe thunderstorm was reported at Grafton (North Coast) with 58mm of rain in about 1 hour.

On the 16th thunderstorms were reported on the North Coast with 2cm diameter hail at Ballina and 4cm diameter hail at Alstonville and Myocum. Trees were blown across roads and skylights broken. There was 4cm diameter hail at Bungawalbin, southeast of Casino. A tornado was sighted west of Woodburn where a farmhouse was destroyed by strong winds.

On the 25th thunderstorms, heavy rain and small hail were reported at Oakdale west of Camden, with 47mm of rain recorded in 3 hours. Thunderstorms and heavy rain were reported in western Sydney.

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On the 31st very heavy rain associated with severe storms on the Mid North Coast caused flash flooding, especially around the Coffs Harbour area. Some of the highest intensities include 309mm in 4 hours at Coffs Harbour (Red Hill) in the foothills behind Coffs Harbour. This represents a return period of greater than 100 years and caused a peak flood level of 5.1 metres in Coffs Creek. The highest rainfall on the Mid North Coast for the 24 hour period to 9 am (1 April) was 445mm at Coffs Harbour (Red Hill). Further south at Girralong (inland from Nambucca Heads) a total of 730mm was recorded in 2 days (30th and 31st). This represents a return period of between 50 and 100 years. Further north at Woolli on the North Coast, 129mm of rain was recorded in 3 hours which also represents a return period of between 50 and 100 years.

Victoria

On the 10th slow moving thunderstorms developed in several areas around Victoria. There were reports of local flash flooding in Hamilton with 35mm of rainfall in 1 hour.

Tasmania

From the 14th to the 16th a complex area of low pressure moved near Tasmania bringing heavy rain to much of the state. A line of thunderstorms which moved across the state on the 14th, causing many locally heavy falls. Flash flooding and other water damage resulted in dozens of insurance claims being lodged.

South Australia

On the 11th a thunderstorm caused damage to some properties in Paringa and Renmark. On the same day a thunderstorm resulted in 43mm of rain in one hour at Cummins as well as producing a tornado (F0), and another thunderstorm produced a 96 km/h wind gust at Coober Pedy.

On the 12th a thunderstorm produced very heavy rainfall and flash flooding at Telowie, Nelshaby and Napperby. A Resident of Nelshaby reported 85mm of rain in one hour, while a farmer near Telowie reported 70mm of rain in one hour.

Western Australia

On the 30th, a thunderstorm at Tom Price in the Pilbara produced 100mm of rain and caused localised flooding.

Northern Territory

On the 3rd, heavy rainfall in a thunderstorm at Kulgera near the Northern Territory/South Australia border caused surface flooding and severe wind gusts felled tree branches in the town.

On the 17th, a thunderstorm squall line produced a wind gust of 100 km/h at Darwin Airport, felled large

trees and smashed house windows in suburbs near Darwin city centre.

WIND

Queensland

Tropical cyclone *Hamish* tracked close to several automatic weather stations in the Coral Sea, and Gannet Cay recorded a wind gust of 190 km/h prior to the anemometer failing on the morning of the 9th.

Other strong wind gusts were recorded at Middle Percy Island with 113 km/h on the 8th, Heron Island with 104 km/h on the 9th and Double Island Point Lighthouse with 106 km/h on the 10th.

New South Wales

On the 31st strong winds generated a heavy ocean swell along the New South Wales coast with an average significant wave height of 6 metres and a maximum height of 11 metres. The strongest coastal winds were recorded at Yamba (North Coast) with a wind gust of 94 km/h.

Victoria

On the 3rd a vigorous cold front moved across Victoria, with gale force northerlies shifting west to southwesterly following the change. The SES had more than 300 calls for assistance, mostly due to fallen trees on roads and damaged powerlines. There were also significant power outages across the state. Strongest wind gusts included 124 km/h at Mount William and 117 km/h at Mount Hotham.

On the 4th a wind gust of 152 km/h was recorded at Wilsons Promontory Lighthouse

On the 14th, a squall line developed just west of Port Phillip Bay during the evening and moved across the metropolitan area. Strong wind gusts at Avalon Airport (where the Avalon Airshow was being held) resulted in 6 people being injured, marquees damaged and 4 planes being tipped over. Strongest wind gusts included 104 km/h at Point Wilson, 100 km/h at Essendon Airport and 96 km/h at St Kilda.

