



## SIGNIFICANT WEATHER – January 2009

### SUMMARY

There were two tropical cyclones during the month, *Charlotte* in Queensland and *Dominic* in Western Australia bringing widespread rainfall and flooding.

Thunderstorms were reported in all states during the month, with dust storms occurring in New South Wales and Tasmania. Bushfires were also reported in New South Wales, Victoria and Tasmania.

An exceptional heatwave affected south-eastern Australia during late January and early February 2009. The most extreme conditions occurred in northern and eastern Tasmania, most of Victoria and adjacent border areas of New South Wales, and southern South Australia, with many records set both for high day and night time temperatures as well as for the duration of extreme heat.

### TROPICAL CYCLONES

#### Queensland

A monsoon trough was active through the Gulf of Carpentaria during early January. A number of low pressure centres formed along it during the 9th-10th. Tropical cyclone *Charlotte* formed in the central Gulf late on the 10th. The system was named on the 11th. Tropical cyclone *Charlotte* continued to track slowly to the south-east and crossed the coast near the Gilbert River Mouth during the early morning on the 12th. Tropical cyclone *Charlotte* then quickly decayed into a rain depression as it moved inland.

Heavy rainfall associated with the rain depression and monsoon trough subsequently occurred over the catchments of the already flooded Gulf rivers. Winds associated with tropical cyclone *Charlotte* caused high tides about the Gulf of Carpentaria coast.

A [map showing the track of tropical cyclone Charlotte](#) is available on our web site.

#### Western Australia

A tropical low formed over the western Kimberley, north east of Broome on the 24th and moved in a westerly direction. Once over water, the low moved rapidly west before slowing and turning to the southwest. The system quickly developed and was named tropical cyclone *Dominic* on the 26th when it was located about 300 kilometres west northwest of Port Hedland.

Tropical cyclone *Dominic* continued a steady movement to the southwest and intensified to category 2 strength. The system passed very close to Barrow Island before it turned on a south-southeast path. Tropical cyclone *Dominic* crossed the Pilbara coast about 12 kilometres to the east of Onslow and a wind gust to 133 km/h was recorded on the 27th at Onslow Airport. Some minor structural damage was caused and power lines were brought down. Widespread rain affected the western Pilbara as tropical cyclone *Dominic* approached the coast and in the 24 hours to 9 am on the 27th, Onslow Airport recorded 238.4mm, the wettest January day on record in Onslow, whilst Thevenard Island reported 242.8mm of rainfall.

As tropical cyclone *Dominic* approached the coast it weakened rapidly. The system was downgraded to below tropical cyclone intensity on the afternoon of the 27th. The weakening system caused heavy rainfall and flooding in many parts of southern Western Australia. The flooding in the Gascoyne River caused inundation of low-lying parts of Carnarvon.

A [map showing the track of tropical cyclone Dominic](#) is available on our web site.

### THUNDERSTORMS/TORNADOES

#### Queensland

On the 1st there was some minor wind damage to a house at Albany Creek and Killarney. Trees were damaged at Toowoomba, Murgon, Caboolture and Ipswich.

On the 13th a wind gust of 115 km/h was recorded at Lucinda. A water spout was reported in a heavy shower near Cairns airport.

On the 23rd severe thunderstorms were reported around Mt Isa. Two funnel clouds with rotation, strong wind gusts and heavy rainfall were reported.

#### New South Wales

On the 8th a thunderstorm with heavy rain at Scone Airport in the upper Hunter produced 20.8mm in 10 minutes and 40mm in 24 hours. At Nullamanna, north of Inverell on the Northern Tablelands, a thunderstorm caused heavy rain with 33mm recorded in 20 minutes. There was also heavy rain from severe storms in the Mount Seaview area of the Mid North Coast with 97mm recorded in about 75 minutes.

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On the 20th a thunderstorm with 2cm diameter hail was reported at Yarralumla, an inner suburb of Canberra. Heavy rain caused flooding of stormwater drains after 38mm fell at Curtin and 37mm at Watson. Roads were blocked when strong winds brought down trees. Lightning hit a substation in Melba causing power outages to nearby homes. On the South West Slopes, a thunderstorm with very strong winds at Wagga Wagga caused damage to houses and uprooted trees.

On the 21st a thunderstorm with very heavy rain at The Oaks, southwest of Sydney was reported. Up to 40mm of rain with small hail was recorded in approximately 3 hours. Thunderstorms and heavy rain at Gosford caused local flash flooding, closing some roads. Up to 51mm of rain was recorded in approximately 2 hours.

