



Australian Government
Bureau of Meteorology

Monthly Weather Review Australia July 2019



The *Monthly Weather Review - Australia* is produced by the Bureau of Meteorology to provide a concise but informative overview of the temperatures, rainfall and significant weather events in Australia for the month.

To keep the *Monthly Weather Review* as timely as possible, much of the information is based on electronic reports. Although every effort is made to ensure the accuracy of these reports, the results can be considered only preliminary until complete quality control procedures have been carried out. Any major discrepancies will be noted in later issues.

We are keen to ensure that the *Monthly Weather Review* is appropriate to its readers' needs. If you have any comments or suggestions, please contact us:

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Units of measurement

Except where noted, *temperature* is given in degrees Celsius (°C), *rainfall* in millimetres (mm), and *wind speed* in kilometres per hour (km/h).

Observation times and periods

Each station in Australia makes its main observation for the day at 9 am local time. At this time, the precipitation over the past 24 hours is determined, and maximum and minimum thermometers are also read and reset. In this publication, the following conventions are used for assigning dates to the observations made:

Maximum temperatures are for the 24 hours *from* 9 am on the date mentioned. They normally occur in the afternoon of that day.

Minimum temperatures are for the 24 hours *to* 9 am on the date mentioned. They normally occur in the early morning of that day.

Mean temperatures are the average of the daily maximum and daily minimum temperatures.

Daily rainfall is for the 24 hours *to* 9 am on the date mentioned. This means a significant fraction of the rain may have occurred on the previous calendar day.

Monthly rainfall is for the period from 9 am on the last day of the previous month to 9 am on the last day of this month.

Maximum daily wind gusts are in the 24 hours from midnight to midnight.

Climatological values

The climatological averages shown in the text and tables are generally long-term means based on observations from the years 1961–1990. They are not shown for sites with less than 25 years of record in that time, as they cannot then be calculated reliably. Climatological extremes are generally taken from all available years of record; the number of years can vary markedly from site to site.

Records

The tables of records are not exhaustive, as they only show sites with at least 30 years of record. This may exclude locations where a new site has been established; this means even some major cities and towns may not be listed.

Maps

The temperature and rainfall maps are intended to give an overview of the country. There could be discrepancies between the values shown on these maps and those at individual locations, as a result of the way the maps are generated. A wide range of maps of rainfall, temperature and other variables, covering the whole country and smaller regions can be found at www.bom.gov.au/climate/maps.

Accessing data

Tables of daily values for selected sites are included toward the back of the *Monthly Weather Review*. Data from many more sites and for other times are available from www.bom.gov.au/climate/data/.

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Cover photograph

After sunset at Rockhampton Downs, Barkley Highway.

Photograph by Gavin Heathertington-Tait, 19 July 2008. Used with permission.

Overview

- Fourth-warmest July on record for Australia, in terms of mean temperature
- Mean maximum temperature above average for nearly all of the country
- Mean minimum temperature above average for large areas, particularly the southeast; below average for some areas of the far north
- July rainfall below to very much below average for very large areas, including most of New South Wales, southern Queensland and Northern Territory, South Australia, and most of Western Australia
- Rainfall above average for western Tasmania, parts of northern Queensland and along the Gulf Coast of Northern Territory

July was the fourth-warmest on record for Australia as a whole, with the national mean temperature

1.63 °C above average. The mean maximum temperature for the month was the third-highest on record for July, at 2.22 °C above average, while the mean minimum temperature was 1.03 °C above average.

The Northern Territory and all States except Tasmania and Victoria placed amongst the ten warmest Julys on record for mean maximum temperature. The mean minimum temperature for the month was the third-warmest on record for Victoria, and the ninth-warmest on record for Tasmania.

July rainfall was below average for Australia as a whole. It was the 12th-driest July since records began in 1900, and Australia's driest July since 2002. South Australia had its ninth-driest July on record, and driest since 1997, while Western Australia had its tenth-driest July on record.

Areal averages in July 2019

	Rainfall anomaly	Mean maximum temperature anomaly	Mean minimum temperature anomaly	Mean temperature anomaly
Australia	-52%	+2.22 °C 3rd-highest	+1.03 °C	+1.63 °C 4th-highest
Western Australia	-61% 10th-lowest	+2.53 °C highest	+0.64 °C	+1.59 °C 2nd-highest
Northern Territory	-99%	+2.31 °C 4th-highest	+1.11 °C	+1.71 °C
South Australia	-68% 9th-lowest	+2.39 °C 5th-highest	+0.66 °C	+1.53 °C 3rd-highest
Queensland	-50%	+1.86 °C 6th-highest	+1.33 °C	+1.60 °C
New South Wales	-64%	+2.17 °C 6th-highest	+1.67 °C	+1.92 °C 4th-highest
Victoria	-19%	+0.95 °C	+1.78 °C 3rd-highest	+1.37 °C 3rd-highest
Tasmania	+36%	+0.54 °C	+1.39 °C 9th-highest	+0.97 °C

Extremes in July 2019

	Hottest day	Coldest night	Wettest day	Warmest overall	Coolest overall	Wettest overall	Strongest wind gust
Australia	36.4 °C at Kalumburu (WA) and Yampi Sound (Defence) (WA), both on the 30th	-12.3 °C at Glen Innes Airport AWS (NSW) on the 19th	86.0 mm at Babinda Post Office on the 9th	27.9 °C at Coconut Island (Qld)	-1.5 °C at Thredbo AWS (NSW)	677.0 mm at Lake Margaret Dam (Tas.)	150 km/h at Hogan Island (Tas.) on the 14th
Western Australia	36.4 °C at Kalumburu and Yampi Sound (Defence), both on the 30th	-4.0 °C at Eyre on the 31st	64.6 mm at Swanbourne on the 5th	26.6 °C at Browse Island	10.3 °C at Norseman Aero	168.8 mm at Northcliffe	98 km/h at Rottnest Island on the 19th
Northern Territory	36.2 °C at Bradshaw-Angallari Valley (Defence) on the 20th	-2.7 °C at Arltunga on the 20th	17.8 mm at Cape Wessel on the 13th	26.4 °C at Cape Wessel	12.1 °C at Arltunga	27.8 mm at Cape Wessel	69 km/h at Cape Wessel on the 13th
South Australia	28.2 °C at Ceduna AMO on the 20th	-3.5 °C at Yunta Airstrip on the 2nd	47.6 mm at Lake Leake (Kooeyong) on the 11th	14.1 °C at Oodnadatta Airport	8.1 °C at Mount Lofty	165.0 mm at Heathfield Works Depot	113 km/h at Mount Crawford AWS on the 23rd
Queensland	33.6 °C at Coconut Island on the 6th	-7.0 °C at Stanthorpe Leslie Parade on the 19th	86.0 mm at Babinda Post Office on the 9th	27.9 °C at Coconut Island	8.9 °C at Stanthorpe Leslie Parade	188.7 mm at Babinda Post Office	91 km/h at Cape Moreton Lighthouse on the 5th
New South Wales	27.0 °C at Kempsey Airport AWS on the 23rd	-12.3 °C at Glen Innes Airport AWS on the 19th	63.0 mm at Meldrum (Coolawarraah) on the 5th	16.7 °C at Byron Bay (Cape Byron AWS)	-1.5 °C at Thredbo AWS	209.6 mm at Perisher Valley AWS	131 km/h at Thredbo AWS on the 14th
Victoria	21.3 °C at Mildura Airport on the 6th	-6.8 °C at Mount Hotham on the 13th	83.7 mm at Falls Creek (Rocky Valley) on the 12th	12.1 °C at Gabo Island Lighthouse	-1.4 °C at Mount Hotham	321.7 mm at Falls Creek (Rocky Valley)	148 km/h at Wilsons Promontory Lighthouse on the 14th
Tasmania	18.5 °C at Campania (Kincora) on the 1st	-7.0 °C at Liawenee on the 31st	62.4 mm at Mount Read on the 2nd	11.2 °C at King Island Airport	1.1 °C at kunanyi (Mount Wellington Pinnacle)	677.0 mm at Lake Margaret Dam	150 km/h at Hogan Island on the 14th

In this table *Hottest day* is the highest daily maximum temperature, *Coldest night* is the lowest daily minimum temperature, *Wettest day* is the highest daily rainfall total, *Warmest overall* is the highest mean monthly temperature, *Coolest overall* is the lowest mean monthly temperature and *Wettest overall* is the highest total monthly precipitation.