Tasmania

On the 4th a wind gust of 135 km/h was recorded at Cape Grim BAPS.

South Australia

On the 11th a wind gust of 96 km/h was recorded at Coober Pedy Airport.

Western Australia

On the 3rd a wind gust of 104 km/h was recorded at Wyndham Aero.

DUST STORMS

New South Wales

On the 3rd raised dust at Hay (Riverina) and Broken Hill (Lower Western) reduced visibility to 3 kilometres. There were duststorms at Wilcannia and Wanaaring in the Upper Western.

On the 4th a duststorm at Coonamble (Central West Plains) reduced visibility to 500 metres. Raised dust at Hay (Riverina) and Brewarrina (Upper Western) reduced visibility to 3 kilometres. Dust storms were reported at Brewarrina, White Cliffs, Tibooburra and Collarenebri in the Upper Western and at Hillston in the Riverina.

On the 5th widespread raised dust was reported on the North West Slopes and Plains. Visibility was reduced to one kilometre at Inverell.

FLOODING

Queensland

Connors/Isaac Rivers:
River rises caused moderate flooding between Pink Lagoon and Yatton in early March.

New South Wales

On the last day of March, a deep low pressure trough off the northern NSW coast and a moist easterly airstream caused heavy rain and extensive flooding on the Mid North Coast. Major flooding occurred in the Bellinger and Nambucca Rivers with moderate flooding in the Hastings River. Nearly 3,000 people were stranded in Bellingen, Darkwood and Kalang Valley. Flooding continued for several days as rain persisted with some residents stranded for up to 3 days. Hundreds of people had to be rescued from their homes and cars as floodwaters rose. All major roads in and around Coffs Harbour were closed, cutting access to several towns. The flood level in Coffs Creek reached 5.1 metres. The Nambucca River at Bowraville reached 10.25 metres. Coffs Harbour Hospital was flooded and power was cut to Bellingen Hospital. The total damage bill was estimated at nearly \$30 million.

The Bureau's observing site at Coffs Harbour Airport lost all its rainfall records for the 31st as floodwaters inundated the instrument site including the automatic rain gauge.

Western Australia

A tropical low, north of the Kimberley and roughly parallel with the Western Australia coast, began to move toward the Pilbara coast on the 28th of February. The low crossed the Pilbara coast near Port Hedland. Heavy rain occurred from the 28th of

February to early on the 2nd of March to cause flooding from the east Pilbara extending to the eastern Gascoyne and adjacent northern Goldfields and Interior. Roads were closed as a result and some mining operations were disrupted.

Northern Territory

There was one moderate flood event at Dorisvale Crossing in early March. Floodwaters reached the Minor flood level of 13 metres at 02:30 on 28th February, and continued to rise to the Moderate flood level of 15 metres at 21:30 28th February. This flood peaked at 17.26 metres at 14:00 2nd march.

BUSHFIRES

Victoria

- The Kilmore East-Murrindindi Complex North fire was declared contained on the 5th. This fire was estimated to have burnt 168,542 hectares, affecting the towns of Marysville and Narbethong.
- The Kilmore East-Murrindindi Complex South fire was declared contained on the 4th. This fire was estimated to have burnt 86,875 hectares, affecting the towns of Heathcote Junction, Humevale, St Andrews, Strathewen, Whittlesea, Steels Creek and Flowerdale.
- The Bunyip Ridge Track fire was declared as contained on the 4th. This fire was estimated to have burnt 26,200 hectares.
- The Cathedral Fire at Wilsons Promontory was declared contained on the 14th. This fire was estimated to have burnt 25,200 hectares.

The losses as a result of the fires in Victoria this season included:

- 173 fatalities
- 31 State/Community infrastructure
- 59 Commercial
- 2,029 private dwellings
- 2,626 agricultural building/facilities
- 12,758 stock
- 26,900 hectares timber plantations

This information sourced from the Joint CFA/DSE State Situation Report issued on the 11th.