On the 22nd thunderstorms and a possible tornado in the northern suburbs of Canberra caused a 2 kilometre trail of damage. Hail and strong winds from thunderstorms destroyed vineyards near Griffith in the Riverina causing over \$5 million in damage. Flash flooding following heavy rain from storms at Jugiong and Harden on the South West Slopes destroyed dams, fences and damaged roads in the area. Jugiong recorded 32mm of rain. At Wagga Wagga, over 6,000 houses lost power when lightning struck a substation.

On the 24th a person was struck by lightning at Maitland in the lower Hunter. Strong winds caused damage to houses in the Maitland-Singleton area.

On the 25th there were thunderstorms and heavy rain on the North Coast with Repentance Creek recording 51mm of rain in 1 hour and Doon Doon recorded 30mm in 30 minutes.

On the 26th there was heavy rain at Corndale (near Lismore) on the North Coast with 56mm of rain recorded in approximately 1 hour.

### Victoria

On the 22nd, a cold front and associated low pressure trough moved through central districts during the afternoon and evening before weakening over the northeast at night. Severe thunderstorms developed over the eastern half of the state associated with the low pressure trough. There were reports of thunderstorm-related damage in Healesville, Rushworth, Mansfield and Orbost through the afternoon, along with numerous wind gusts in excess of 100 km/h, the highest being a 118 km/h wind gust at Mount Hotham.

### Tasmania

On the 31st, a severe thunderstorm developed in the Fingal Valley and near St Marys. The thunderstorm initially developed just east of Cressy, then moved eastwards through the hot and humid conditions in the Fingal Valley, developing into a severe storm.

Hail of 1.5cm in diameter and heavy rain fell in Fingal, with an unconfirmed report of flooding in the local hotel. The storm developed further as it continued moving eastwards, and more heavy rain was accompanied by wind gusts that blew down large trees, across power lines starting some bushfires. Over the small township of Gray it produced large quantities of hail. The hail damaged a number of cars, blocked roof gutters, broke windows and caused significant damage to gardens and an orchard. There was also damage to vehicles at camping grounds near the Chain of Lagoons as the storm continued on its track to the east.

### South Australia

On the 28th a thunderstorm occurred near Jamestown in the Lower North district. It produced heavy rain causing local flooding nearby.

### Western Australia

On the 7th, Wyndham Aerodrome reported a wind gust of 148 km/h during a thunderstorm, causing damage to a house roof.

Tropical moisture from ex-Tropical Cyclone *Dominic* helped spawn severe thunderstorms in the southern Central Wheat Belt on the afternoon of the 28th. Heavy rainfall caused flash flooding in the York-Quairading region as daily falls to 9am on the 29th included 68mm at Doodlakine and 60mm at Quairading. Low-lying parts of York were inundated, while several motorists were caught in floodwaters on the York-Quairading road.

On the 31st, Gingin Aerodrome reported a wind gust of 94 km/h. A thunderstorm developed to the west of Yanchep, then moved over Bindoon causing some damage.

### Northern Territory

On the 12th a severe thunderstorm damaged power lines at Mataranka, in the Roper-McArthur District.

Overnight on the 26th and 27th, long-lived thunderstorms affected the Barkly District southeast of Tennant Creek.

On the 30th, an intense monsoonal squall line passed through the Darwin area during the early morning. Damage to vegetation was reported along Gunn Point Road, about 40 kilometres northeast of Darwin.

**WIND**

### New South Wales

On the 20th Canberra Airport recorded a wind gust of 106 km/h from a thunderstorm downburst. Several trees were brought down blocking roads in Curtin.

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Wagga Wagga was also hit by a severe thunderstorm with a wind gust of 115 km/h. The wind caused considerable damage to houses in Wagga Wagga and many trees were uprooted.

On the 22nd strong winds were recorded during a dust storm on the South West Slopes, with a wind gust of 100 km/h at Khancoban. The strong winds brought down over 80 trees in the Howlong area and caused power outages affecting over 4,000 homes. In the northern suburbs of Canberra a 2 kilometre trail of damage in Harrison, Dunlop and Palmerston was possibly caused by a tornado.

On the 24th there were strong winds from storms in Singleton and Maitland in the lower Hunter which caused considerable damage to several houses.

### Tasmania

On the 6th winds gusted to 100 km/h at Droughty Hill on the eastern shore causing damage to the mast of a skiff.