Significant weather

Severe winds in South Australia

A strong cold front during the afternoon and early evening on the 10th swept across South Australia, the strongest for the winter to that date. Strong to gale force northwesterly winds occurred ahead of the front, followed by squally winds, heavy showers and thunderstorms with the passage of the front itself.

Emergency services responded to about 180 requests for assistance, mostly in the Mount Lofty Ranges and the South East. There were scattered power outages, although most were localised with no more than 6,000 people affected at any one time.

The prefrontal northwesterly winds reached gale force with gusts around 90-95 km/h from early afternoon over parts of southern Eyre Peninsula, the Mount Lofty Ranges and the adjacent western Murraylands. The winds brought down dozens of trees and tree branches. A tree fell on a house and car in Strathalbyn and a caravan was blown off the road near Callington. Dust affected some areas east of the ranges.

The front crossed Kangaroo Island mid-afternoon, then the Adelaide area and the South East late afternoon to early evening, accompanied by squally showers and thunderstorms with locally damaging winds. Winds gusts over 90 km/h were recorded at various locations; including 109 km/h at Coonawarra, 108 km/h at Naracoorte, 98 km/h at Cape Borda, Parndana and Mount Crawford, 96 km/h at Keith and 93 km/h at Nuriootpa. A tornado cut a narrow path of damage through eucalypt trees on a farming property at Avenue Range, near Lucindale.

Strong northwest to westerly winds, became near gale force with gusts of 90-95 km/h at Mount Crawford in the Mount Lofty Ranges for a short period during the early afternoon on the 12th, as a front passed by to the south. Isolated and minor tree related damage occurred.

Strong to gale force north to northwesterly winds ahead of a cold front affected parts of the Mount Lofty Ranges for a couple of hours during the afternoon on the 22nd. Impacts were mostly on and about the southeastern slopes, with about a dozen reports of tree related and shed roofing damage. Gale force winds were recorded at Strathalbyn and Hindmarsh Island with gusts of 90-95 km/h. One gust of 106 km/h occurred at Strathalbyn at 2:15 pm.

Localised squally winds also occurred in the Lower South East mid-afternoon with the passage of the front. A wind gust to 89 km/h occurred at Mount Gambier Airport and a part of a roof was blown onto a road at Eight Mile Creek east of Port Macdonnell.

Strong to gale force northwest winds ahead of another front and low affected most parts of the Mount Lofty Ranges from the Barossa to Victor Harbor during the afternoon on the 23rd. At Mount Crawford winds averaged 60-70 km/h for about three hours, with gusts up to 113 km/h. There were numerous reports of tree related damage and some shed roofing blown off. One house at Woodside had part of a roof blown off. Emergency services responded to about 60 requests for assistance.

Severe Thunderstorms in South Australia

A front and low pressure system moved across the south of the State during the afternoon on the 23rd, bringing windy conditions generally (refer above) and also heavy showers and isolated thunderstorms to the South East.

One long-lived thunderstorm formed out to sea and tracked very quickly eastwards, crossing the coast at Southend at about 1:30 pm. Localised wind damage occurred in the town with SES responding to eight incidents. Part of a roof was blown off, fences were damaged and roller doors blown out. The pattern of damage is consistent with a short-lived tornado having occurred.

Strong winds and snow in Victoria

40-50 cm of snow fell across the Alpine areas in Victoria between the 12th and 14th, in a cold outbreak following the passage of several cold fronts.

The strongest wind gusts for the month were recorded on the 14th, with gusts of 148 km/h reported at Wilsons Promontory Lighthouse.

Cold fronts, damaging winds and snow in Tasmania

A cold front that crossed Tasmania early from the 1st to the 2nd brought strong and gusty winds across the State, lifting the roof from a gymnasium in the Hobart suburb of Glenorchy, as well felling trees. Gusts over 100 km/h were reported at several sites in the south, including 128 km/h at Maatsuyker Island, 126 km/h at Scotts Peak Dam, 100 km/h at Maria Island, 94 km/h at Strahan and 94 km/h at Hobart.

Tasmania experienced several days of strong and gusty winds from the 10th to the 12th as a complex low pressure system passed south of the island, with several cold fronts crossing. Widespread power outages, damaged roofs and downed trees were reported across the north of the State, with gusts to 122 km/h at Cape Grim, 107 km/h at Low Head, 102 km/h at Swan Island and 100 km/h at Strahan,

96 km/h at Devonport, 93 km/h on Flinders Island and 91 km/h on King Island. Low atmospheric pressure accompanied by onshore winds saw abnormally high tides causing some local inundation on the northwest coast on the 11th.

A cold outbreak from the 12th brought snow to Tasmania's highlands, falling as low as 300 m at times in the south, accompanied by wind gusts that reached 150 km/h on Hogan Island, 135 km/h at Cape Grim, and 131 km/h at kunanyi / Mount Wellington.

There were more strong and gusty winds as cold fronts crossed Tasmania on the 17th, 19th, 21st and 22nd, with gusts over 100 km/h reported from exposed locations. Further highland snow fell around the 23rd and 24th.

Persistent fog in Tasmania

Fog persisted from the 6th to the 9th, under the influence of a high pressure system over the southern Tasman Sea.

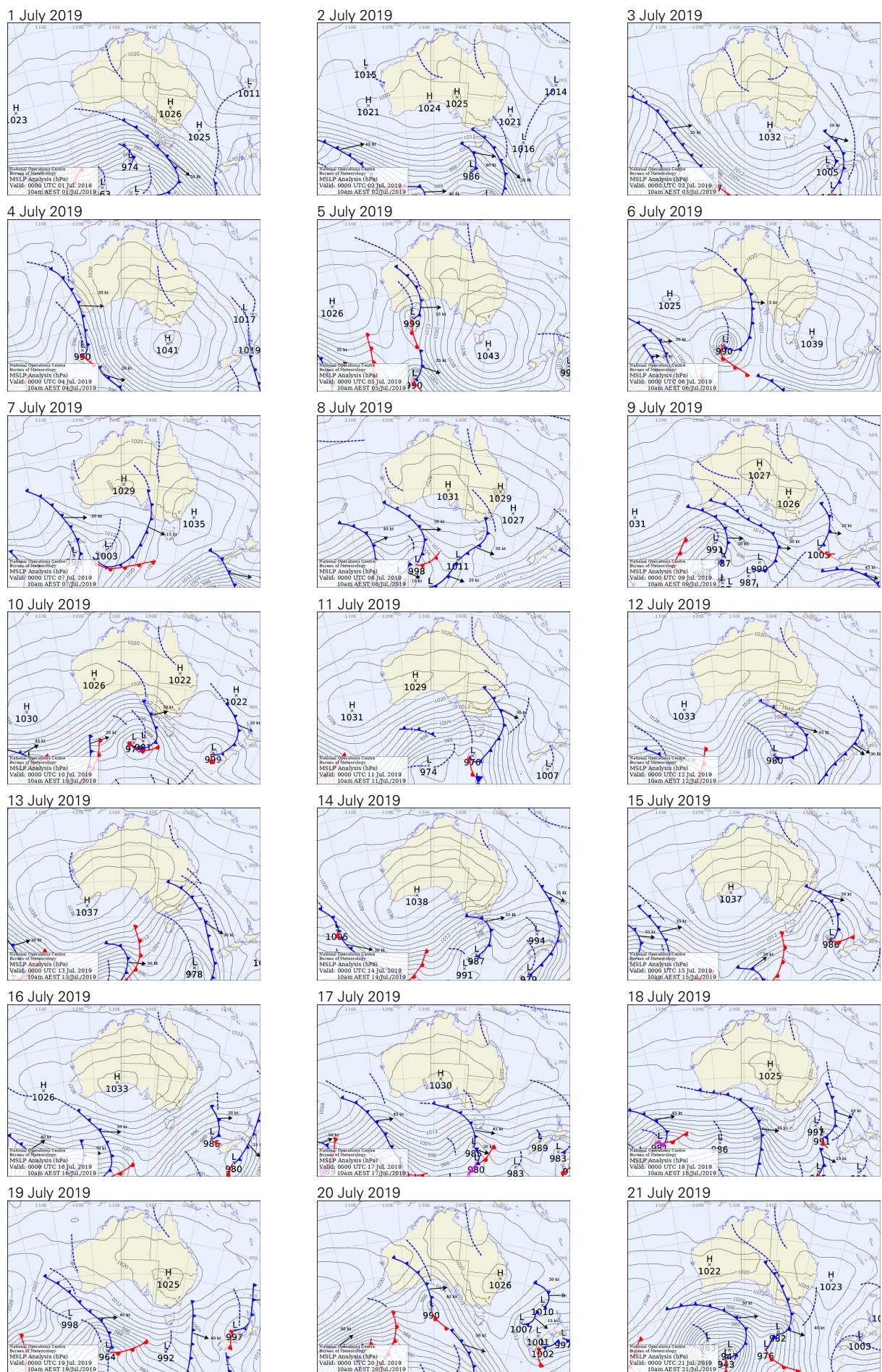
Strong winds, snow and hazardous surf in New South Wales