TEMPERATURE

Note: The record tables below are only shown for sites with 30 years or more of observations. (Northern Territory is 20 or more years).

Highest Mean Maximum Temperature for March

Station	Actual °C	Previous Highest °C	Year	Years of Record
Queensland				
Mornington Island	34.0	33.6	1997	34

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Yuendumu	37.2	37.0	1992	39
Mango Farm	35.4	35.4	2002	27
Timber Creek	37.5	37.5	1990	28
Pirlangimpi AWS	32.9	32.7	1992	26

Lowest Mean Minimum Temperature for March

Station	Actual °C	Previous Lowest °C	Year	Years of Record
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Northern Territory

Larrimah	19.9	20.5	1997	43
Daly Waters AWS	19.4	20.6	1946	39
Katherine Aviation Museum	21.1	21.5	1997	22
Tindal RAAF AWS	21.0	21.1	1997	21

Highest Daily Maximum Temperature for March

Station	Actual °C	Date	Previous Highest °C	Year	Years of Record
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Queensland

Charleville Aero	40.7	02	40.3	1985	67
Mitchell PO	41.0	03	39.9	2007	40

Western Australia

Troughton Island	35.4	06	35.3	2003	31
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Northern Territory

Pirlangimpi AWS	35.2	21	35.0	1998	26
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Highest Daily Minimum Temperature for March

Station	Actual °C	Date	Previous Highest °C	Year	Years of Record
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Queensland

Charleville Aero	30.4	04	28.1	1989	67
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New South Wales

Mungindi PO	26.6	04	26.0	1980	44
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Northern Territory

Alice Springs Airport	29.6	03	29.4	1951	67
Jervois	29.4	14	29.3	2008	40

Lowest Daily Minimum Temperature for March

Station	Actual °C	Date	Previous Lowest °C	Year	Years of Record
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Queensland

Cairns Aero	17.7	31	18.5	2002	67
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New South Wales

Perisher Valley	-7.0	06	-5.5	1984	33
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South Australia

Arkaroola	0.0	31	5.7	1993	32
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RAINFALL

Note: The record tables below are only shown for sites with 30 years or more of observations. (Northern Territory is 20 or more years).

Highest Monthly Rainfall on Record for March

Station	Actual mm	Previous Highest mm	Year	Years of Record
South Australia Yaninee	76.0	70.6	1921	85

Lowest Monthly Rainfall on Record for March

Station	Actual mm	Previous Lowest mm	Year	Years of Record
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New South Wales

Tibooburra PO	0.0	0.0	2003	121
Goodooga PO	0.0	0.0	1995	111
Boomi (Barwon St)	0.0	0.0	2008	100
Collarenibri (Bundabarina)	0.0	0.0	1996	96

Baradine Forestry

Baradine Forestry	0.0	0.0	1995	65
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Brewarrina (Yappalee)

Brewarrina (Yappalee)	0.0	0.0	1998	43
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Bundarra (Ross)

Bundarra (Ross)	0.0	0.0	2008	42
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Victoria

Bonbeach (Carrum)	1.4	3.0	1980	49
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South Australia

Innamincka Station	0.0	0.0	2008	124
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Woomera (Pernatty Stn)

Woomera (Pernatty Stn)	0.0	0.0	2008	80
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Marree (Clayton)

Marree (Clayton)	0.0	0.0	2008	50
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Berri

Berri	0.0	0.0	2003	49
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Northern Territory

McArthur River Mine	5.4	13.4	1987	34
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Centre Island AWS

Centre Island AWS	5.6	10.0	1987	29
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Highest Daily Rainfall on Record for March

Station	Actual mm	Date	Previous Highest mm	Year	Years of Record
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South Australia

Yaninee	56.5	08	47.2	1921	79
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Tarcoola (Lake Everard)	40.0	08	36.4	2007	77
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Hiltaba	40.4	08	37.0	1958	74
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Western Australia

Nth Ravensthorpe	33.2	02	28.8	1974	41
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Marymia	60.2	02	59.2	1973	37
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Note: Some statistical records mentioned in this report are based on data that have yet to be fully validated