On the 22nd, extremely strong and gusty northerly winds blew across the state as a deep low pressure system passed to the southwest of Tasmania and an associated cold front approached. Winds and fire dangers increased rapidly during the late morning as the front approached, only gradually abating in the evening as the front receded eastward and the low sank to the south. Wind gusted to over 100 km/h at several sites, peaking at 150 km/h on Mount Wellington and 157 km/h at Droughty Hill. Hobart's gust of 124 km/h was one of the strongest ever recorded there. Widespread damage was sustained across the state (but was most intense in the southeast) and over 27,000 premises lost power, with thousands remaining without power overnight. Lanes were shut on the Tasman Bridge as traffic lights failed. Trees fell across a number of cars, a bus in Hobart, and a suburban Hobart primary school. Many buildings lost their roofs, including grandstands at both Elwick racecourse and Bellerive Oval.

## DUST STORMS

### New South Wales

On the 22nd Berrigan (South West Slopes) reported a severe dust storm with strong winds and visibility reduced to 100 metres. Similar conditions occurred at Albury with dust reducing visibility to 400 metres and winds gusting to 98 km/h. Balranald (Lower Western) reported dust and visibility of 1,000 metres. Wagga Wagga reported raised dust and winds to 98 km/h with Corowa, Tocumwal, Hay and Menindee all reporting dust storms or raised dust.

### Tasmania

On the 22nd winds whipped up a rare dust storm in southern Tasmania. Visibility was reduced across large areas, at times making it difficult to see the few kilometres from Hobart's city centre to the Eastern Shore.

## FLOODING

### Queensland

During early January an active monsoon trough with an embedded low pressure system centred over the Northern Territory interacted with an upper level trough, producing heavy widespread rainfall areas and thunderstorms across the north-western districts of Queensland. This resulted in the first flood warnings for the season in the Gulf Rivers and the Georgina, Diamantina and Cooper catchments.

The low pressure area persisted over the North Territory and western Queensland producing further heavy rainfall around the Gulf of Carpentaria and western Queensland to the 7th causing more rises in the Nicholson, Albert and Flinders Rivers.

Flood warnings commenced early in January for the Gulf Rivers (including the Nicholson, Gregory, Albert, Leichhardt, Cloncurry, Flinders and Norman Rivers) and also for the Georgina and Diamantina Rivers in the channel country of far western Queensland.

A low pressure system then formed in the Gulf of Carpentaria during the 8th with the monsoon trough extending from the low across the Queensland North Tropical Coast and over the Coral Sea. This low continued to produce heavy rainfall around the Gulf of Carpentaria and the North Tropical Coast for several days before deepening to become tropical cyclone *Charlotte*.

Tropical cyclone *Charlotte* tracked slowly southeast to cross the Gulf coast near Gilbert River Mouth on the 12th producing further heavy rainfall on the Gulf coast in the vicinity of the coastal crossing. However, heavier falls were recorded on the North Tropical Coast between Cape Tribulation and Babinda then moving up the east Queensland coast. This heavy rainfall event coincided with king tides along the coast and led to major flooding in the Tully River and the inundation of houses at Cairns and Townsville.

The heaviest rainfall then moved south to be centred over Townsville causing major flooding in the Haughton River at Giru. Upper Major Creek recorded over 700mm of rainfall in 48 hours on the 14th.

Isolated showers and thunderstorms continued through the northern half of the state for the remainder of the month producing isolated heavy falls and further exacerbating existing flooding around the Gulf of Carpentaria and over the Diamantina, Georgina and Cooper catchments.

By the 29th a tropical low had developed on the monsoon trough and was positioned over the southern Gulf of Carpentaria. The low deepened slowly and produced further heavy rainfall in already flooded areas around the Gulf of Carpentaria. This again, further exacerbated existing flood conditions.

Many gauging stations across the Gulf River Systems and the Channel Country recorded very high flood peaks, including the Gilbert River at Strathmore (8.10 metres, highest flood since 1974), the Cloncurry River at Cloncurry (8.03 metres, highest flood since March 1997), the Georgina River at Urandangie (6.85 metres, highest flood since March 1997) and in Eyre Creek at Glengyle (5.25 metres, highest flood since March 1997).

### **Northern Territory**

There was major flooding in the Wickham River, with two peaks over a period of about one week. The first peak was 11.15 metres on the 23rd and then 11.41 metres on the 30th.

The Barkly Highway was cut off for a prolonged period in early January due to high flows.