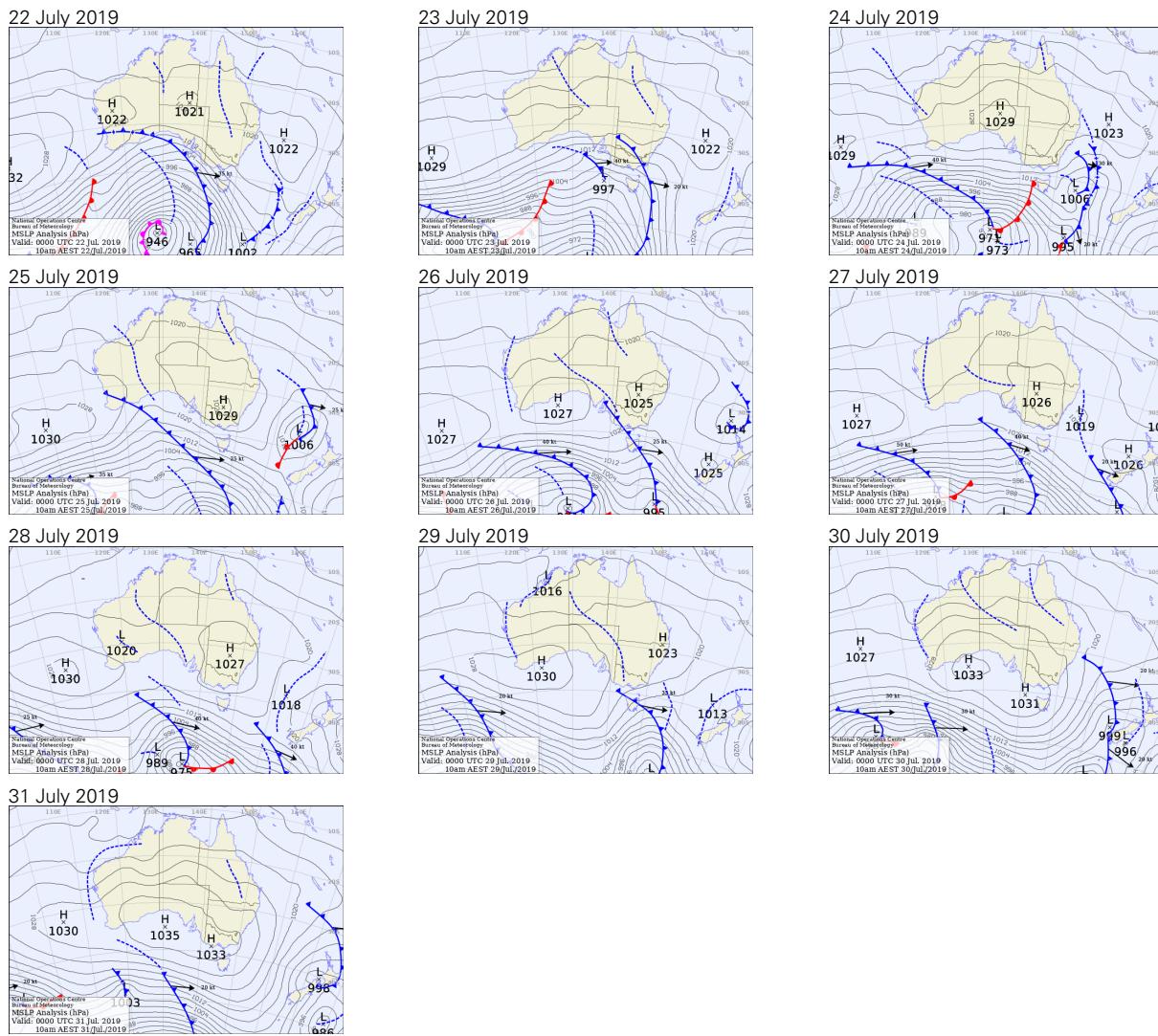
A series of cold fronts moved through the State between the 11th and 15th of the month, bringing particularly cool and windy conditions to large parts of the southeast of the State; Thredbo (in the Snowy Mountains) recorded a maximum wind gust of 131 km/h on the 14th.

The cold and windy outbreak during the middle of the month brought blizzard conditions and snowfall to the Alpine regions, with up to 1 m of snow falling across the Alps.

Hazardous surf conditions were experienced along the northern parts of the coast during the first week of July, during the middle of month for the New South Wales coast north of Batemans Bay, and again for the northern parts of the coast on the 31st.

Synoptic analyses and summary





Synoptic summary

A series of cold fronts and pre-frontal troughs tracked across southern Australia during the month, with areas of high pressure dominating much of northern Australia. In the first week of the month, a vigorous westerly flow became established over Tasmania in the wake of a pair of cold fronts. The next dominant feature was a very strong cold front that crossed the west coast of Western Australia in the first few days of July. This system moved eastwards, reaching southeast Australia by the end of the first week. An upper-level trough developed over central Queensland from the 4th and interacted with a surface trough for several days.

The second week of July featured a series of cold fronts progressing across southern Australia, before a large high pressure system moved into the Great Australian Bight, and lingered for a few days in the middle of the month.

Another series of cold fronts tracked across southern parts of the mainland around the third week of July, but the associated rainfall was confined to the far southwest and far southeast of Australia. High pressure dominated much of Australia during the last week of July, while a series of cold fronts tracked across the Southern Ocean, crossing Tasmania, Victoria, and southeastern New South Wales.

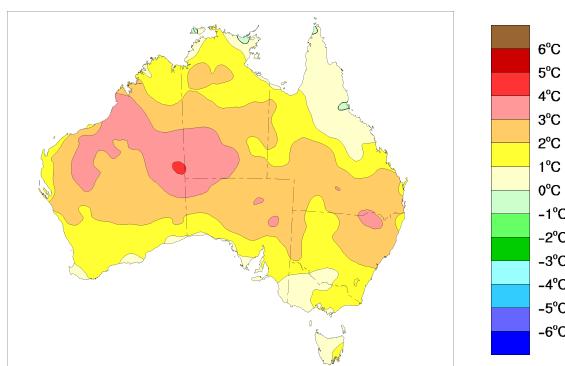
Temperatures

July 2019 was the fourth-warmest July on record for Australia as a whole, with the national mean temperature 1.63°C above average. The mean maximum temperature for the month was the third-highest on record for July, at 2.22°C above average, while the mean minimum temperature was 1.03°C above average.

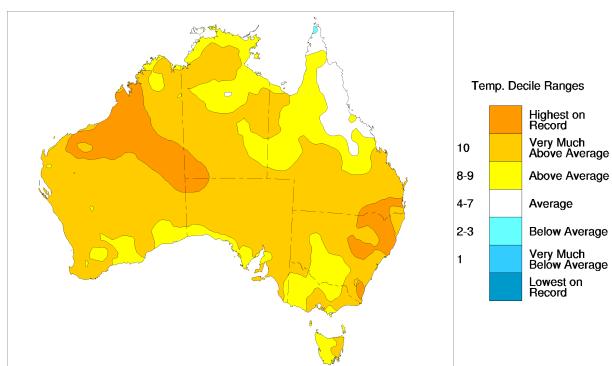
Maximum temperatures

Overall, the mean maximum temperature for Australia was 2.22°C above average, the third-highest on record for July. Western Australia experienced its warmest July days on record, with an anomaly of $+2.53^{\circ}\text{C}$. Northern Territory, South Australia, Queensland and New South Wales were all amongst ten warmest mean maximum temperatures on record for July.

Anomalies of mean daily maximum temperature in July 2019



Decile rank of mean daily maximum temperature in July 2019



Mean maximum temperatures were above average for nearly all of Australia. Mean maximum temperatures were close to average in the northeast from the Cape York Peninsula to the central coast of Queensland, as well as adjacent inland districts. Mean maximum temperature for the month was in the highest 10% of historical observations for much of the country, and warmest on record for a large area of

northwestern to northern inland Western Australia, and areas in eastern New South Wales, extending into adjacent southeast Queensland. The warmest days on average were at Kalumburu in the Kimberley in Western Australia, with 33.5°C . A number of locations in along the northwest coast of Western Australia between Karratha Aero and Mandora had a record number of days in July with temperatures at or above 30°C .

In the first part of the month, warmer than usual days were observed over much of eastern and western Australia due to clear, sunny skies. By the 5th, areas of rain over the southwest and central Queensland kept daytime temperatures four to six degrees below average in the Central Coalfields, while areas of South Australia, New South Wales and Victoria were much warmer than average due to warm northwesterly winds ahead of the cold front, particularly on the 6th. Most of the nation reported warmer than average daytime temperatures between the 7th and 12th, as high pressure dominated the mainland.

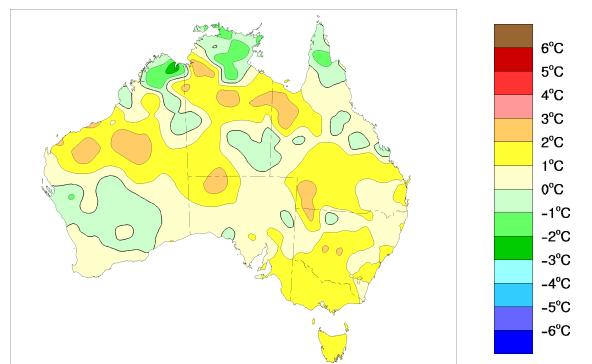
A cool south to southwesterly winds brought cooler than averages over much of southern Australia by the 13th, with the cool air extending further north over the following days, with much of northern Australia reporting daytime temperatures several degrees below average. Warm, northwesterly winds ahead of cold front on the 18th brought warmer than average days to the west, then central parts of Australia including the Northern Territory and South Australia, then in the southeast as the cold front tracked eastwards.

For the remainder of the month, daytime temperatures were generally warmer than average across most of the northern half of Australia, especially in the northwest. Kalumburu in the Kimberley in Western Australia had the hottest day with 36.4°C on the 30th. Meanwhile, most of the country's southern coast was exposed to a series of cold fronts, which kept daytime temperatures cooler than average to the end of the month.

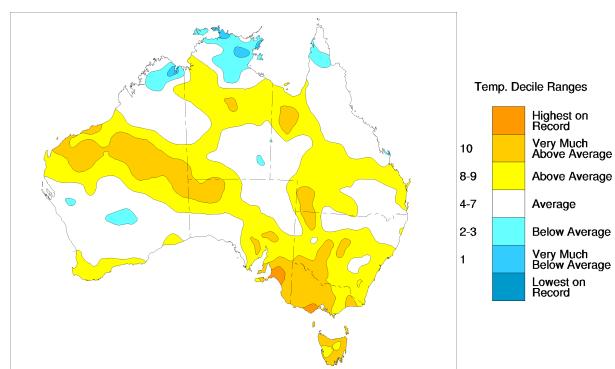
Minimum temperatures

Minimum temperatures were warmer than average, with a national anomaly of $+1.03^{\circ}\text{C}$. All States and Territories reported above average minima. The statewide anomaly for Victoria was $+1.78^{\circ}\text{C}$, the third-warmest mean minimum temperature on record for July. Tasmania had its ninth-warmest July on record in terms of mean minimum temperature and was 1.39°C warmer than average.

Anomalies of mean daily minimum temperature in July 2019



Decile rank of mean daily minimum temperature in July 2019



Mean minimum temperatures were broadly cooler than average across the Top End of the Northern Territory, small parts of the northern Cape York Peninsula in Queensland, and in the Kimberley, central Gascoyne and northern Goldfields districts of Western Australia.

Mean minimum temperatures were warmer than average across the Pilbara to central and Southern Interior of Western Australia as well as parts of the southern coast, the Victoria River and Barkly districts in the Northern Territory, and in the northwest and

southeast of South Australia. Minima were also warmer than average in Victoria; Tasmania; western and southern New South Wales, and much of western Queensland and parts of the southern inland, Central Highlands and southeast coast.

At the start of the month, night-time temperatures were generally warmer than average across the southwest and southeast of Australia, as well as southern Queensland and much of New South Wales. The above average night-time temperatures over eastern Australia were the result of thick cloud cover and associated areas of rain. Areas through the central inland of Queensland and New South Wales were more than 8 °C above average from around the 6th to the 8th.

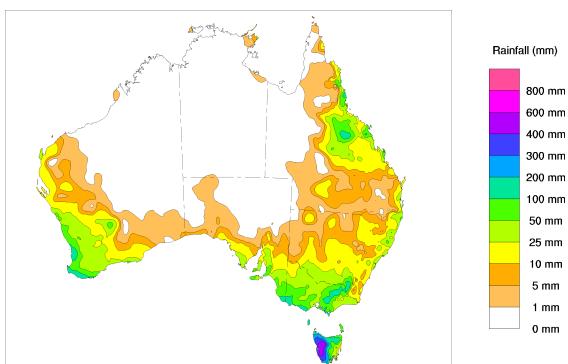
From the middle of the month until around the 20th, a large high pressure system dominated much of Australia, with cool and clear nights across the country. Night-time temperatures were much cooler than average around the Atherton Tablelands in northern Queensland, as well as elevated areas of the Southern Downs, extending south to the Northern Tablelands in New South Wales. Night-time temperatures were more than 6 °C cooler than average in these areas on the 16th. The coldest night for the month was at Glen Innes Airport AWS with -12.3 °C on the 19th.

On the 20th, the passage of a cold front from the southwest to southeast of Australia generally saw above average night-time temperatures across southern Australia. Much of the central and northern parts of the country were cloud-free, and cooler than average until the last week of the month. Cool, westerly winds affected southern parts of Australia in the last part of the month, and resulted in anomalously cool nights. Remaining areas of central and northern Australia were mostly warmer than usual for the rest of the month.

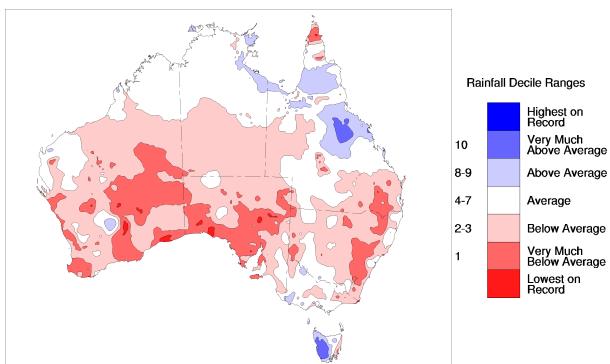
Rainfall

Nationally, rainfall was the twelfth-driest on record for July, and the driest since 2002. Rainfall was more than 50% below the long-term average, for Australia as a whole. South Australia had its ninth-driest July on record, and Western Australia had its tenth-driest July on record. All States and Territories, except Tasmania, had below average July rainfall.

Total rainfall in July 2019



Decile rank of total rainfall in July 2019



Overall, July rainfall was above average about the Gulf of Carpentaria coast, parts of northern Queensland and western Tasmania. Rainfall was below or very much below average for most of Western Australia except the Kimberley, parts of the western Pilbara and northwest Gascoyne; most of South Australia; parts of East Gippsland and Central Victoria; most of New South Wales and extending into southern Queensland. Much of the rainfall was confined to southern and eastern Australia in July, with very little or no rainfall recorded in western Queensland, the Northern Territory, northern Pastoral districts of South Australia and the northern and eastern half of Western Australia.