## **BUSHFIRES**

### **New South Wales**

On the 4th lightning started a bushfire at Wingecaribee Shire south of Moss Vale in the Illawarra, and about 1,200 hectares was burnt over the next 2 or 3 weeks.

From the 20th to 28th lightning started a bushfire at Budawang National Park, northwest of Batemans Bay on the South Coast; over 2,000 hectares of heavily timbered terrain was burnt.

On the 24th lightning started a bushfire at Jingera Rock near Wyndham in the Bega Valley, South Coast; 2,400 hectares burnt and was still uncontained at end of the month.

On the 13th a small bushfire in Garigal National Park threatened houses at East Killara on Sydney's north shore.

On the 15th, lightning started a bushfire in Kur-ring-gai Chase National Park, threatening nearby factories. Another scrub fire at Londonderry in Sydney's far west burnt machinery sheds and several motor vehicles.

### **Victoria**

From the 29th to 31st, a stretch of hot weather in Victoria resulted in the outbreak of a number of fires. The largest fire was the "Delburn Complex" which burnt approximately 6,000 hectares of land in West Gippsland. Other smaller fires reported in this period included one near Branxholme in southwest Victoria and one in the Endeavour Hills area east of Melbourne.

### **Tasmania**

On the 22nd strong winds combined with low humidity to produce extreme fire dangers. Fires ignited at Rossarden (near Fingal) and Powranna, and spread rapidly causing closure of the Midlands Highway between Campbell Town and Powranna and the Esk Highway between Conara and St Marys for a number of hours. About 20 power poles were felled by fire along the Midlands Highway, many kilometres of fencing was lost and several paddocks were lost. A cattle feedlot at Powranna lost tens of thousands of dollars worth of fodder and a large steel fodder shed. By the end of the month, 2,352 hectares was burnt at Rossarden and 550 hectares at Epping Forest.

Lightning in the southwest on the 29th started a bushfire at Mount Fincham in the Franklin Gordon Wild Rivers National Park which burnt 190 hectares.

## **HEAT WAVE**

### **New South Wales**

A severe heatwave at the end of the month caused record high temperatures on the Southern Tablelands and a record number of consecutive days above 40°C over parts of the Riverina and South West Slopes.

### **Victoria**

A heat wave affected Victoria (along with other parts of south eastern Australia) from the 27th until the end of the month. In much of central, southern and western Victoria, maximum temperatures widely reached their highest levels since at least 1939. Melbourne narrowly missed its all-time temperature record on the 30th, with 45.1°C the second-highest on record behind 45.6°C on 13 January 1939. In Geelong (45.3°C on the 29th) and Wilsons Promontory (41.4°C on the 30th). Other stations where all-time records were set or equalled included Mangalore Airport, Maryborough, Tatura, Scoresby, Jewwodd, Lake Eildon, Wonthaggi, Moorabbin and Dartmouth.

Overnight minimum temperatures were also very high in many places. Melbourne Airport's minimum of 30.5°C on the 29th was only 0.4°C short of the Victorian record, set at Mildura in 1999 and Kerang in 2001. The extremely high day and night temperatures combined for a record high daily mean temperature at Melbourne on the 29th (35.0°C), which was then exceeded on the 30th (35.4°C).

Over the five days 27th to 31st, maximum temperatures were 12°C to 15°C above normal over much of Victoria. Melbourne endured three successive days (28th, 29th and 30th) of temperatures above 43°C for the first time in recorded history.

### Tasmania

Between the 28th and 31st a heatwave affected northern Tasmania. Hot tropical air was directed over the southern mainland and then onto Tasmania by a slow-moving high pressure system in the Tasman Sea and an intense tropical low off the northwest coast of Western Australia. The previous state record of 40.8°C, set at Hobart on 4 January 1976, was broken on the 29th when Flinders Island Airport reached 41.5°C. But the record only lasted for one day - it was beaten by Ross (41.6°C), St Helens (41.8°C) and Scamander (42.2°C) on the 30th. The temperatures at Cressy (41.4°C) and Fingal (41.3°C) on the 30th also exceeded the old Tasmanian record. Fingal had two consecutive days over 40°C on the 29th and 30th - the only other time this has occurred in Tasmania was in Hobart on 29-30th December 1897. Seven of the eight highest temperatures ever recorded in Tasmania occurred on the 29th and 30th, and eight sites reached 40°C.