At the start of the month, a cold front and westerly airstream brought moderate falls to western Tasmania. An upper-level trough developed over central Queensland on the 5th, and produced moderate falls over central inland districts and along

the north tropical to central Queensland coasts. A moist, onshore flow produced showers along much of the New South Wales and southeast Queensland coasts. In the west, a strong cold front generated a rainband over southwest Western Australia, with a large pool of cold, unstable air enabling thunderstorms to develop behind the front. Moderate falls were recorded over much of the South West Land Division, and western Gascoyne and Pilbara districts in Western Australia to 9 am on the 5th. The cold front and a pre-frontal trough continued eastwards, and crossed the southeast, bringing widespread light to moderate falls to most of Tasmania, Victoria and New South Wales, before the system moved offshore around the 10th. A surface trough extended through inland Queensland and produced widespread light to moderate falls along Queensland's north tropical and central coasts, and central inland districts. The wettest day was at Babinda Post Office with 86.0 mm on the 9th.

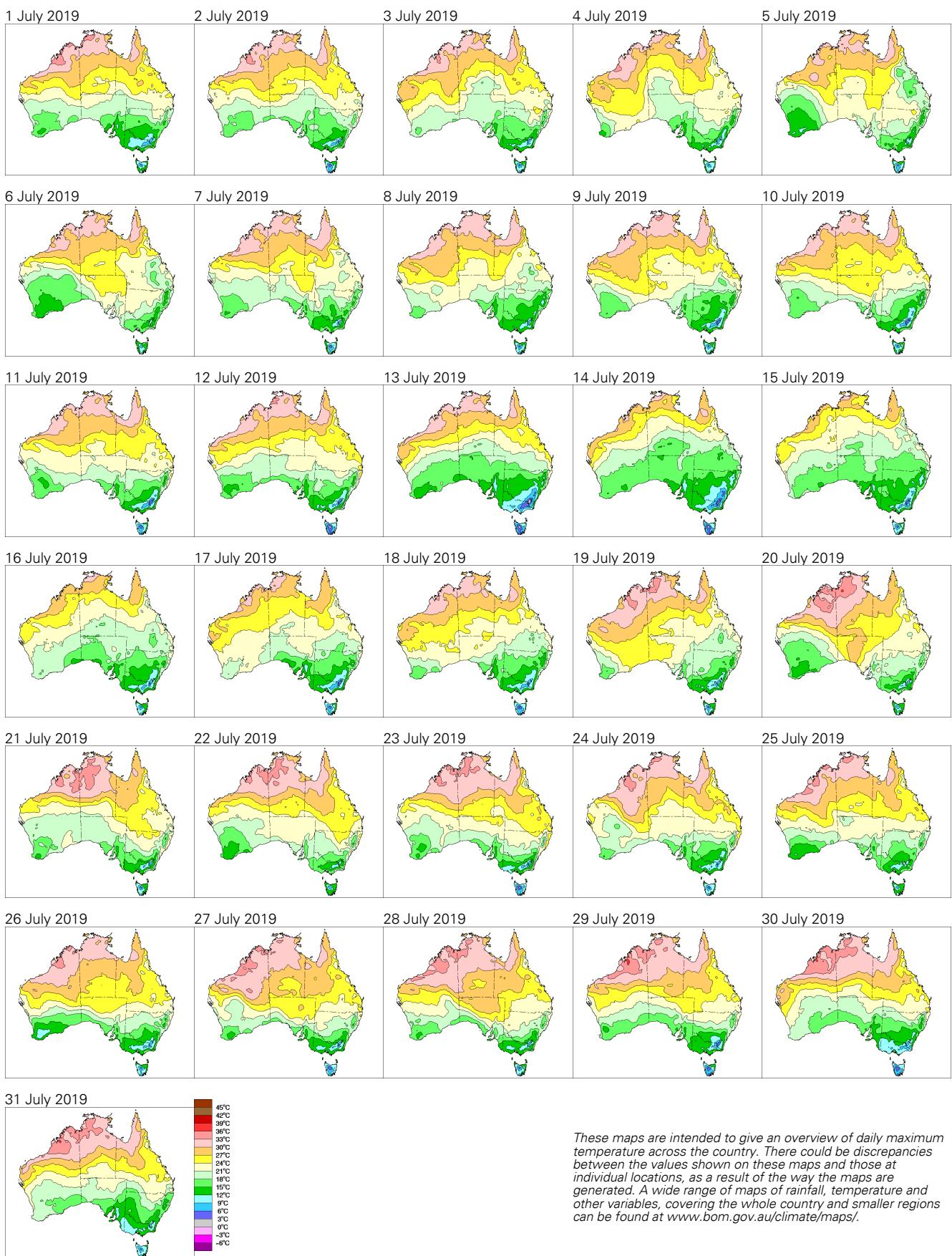
During the second week of the month, a cloudband associated with a strong cold front tracked over southeast Australia, with shower and thunderstorm activity generating moderate falls in parts of the southeast, with falls exceeding 100 mm in parts of northern Tasmania. A southwest to westerly flow over Tasmania brought further moderate falls in the middle of the month.

A large high pressure system became established over much of Australia during the third week of the month, with rainfall during the last two weeks of July confined to the far southwest and southeast of Australia. An easterly onshore flow combined with a surface trough extending from the Gulf Country to southeast Queensland, and produced showers and light to moderate falls across the Central Highlands District in Queensland. Onshore showers also produced moderate falls about the north tropical Queensland coast, and light falls about parts of the far northeast Top End in the Northern Territory.

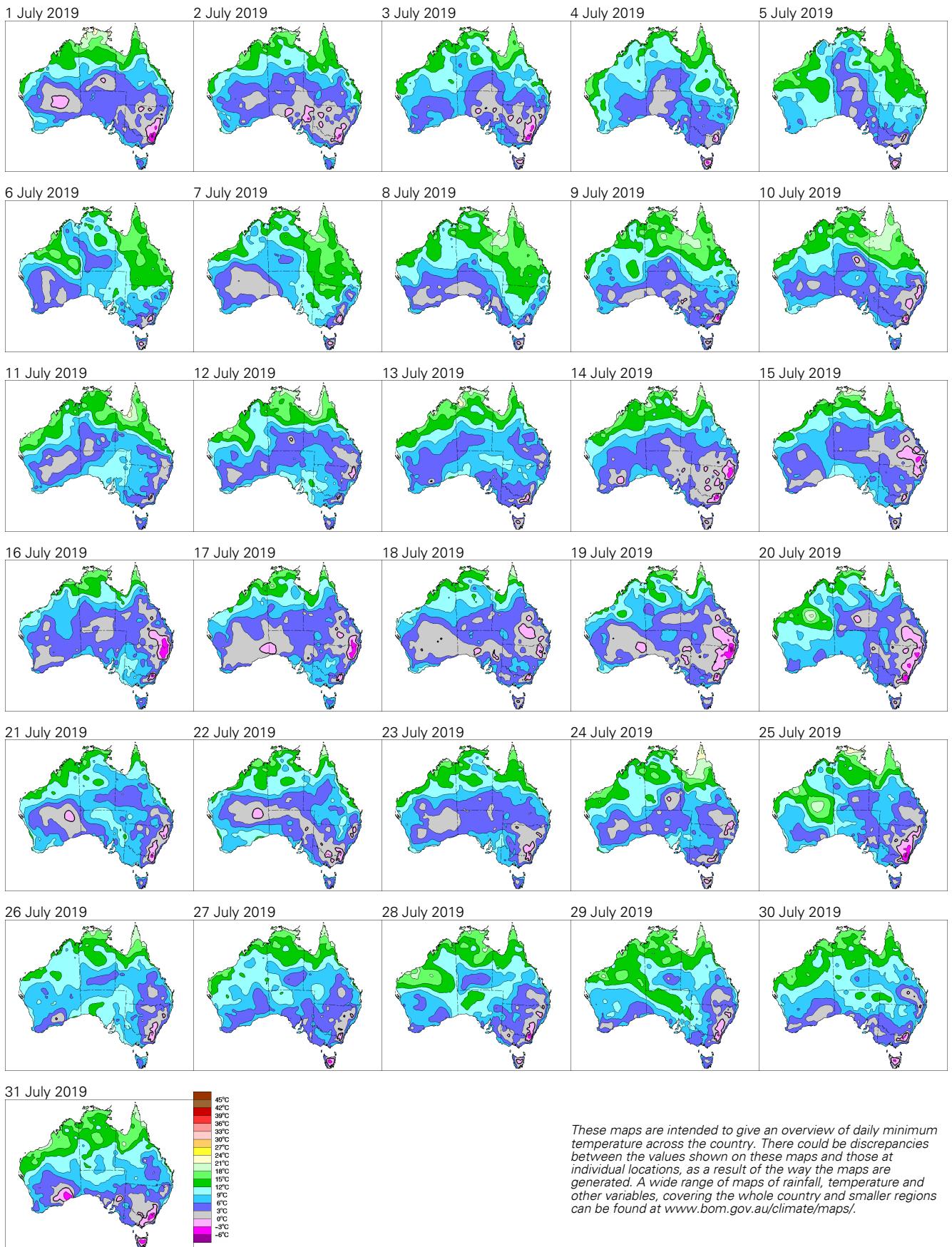
During the last part of the month, a series of cold fronts swept across southern Australia. The fronts brought mostly light falls to southwest and the southern coast of Western Australia, although thunderstorms developed over parts of the South West Land Division, producing isolated moderate falls. Light to moderate falls were also recorded in southeastern South Australia, Tasmania, Victoria, and the Snowy Mountains in New South Wales, and Tasmania. The wettest place overall during July was Lake Margaret Dam, in Tasmania, with 677.0 mm.