Several other sites, mostly in the north, had their hottest day on record between the 29th and 31st, with many beating the previous record by 2 or 3 degrees on multiple days. Launceston's previous record of 35.4°C was exceeded on all 3 days and their highest temperature was 39.0°C (which also broke the record of 38.3°C set at the old Launceston site in 1912). Launceston Airport had three consecutive days above 37°C; it had never experienced even two consecutive days above 35°C before. Burnie set a new record of 33.8°C on the 31st; the previous record of 32.8°C was set in 1982.

There were many impacts of the hot weather. These included shutdowns of the Basslink electricity cable between Tasmania and the mainland for about an hour on both the 29th and 30th (contributing to widespread blackouts in Victoria and South Australia, where hundreds of thousands of premises lost power); a major train derailment on the 30th just south of Deloraine (possibly caused by heat buckling the rain lines); and some companies in Launceston had to take emergency measures after their air conditioning failed.

Overnight temperatures were also very warm from the 29th to 31st. The warmest was the night of the 29th, when a cloudband crossed the state overnight and inhibited cooling. Several sites had their warmest night on record, and Melton Mowbray's 24.0°C was the fourth-highest January minimum temperature ever recorded in Tasmania.

### South Australia

In southern South Australia, maximum temperatures widely reached their highest levels since at least 1939. Adelaide narrowly missed all-time records during this initial heatwave period. Adelaide's 45.7°C on the 28th ranks third behind two 1939 readings of 46.1°C and 45.9°C.

South Australia's highest temperature was 48.2°C at Kyancutta on the 28th. Another notable reading was 48.0°C at Pallamana, near Murray Bridge, on the 28th. These values fell short of the state record of 50.7°C.

Overnight minimum temperatures were also very high in many places during this part of the event. Adelaide experienced its warmest night on record when the temperature only fell to 33.9°C in the early hours of the 29th, and other site records included those at Ceduna and Murray Bridge.

On the morning of the 29th, an exceptional event also occurred in the northern suburbs of Adelaide around 3am when strong north-westerly winds mixed hot air aloft to the surface. At RAAF Edinburgh, the temperature rose to 41.7°C at 3.04 a.m.

A report on [the exceptional January-February 2009 heatwave in South-eastern Australia](#) is available on our web site.

## 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 January

Station	Actual °C	Previous Highest °C	Year	Years of Record
<b>New South Wales</b>				
Taralga	29.8	29.6	2007	48
Bankstown Airport AWS	30.7	30.5	1991	40
Parramatta North	31.3	31.1	1991	40
Bowral (Parry Drive)	28.2	28.0	1973	39
Cooma Visitors Centre	30.4	30.4	1988	34
Camden Airport AWS	32.5	31.7	1991	32
Goulburn TAFE	30.5	30.2	1988	31
<b>Victoria</b>				
Lake Eildon	32.3	32.2	1981	38
<b>Western Australia</b>				
Wongan Hills	36.9	36.6	1980	41
Pingelly	34.0	33.9	1997	37

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### Lowest Mean Maximum Temperature for January

Station	Actual °C	Previous Lowest °C	Year	Years of Record
<b>Queensland</b>				
Burketown PO	29.7	30.8	1894	113
Urandangi	32.3	32.4	1974	70
Mount Isa Aero	30.0	30.3	1974	42
<b>Northern Territory</b>				
Brunette Downs	31.5	31.7	1974	41
Alyangular Police	31.7	31.8	2003	24
Wollogorang	31.4	31.9	2003	23

### Highest Mean Minimum Temperature for January

Station	Actual °C	Previous Highest °C	Year	Years of Record
<b>Western Australia</b>				
Emu Creek Station	26.2	26.1	1980	36

### Lowest Mean Minimum Temperature for January

Station	Actual °C	Previous Lowest °C	Year	Years of Record
<b>Northern Territory</b>				
Timber Creek	24.2	24.2	2006	27

### Highest Daily Maximum Temperature for any Month

Station	Actual °C	Date	Previous Highest °C	Year	Years of Record
<b>Tasmania</b>					
Flinders Island Airport	41.5	29	38.8	Jan, 2003	47

### Highest Daily Maximum Temperature for January

Station	Actual °C	Date	Previous Highest °C	Year	Years of Record
<b>New South Wales</b>					
Bombala (Therry Street)	40.0	31	39.8	1968	41
Tumbarumba PO	39.8	30	39.4	1968	41
Thredbo Village	33.5	30	31.5	2006	39
Cooma Visitors Centre	39.0	31	38.5	2006	35
<b>Victoria</b>					
Wilson's Promontory LH	41.4	29	41.1	1959	53
Omeo Comparison	40.2	30	40.0	1968	52
Mangalore Airport	44.6	31	44.4	1982	51
Maryborough	43.6	30	43.3	2003	45
Tatura Inst	43.5	31	43.3	1982	45
Sustainable Ag Scoresby Research Institute	43.8	29	42.8	2003	42
Heywood Forestry	43.2	29	42.1	1981	40
Lake Eildon	43.0	31	42.3	1982	39
Wonthaggi	43.7	29	43.0	1982	39
Moorabbin Airport	44.9	29	44.3	2003	38
Dartmouth Reservoir	41.1	30	40.2	2007	31
Grovedale Geelong Airport	45.3	29	44.8	2003	20
<b>Tasmania</b>					
Launceston Airport Comparison	39.9	30	37.3	1943	70
Flinders Island Airport	41.5	29	38.8	2003	47
Burnie (Round Hill)	33.8	31	32.8	1982	44
Marrawah	33.0	29	32.8	1991	38
<b>South Australia</b>					
Mount Gambier Aero	43.6	29	43.5	1982	67
Adelaide Airport	44.0	28	44.0	1968	54
Yongala	43.5	28	43.4	2003	53

Mount Barker	44.5	28	43.0	1982	52
Keith	45.5	28	45.4	2003	48
Eudunda	43.5	28	43.5	1968	45
Meningie	45.1	28	43.2	1982	43
Murray Bridge Comparison	46.6	28	45.6	1968	43
Adelaide (Kent Town)	45.7	28	44.2	1982	32
<b>Western Australia</b>					
Emu Creek Station	49.0	10	48.2	2004	37
Gascoyne Junction	48.6	11	48.3	2008	32

### Lowest Daily Maximum Temperature for January

Station	Actual °C	Date	Previous Lowest °C	Year	Years of Record
<b>Queensland</b>					
Croydon Township	22.6	12	23.0	1976	46
Mount Isa Aero	22.8	29	23.2	1991	43
<b>Western Australia</b>					
Emu Creek Station	26.2	27	27.4	1982	37
<b>Northern Territory</b>					
Tennant Creek Airport	23.8	17	24.2	2006	39

### Highest Daily Minimum Temperature for any Month

Station	Actual °C	Date	Previous Highest °C	Year	Years of Record
<b>Tasmania</b>					
Launceston Airport Comparison	20.7	30	19.8	Jan, 1998	70
Scottsdale (West Minstone Road)	21.3	30	20.0	Jan, 1997	37

### Highest Daily Minimum Temperature for January

Station	Actual °C	Date	Previous Highest °C	Year	Years of Record
<b>New South Wales</b>					
Lake Victoria	31.5	29	31.5	1982	44
Corowa Airport	32.0	29	29.4	1982	36
<b>Victoria</b>					
Longerenong	28.8	29	27.8	1991	45
Scoresby Research Institute	29.2	29	26.5	2006	42
Walpeup Research	29.2	29	29.0	2008	42
Melbourne Airport	30.5	29	27.3	2008	39
Wonthaggi	25.0	29	22.5	1993	39
Castlemaine Prison	28.5	29	27.2	1997	38
<b>Tasmania</b>					
Launceston Airport Comparison	20.7	30	19.8	1998	70
Scottsdale (West Minstone Road)	21.3	30	20.0	1997	37
Bicheno (Council Depot)	18.9	31	18.8	2003	34
<b>South Australia</b>					
Ceduna AMO	32.7	29	32.6	1961	67
Mount Barker	28.0	29	27.3	1997	52
Murray Bridge Comparison	29.1	29	28.2	1982	43
Kimba	31.5	29	30.6	2006	42
Adelaide (Kent Town)	33.9	29	33.5	1982	32

### Lowest Daily Minimum Temperature for January

Station	Actual °C	Date	Previous Lowest °C	Year	Years of Record
<b>Victoria</b>					
Ballarat Aerodrome	0.7	03	1.0	1994	52
Scoresby Research Institute	3.6	03	4.6	1965	42
Moorabbin Airport	6.0	03	6.1	1973	38

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## Tasmania

Swansea Post Office	2.4	03	2.7	1976	53
Scottsdale (West Minstone Road)	2.2	02	2.8	2007	37