Daily maps

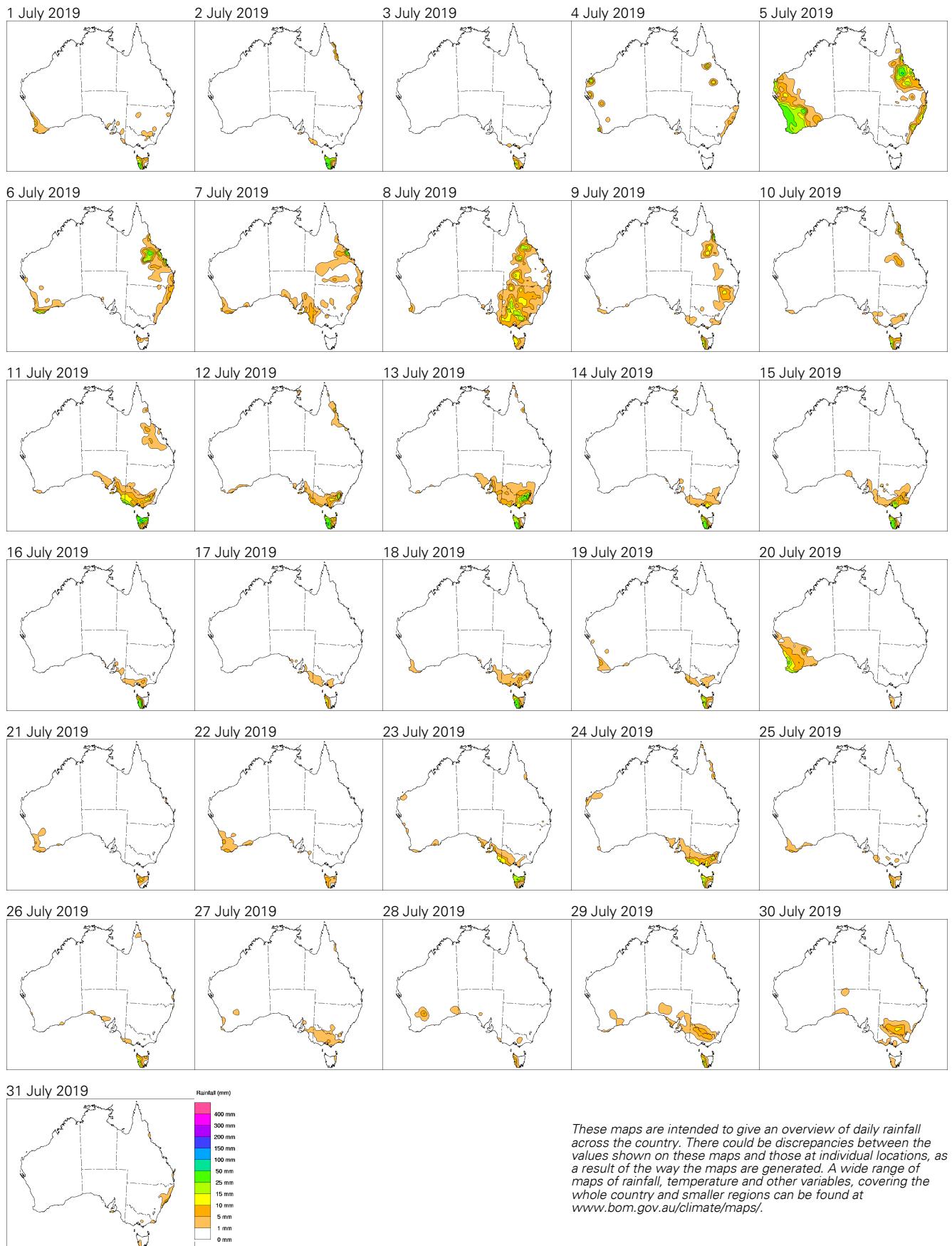
Daily maximum temperature maps



Daily minimum temperature maps



Daily rainfall maps



These maps are intended to give an overview of daily rainfall across the country. There could be discrepancies between the values shown on these maps and those at individual locations, as a result of the way the maps are generated. A wide range of maps of rainfall, temperature and other variables, covering the whole country and smaller regions can be found at www.bom.gov.au/climate/maps/.

Records

Record highest July mean maximum temperature

		New record	Old record	Years of record
Western Australia				
003003	Broome Airport	31.3 =	31.3 in 1988	80
004019	Mandora	32.0	31.3 in 2017	58
004032	Port Hedland Airport	30.2	29.6 in 1992	72
005008	Mardie	30.0 =	30.0 in 1994	64
013017	Giles Meteorological Office	23.9	23.1 in 2018	63
013030	Telfer Aero	28.0	27.7 in 2018	46
Northern Territory				
015635	Yulara Airport	23.9	23.5 in 2018	33
Queensland				
040004	Amberley AMO	24.0	23.9 in 2018	78
040043	Cape Moreton Lighthouse	20.7 =	20.7 in 2016	110
040717	Coolangatta	22.0	21.9 in 2018	31
041359	Oakey Aero	21.2 =	21.2 in 2018	47
New South Wales				
050031	Peak Hill Post Office	17.7	17.4 in 2018	54
051049	Trangie Research Station AWS	18.3 =	18.3 in 2017	78
056018	Inverell Research Centre	18.2	17.8 in 2013	62
059030	South West Rocks (Smoky Cape Lighthouse)	21.3	20.8 in 2017	81
060085	Yarras (Mount Seaview)	21.1	20.6 in 2002	50
063005	Bathurst Agricultural Station	14.0	13.8 in 2017	96
064009	Dunedoo Post Office	17.9	17.6 in 1975	62

= indicates the new record equals the old one.

Highest July mean maximum temperature for at least 30 years

		Observed this month	Most recent higher
Western Australia			
009131	Jurien Bay	20.7	20.9 in 1977
New South Wales			
070278	Cooma Visitors Centre	13.1	13.4 in 1988 *

* note: there are gaps in the historical record at this site, so it is possible a higher value has gone unreported.

Record highest July daily minimum temperature

		New record	Old record	Years of record
South Australia				
023090	Adelaide (Kent Town)	16.0 on 6th	15.5 on 1st in 2011	43
New South Wales				
200288	Norfolk Island Aero	19.1 on 3rd	18.9 on 30th in 1998	81

Record highest July mean minimum temperature

		New record	Old record	Years of record
South Australia				
022018	Warooka	8.8 =	8.8 in 2002	61
023000	Adelaide (West Terrace / ngayirdapira)	9.4 =	9.4 in 1975	95
023034	Adelaide Airport	9.0	8.8 in 2013	65
024024	Loxton Research Centre	5.7	5.4 in 1999	36
024511	Eudunda	7.3	6.9 in 1975	55
026091	Coonawarra	6.8	6.4 in 2013	34
New South Wales				
069017	Montague Island Lighthouse	11.5	11.4 in 2001	49
Tasmania				
092012	Fingal (Legge Street)	2.4	2.2 in 1996	34
<i>= indicates the new record equals the old one.</i>				

Highest July mean minimum temperature for at least 30 years

		Observed this month	Most recent higher
Western Australia			
005026	Wittenoom	13.6	15.1 in 1973
South Australia			
023733	Mount Barker	7.2	7.4 in 1862 *
Victoria			
076031	Mildura Airport	6.1	6.6 in 1975
076047	Ouyen (Post Office)	6.2	6.7 in 1975
079028	Longerenong	5.2	5.9 in 1988 *
089002	Ballarat Aerodrome	4.5	4.8 in 1975 *
<i>* note: there are gaps in the historical record at this site, so it is possible a higher value has gone unreported.</i>			

Record highest July mean temperature

		New record	Old record	Years of record
Western Australia				
005008	Mardie	21.8 =	21.8 in 2015	63
005017	Onslow Airport	20.9 =	20.9 in 2000	54
005026	Wittenoom	20.4	20.3 in 1973	67
013017	Giles Meteorological Office	16.4	15.8 in 1973	63
013030	Telfer Aero	20.3	19.6 in 2016	46
Northern Territory				
015511	Curtin Springs	14.6	14.5 in 1973	55
015635	Yulara Airport	14.6	14.4 in 1996	33
South Australia				
017110	Leigh Creek Airport	12.6	12.1 in 2009	36
023090	Adelaide (Kent Town)	12.7 =	12.7 in 2013	43
024024	Loxton Research Centre	11.5	11.1 in 2018	36
026091	Coonawarra	10.8	10.6 in 1999	34
New South Wales				
061054	Nelson Bay (Nelson Head)	15.0	14.8 in 2013	34
061055	Newcastle Nobbys Signal Station AWS	14.7	14.6 in 1993	154
066037	Sydney Airport AMO	14.6	14.5 in 2013	81
Tasmania				
092012	Fingal (Legge Street)	7.7	7.5 in 2013	34

= indicates the new record equals the old one.

Highest July mean temperature for at least 30 years

		Observed this month	Most recent higher
South Australia			
016001	Woomera Aerodrome	13.0	13.6 in 1975
016065	Andamooka	13.6	14.2 in 1975
019017	Hawker	11.2	11.5 in 1975 *
023034	Adelaide Airport	12.6	12.8 in 1975
023733	Mount Barker	10.9	11.0 in 1867 *
026021	Mount Gambier Aero	10.4	10.6 in 1988
New South Wales			
049002	Balranald (RSL)	11.2	12.2 in 1975 *
Victoria			
076031	Mildura Airport	11.6	12.3 in 1975
076047	Ouyen (Post Office)	11.2	12.4 in 1975
089002	Ballarat Aerodrome	7.8	8.2 in 1975 *

* note: there are gaps in the historical record at this site, so it is possible a higher value has gone unreported.

Record highest July daily rainfall

		New record	Old record	Years of record
Western Australia				
008079	Manarra	52.0 on 5th	48.8 on 9th in 1928	99
008200	Eradu	52.6 on 5th	= 52.6 on 9th in 1928	77
008240	Coolangatta	47.7 on 5th	44.0 on 30th in 1996	69
008273	Arena	51.4 on 5th	42.0 on 9th in 2010	40
008274	Naraling	54.8 on 5th	46.4 on 24th in 1988	38
008285	Mataranka	50.0 on 5th	46.4 on 3rd in 2018	32
009868	Munglinup	32.0 on 29th	29.0 on 13th in 2013	30
010044	Bungulla	36.0 on 5th	34.8 on 25th in 1929	92
South Australia				
026014	Lake Leake (Kooeeyong)	47.6 on 11th	44.5 on 1st in 2009	116
Queensland				
027050	Heathlands National Park	17.2 on 24th	12.0 on 2nd in 1985	41
Victoria				
086094	Powelltown DNRE	78.8 on 15th	78.5 on 20th in 1949	78
088020	Daylesford	67.4 on 1st	49.8 on 11th in 1933	150
090067	Port Campbell Post Office	41.2 on 11th	40.1 on 17th in 1964	134
090105	Strathdownie	42.0 on 10th	39.6 on 21st in 2000	56
Tasmania				
091022	Cressy Research Station (Main Office)	49.0 on 11th	46.2 on 21st in 2000	80
097072	Strahan Aerodrome	47.6 on 11th	47.4 on 9th in 1989	34
= indicates the new record equals the old one.				

Record highest July total rainfall

		New record	Old record	Years of record
Tasmania				
096071	Lake St Clair National Park	428.8	405.0 in 2016	30
097047	Savage River Mine	385.8	381.7 in 1970	53
097061	Strathgordon (Gordon Power Station)	680.6	600.6 in 2016	45

Highest July total rainfall for at least 30 years

		Observed this month	Most recent higher
Tasmania			
097006	Lake Margaret Dam	677.0	769.2 in 1917 *
097020	Lake Margaret Power Station	589.8	595.1 in 1970 *
097054	Zeehan (West Coast Pioneers Museum)	495.7	544.1 in 1970 *

* note: there are gaps in the historical record at this site, so it is possible a higher value has gone unreported.

Record lowest July total rainfall

		New record	Old record	Years of record
Western Australia				
008088	Mingenew	2.8	11.8 in 1937	123
009532	Denmark Agric. School	86.6	87.8 in 2005	36
009619	Wilgarrup	40.0	41.7 in 2012	114
009631	Esperance Downs Research Stn	10.2	14.8 in 1977	66
010244	Bakers Hill	0.0	22.8 in 2012	51
010525	Broomehill	3.0	16.8 in 2012	127
010635	Riverdale	21.7	23.2 in 2005	106
011019	Eyre	3.0	3.8 in 1897	89
012297	Beaumont West	15.4	19.0 in 1994	38
South Australia				
018089	Waddikee	6.6	12.2 in 1982	92
022800	American River	17.0	31.2 in 1970	118
023718	Goolwa Council Depot	6.0	15.2 in 1924	154
Queensland				
041457	Coolmunda Dam	0.0	1.8 in 1977	43
041464	Oakington	0.4	2.0 in 2007	42
New South Wales				
056096	Glen Innes (Reddestone (Redbank))	1.4	1.8 in 1970	49
056100	Wellingrove (Wangalea)	1.6	3.1 in 1970	80
061350	Upper Chichester (Simmonds)	6.0	8.2 in 1995	38
062093	Windamere Dam	3.8	4.4 in 2017	44
064025	Coolah (Binnia St)	0.2	1.4 in 2002	131
073029	Murrumburrah (Historical Society)	0.0	2.9 in 1982	125
200839	Lord Howe Island Aero	43.8	55.8 in 2016	31
Victoria				
076064	Walpeup Research	1.6	3.7 in 1982	80
089082	Beaufort (Sheepwash)	0.8	23.0 in 1999	52
090167	Winchelsea (Post Office)	0.0	11.5 in 1899	118

Lowest July total rainfall for at least 30 years

		Observed this month	Most recent lower month
Western Australia			
009542	Esperance Aero	21.2	17.8 in 1977
009589	Nornalup	85.6	76.0 in 1918 *
009626	Pleasant Valley	22.8	16.2 in 1977
009815	The Duke	50.8	33.3 in 1977 *
009822	Dalyup Park	33.2	24.8 in 1977 *
011008	Mundrabilla Station	2.2	0.0 in 1986
012198	Scaddan West	12.0	7.2 in 1977 *
012312	Katta Barega	12.2	6.5 in 1977
South Australia			
016024	Lake Everard	1.4	0.0 in 1976 *
016034	Hiltaba	6.7	3.0 in 1976 *
017014	Blinman	0.2	0.0 in 1982 *
018054	Port Kenny (Mount Cooper)	16.8	14.2 in 1976
018060	Nundroo	6.6	2.8 in 1976
018098	Yaninee	10.5	10.0 in 1976 *
018107	Port Lincoln (Woolga)	44.6	44.2 in 1976
022008	Maitland	37.0	33.8 in 1934 *
022012	Paskeville	18.6	12.6 in 1976 *
023012	Owen	12.2	6.7 in 1982 *
023076	Port Parham	17.4	6.6 in 1982 *
023732	Adelaide (Morphett Vale)	15.0	12.9 in 1899 *
Queensland			
039085	Sandy Cape Lighthouse	6.9	5.8 in 1974 *
041095	Stanthorpe Leslie Parade	1.0	0.3 in 1888 *
041100	Texas Post Office	1.4	1.1 in 1972
041116	Wallangarra Post Office	2.6	2.1 in 1972
041128	Wondalli	1.8	0.0 in 1974 *
041275	Glenroy Massie	0.8	0.4 in 1977
041285	Fairleigh	0.4	0.0 in 1977 *
041344	Karara	0.8	0.6 in 1977 *
New South Wales			
056010	Walcha (Emu Creek)	3.0 =	3.0 in 1970 *
056028	Uralla (Salisbury Court)	8.6	8.5 in 1977
056050	Tenterfield (Aberfeldie)	1.2	0.0 in 1970 *
057023	Ebor (Wongwibinda)	5.1	0.8 in 1972 *
063039	Katoomba (Farnells Rd)	0.4	0.0 in 1970
063063	Oberon (Albion St)	9.8	7.1 in 1929 *
063146	Cheetham Flats (Jundas)	11.2	4.3 in 1970
070045	Hall (Lochleigh)	9.0	6.8 in 1982 *
070119	Big Hill (Glen Dusk)	4.0	1.3 in 1972 *
073050	Bowning (Wanganui)	15.4	14.0 in 1937 *
074217	Marrar (Brigadoon)	13.0	3.2 in 1982 *
Tasmania			
092053	Coles Bay (Freycinet)	14.6	6.1 in 1971 *
094027	Hastings Chalet	57.6	47.7 in 1973 *