## Victoria

Beales Reservoir	2.2	3.2	1990	128
Bungaree (Kirks Reservoir)	1.6	2.9	1932	128
Caulfield (Racecourse)	1.0	1.5	1964	122
Lancefield	0.0	1.1	1932	121
Toorourrong Reservoir	1.0	1.3	1964	117
Wilsons Reservoir	1.6	2.5	1932	114
Meredith	0.0	2.4	1990	107
Ballarat Aerodrome	0.8	2.6	1957	101
Preston Reservoir	0.8	1.1	1932	99
Moorabool Reservoir	1.4	2.0	1932	97
Eltham	0.2	1.0	1930	96
Yandoit	0.0	0.3	1906	96
Cheltenham Kingston Centre	0.0	1.9	1930	94
Labertouche	1.8	3.2	1990	91
Walpeup Research	0.0	0.3	1969	71
Laverton RAAF	0.2	3.1	1957	68
Essendon Airport	0.4	0.8	1932	63
Lauriston Reservoir	0.0	2.9	1964	61
Scoresby Research Institute	2.2	5.3	1964	59
Springvale Necropolis	2.9	3.2	1990	59
Bullengarook East (Seskinore)	1.0	1.3	1964	58
Glen Park (White Swan Reservoir)	1.2	3.9	1957	57
Vaughan	0.0	2.0	1965	51
Charlton (Donald St)	0.0	1.2	2000	49
Croydon (Council Depot)	5.2	19.8	2001	44
Eppalock Reservoir	0.0	7.8	2004	44
Donald	0.4	0.5	1967	43
Glenthompson	0.0	3.0	1990	43
Beaufort (Sheepwash)	1.6	6.8	1990	42
Castlemaine Prison	0.0	5.1	1967	42
Lima South (Lake Nillahcootie)	4.4	8.6	1989	42
Eastville (Bonnie Banks)	0.0	3.1	1969	41
Harcourt	0.0	8.6	1990	41
Linga	0.0	0.2	1980	41
Murrayville (Ngallo)	0.0	0.6	1980	41
Prairie West	0.0	1.4	1992	41
Warrandyte	2.0	5.2	1990	41
Ararat Prison	1.0	2.0	1990	40
Drysdale (Brimdale)	2.4	6.6	1990	40
Hesket (Straws Lane)	0.0	8.2	1990	40
High Camp (Lannermoor)	0.0	9.6	1986	40
Kyneton	0.0	8.2	1990	40
Moliagul	0.0	1.0	1983	40
Smeaton (Blampied (Bardia))	0.6	2.6	1983	40
Warracknabeal Museum	0.0	1.2	1980	40
Wurdiboluc Reservoir	2.6	4.2	2008	40
Melbourne Airport	1.2	4.4	1990	39
Stratford	0.6	0.8	1990	39
Bright	15.8	17.0	2003	38
Bannockburn (Hillside)	0.0	1.4	1990	37
Baringhup (Blue Hills)	0.0	6.4	1983	37
Glen Waverley (Golf Course)	2.2	2.4	1990	37
Navarre (Avon No.3)	0.0	4.6	1986	37
Tatura (Thiess Services)	0.0	2.4	1986	36
Benayeo	1.8	3.2	1999	35
Greenvale Reservoir	1.4	7.2	2001	35
Bundoora Latrobe Uni	1.0	6.6	1990	30
Shelford West	0.0	10.2	1976	30
<b>Tasmania</b>				
Maria Island (Darlington)	3.6	4.1	1932	90

## 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).

### Western Australia

Troughton Island recorded 222.4mm to 9 am on the 16th during a thunderstorm. The two hour total of 202.2mm to 0530am on the 16th was greater than a 1 in 100 year rainfall event, whilst the fall of 183.0mm in the 90 minutes to 0510am also exceeded a 1 in 100 year rainfall event.

#### Highest Monthly Rainfall on Record for January

Station	Actual mm	Previous Highest mm	Year	Years of Record
<b>Queensland</b>				
Millungera Station	848.5	729.6	1974	117
Wando Vale Station	716.0	711.4	1991	116
Devoncourt Station	576.6	512.1	1974	100
Marion Downs	295.7	252.6	1974	95
Stradbroke Station	543.0	532.8	1974	88
Esmeralda Station	815.0	583.2	1991	85
Mount Isa Mine	484.2	481.3	1974	78
Tranby	278.0	231.6	1941	70
Bushy Park	460.2	437.0	1974	67
Herbert Vale	577.8	441.0	1894	52
Nardoo Station	656.2	520.4	1991	44
Mount Isa Aero	535.2	479.4	1974	42
Strathtay Station	597.8	514.2	1991	40
The Monument	459.4	299.0	1981	30
<b>Western Australia</b>				
Kirkalocka	113.0	106.5	1915	97
Onslow Airport	275.6	258.6	1961	46
Lort River	165.0	153.2	1999	41
Dampier Salt	200.2	125.2	1987	39
<b>Northern Territory</b>				
Daly Waters AWS	576.0	393.8	1940	31
Kidman Springs	443.4	322.5	1984	37

#### Lowest Monthly Rainfall on Record for January

Station	Actual mm	Previous Lowest mm	Year	Years of Record
<b>New South Wales</b>				
Rylstone (Ilford Rd)	1.5	1.8	1905	120
Glen Morrison (Branga Plains)	12.0	15.8	1966	63
Tenterfield (Aberfeldie)	16.4	17.8	1963	60
Dundee (Karinga)	15.6	22.8	1981	50
Dundee (Wattle Dale)	23.0	25.3	1966	50
Bulga (Down Town)	9.0	17.2	2003	45
Mount Mitchell (Tirranna)	29.2	36.2	1981	45
Watagan Central	4.0	8.9	1985	44
Pulletop (Wolonga)	0.0	0.2	2006	43
Curban (Ercildoune)	1.6	2.2	1985	41
Milbrodale (Hillsdale)	6.0	18.0	1966	41
Bowmans Creek (Grenell)	14.4	17.8	2002	40
Narrandera Golf Club	0.8	1.8	1987	40
Toolijooa (Nyora)	25.0	26.4	1994	39
Rouchel (Bonnie Doon)	8.4	13.8	2003	38
Lansdowne PO	14.6	25.1	2003	37

## Significant Weather – January 2009

### South Australia

Lobethal	0.0	0.3	1906	125
Yankalilla (Inman Valley)	0.4	1.6	1957	77
Adelaide Airport	0.0	0.3	1957	54
Myponga Reservoir	1.0	1.3	1965	46
Lenswood Research Centre	1.2	3.6	1989	42
Williamstown (South Para Reservoir)	0.4	1.8	2008	42
Naracoorte (Bettws-Y-Coed)	2.5	4.4	2000	41
Prospect Hill	1.2	2.0	1985	41
Riverton (Leaward)	0.0	0.4	1989	41
Ardrossan (Vitana)	0.0	0.8	1989	40
Bordertown (Beeama Section 48)	1.0	2.2	2000	40
Eudunda (Moondah)	0.0	1.4	2008	40
Hamley Bridge (Linwood)	0.0	0.6	2000	40
Kulkami	1.0	2.1	1971	40
Lowaldie (Carramar Stud)	0.0	0.5	1971	40
Rockleigh (Black Heath)	0.4	2.6	2008	40
Upper Hermitage Avenue (Downer)	0.0	0.8	1992	39
Caliph	0.0	1.6	1987	37
Furner (Kennion Section 235)	0.0	0.6	1983	35
Sanderston (The Fords)	3.6	4.2	1987	33
Mantung	0.0	0.2	1994	32
Adelaide (Hope Valley Reservoir)	0.0	0.2	1983	31
Blackwood (Wittunga)	0.4	1.0	1992	30
	0.6	2.2	1985	30

### Highest Daily Rainfall on Record for January

Station	Actual mm	Date	Previous Highest mm	Year	Years of Record
<b>Queensland</b>					
Marion Downs	192.0	07	90.0	2007	95
Barkly Downs	145.0	04	118.2	1974	90
Crowfells Station	148.2	27	143.0	1991	75
Mudgeacca	176.0	08	154.6	1974	68
Glenwood	94.6	23	91.2	1974	50
Herbert Vale	175.0	04	137.2	1924	50
Wentworth	100.0	02	79.0	1999	47
Mount Nicholson	162.2	23	147.8	2002	43
Doongara	130.0	04	100.4	1974	40
Fletcher View Station	140.4	25	126.0	1998	40
<b>Western Australia</b>					
Mileura	132.6	28	99.1	1909	105
Kirkalocka	47.0	30	45.0	2003	95
Beringara	113.8	28	109.7	1925	78
Lort River	118.0	28	89.6	2007	41
Onslow Airport	238.4	27	236.7	1961	39
<b>Northern Territory</b>					
Benmara	143.0	02	121.0	1979	39
Daly Waters AWS	156.8	30	83.8	1944	30
Hidden Valley	105.0	03	87.0	2004	30

Note: Some statistical records mentioned in this report are based on data that have yet to be fully validated