* note: there are gaps in the historical record at this site, so it is possible a lower value has gone unreported.
= indicates the new record equals the old one.

Selected observations

Daily and mean maximum temperatures for July 2019

Western Australia	Mean Anom	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
		33.5	34.7	34.1	33.3	32.9	32.2	33.2	33.0	33.8	33.9	32.9	32.8	33.8	32.7	31.2	29.7	30.8	31.6	33.3	34.1	34.0	32.3	34.2	34.8	33.6	34.9	34.7	35.2	34.7	35.3	36.4	35.2	
001019 Kalumburu	31.9	32.5	32.1	31.4	30.6	29.4	31.4	31.8	31.0	31.5	31.4	31.1	32.3	31.1	27.8	26.0	28.1	29.4	31.2	33.2	34.5	33.5	33.8	33.9	32.7	32.2	32.9	33.7	34.5	35.3	34.9			
002056 Kununurra Aero	31.3	+2.5	32.6	32.2	32.0	33.6	28.7	28.9	33.4	32.6	30.6	31.3	31.8	32.2	32.4	30.0	27.5	28.4	29.6	32.7	28.8	28.1	31.5	31.5	31.7	30.7	31.1	33.9	32.3	30.6	34.7	34.2		
003003 Broome Airport	32.3	34.6	32.5	32.3	30.6	29.8	32.1	32.7	31.2	32.2	32.6	32.7	32.6	32.7	30.7	28.8	29.6	30.8	31.5	30.8	32.2	34.3	33.8	33.7	32.3	32.9	33.4	31.8	33.1	33.8	33.7	35.3		
004032 Port Hedland Airport	30.2	+3.1	31.8	30.8	30.2	27.8	27.9	29.1	30.0	30.9	29.3	30.2	30.4	31.5	30.8	29.1	27.8	28.2	29.0	29.0	30.1	31.1	28.8	29.6	29.2	29.3	32.9	30.6	31.5	33.7	31.8	32.4	31.8	
004083 Karatha Aero	28.3	28.5	27.5	26.7	26.2	28.7	25.4	29.2	27.5	28.7	28.1	30.8	30.3	28.3	25.5	25.9	26.0	27.0	27.5	31.3	25.3	26.3	27.5	27.6	31.1	31.0	31.6	30.5	31.7	27.4	32.0			
004106 Marble Bar	29.7	30.0	29.4	29.7	31.5	30.0	27.4	29.7	31.0	30.3	29.8	28.0	29.9	28.8	27.1	26.0	26.7	27.2	28.9	31.7	30.6	27.5	28.1	27.6	29.3	32.2	32.3	33.6	33.2	32.8	30.0	30.2		
005007 Learmonth Airport	25.6	25.9	24.6	25.3	26.3	22.5	22.3	27.3	24.9	27.7	26.9	23.1	29.4	29.0	26.0	24.2	23.7	24.7	24.9	28.0	24.4	25.4	26.6	20.8	24.8	26.5	27.1	26.7	27.2	28.6	24.5	29.0		
006011 Carnarvon Airport	24.1	+2.0	22.6	21.1	28.3	25.0	20.8	19.2	22.3	24.4	23.3	21.0	21.9	28.8	28.6	25.8	27.8	26.6	22.3	21.1	21.8	23.4	26.1	24.5	23.1	21.1	22.3	23.4	22.0	30.1	28.9			
006044 Denham	22.5	20.0	21.5	27.5	25.0	19.5	20.4	20.2	20.0	19.5	21.5	19.5	20.5	25.9	25.0	25.0	24.5	27.0	26.0	22.5	20.1	21.0	22.0	23.0	22.8	21.2	21.0	21.2	27.5	25.0				
007176 Newman Aero	25.1	25.3	25.6	26.1	27.1	21.2	21.5	24.1	27.4	27.7	26.8	24.0	26.0	24.2	22.0	22.6	23.8	25.2	26.3	28.5	23.2	22.8	22.8	23.1	24.2	26.9	28.2	30.4	27.3	27.0	24.7	22.9		
007185 Paraburdoo Aero	27.0	27.5	28.6	29.3	29.6	21.4	22.6	27.3	28.7	28.0	27.5	25.7	27.8	25.6	25.3	26.7	27.6	27.5	31.3	23.1	25.8	25.2	24.4	23.2	27.3	29.8	29.1	27.0	29.3	21.9	26.7			
007045 Meekatharra Airport	21.9	+3.0	21.6	23.0	24.9	27.2	15.7	16.2	21.1	24.6	23.1	21.2	22.4	23.5	21.7	20.7	20.6	21.4	24.0	24.1	26.4	17.2	18.1	19.7	20.7	19.3	22.8	24.6	20.4	23.4	24.9	22.1	20.8	
007600 Mount Magnet Aero	20.2	18.6	20.2	23.5	25.4	15.3	15.4	19.0	22.4	19.6	18.5	18.0	19.7	19.5	19.0	19.1	20.3	23.2	24.2	24.6	16.4	18.3	17.3	18.9	19.5	20.8	23.6	20.1	21.7	22.7	21.8	19.6		
008296 Morawa Airport	20.1	19.5	20.5	24.0	22.4	15.4	16.6	19.1	20.0	18.1	18.5	18.5	18.6	20.3	19.3	21.0	23.0	18.7	16.8	16.0	19.6	18.1	19.5	21.4	21.5	20.3	22.4	19.3	21.0	19.0				
008297 Dalwallinu	18.1	16.8	19.1	22.0	13.0	14.4	15.4	17.4	18.6	17.1	16.8	16.0	16.9	17.9	17.0	18.3	18.9	19.6	21.6	19.3	16.0	18.1	16.8	19.9	17.7	15.7	20.9	18.2	19.2	20.7	19.0			
008315 Geraldton Airport	21.3	20.8	21.7	25.2	21.4	17.8	17.7	21.1	20.1	19.2	20.0	20.2	20.5	22.5	21.6	22.2	22.9	23.4	22.3	21.4	18.7	20.6	19.6	19.9	22.6	20.7	21.3	21.0	20.6	23.1	25.9	23.1		
009021 Perth Airport	19.3	+1.6	19.2	20.9	21.8	13.5	16.8	19.1	20.1	18.2	18.6	19.0	18.8	19.1	19.0	19.9	21.8	22.7	19.8	19.6	17.6	19.1	17.2	18.8	21.2	18.2	16.3	20.6	19.4	16.7	23.2	22.7		
009131 Jurien Bay	20.7	19.6	21.4	23.7	19.4	17.6	18.6	20.3	20.5	20.0	19.0	18.9	20.4	22.2	21.8	23.3	21.4	21.1	24.0	20.0	19.5	20.3	19.8	21.0	20.5	20.8	20.7	20.0	23.1	21.5	24.3			
009225 Perth Metro	19.3	20.2	20.8	21.7	19.1	15.3	18.2	19.2	20.5	18.3	18.1	18.6	18.7	19.1	19.3	19.8	21.9	22.4	20.7	19.4	17.7	19.2	17.4	19.0	20.8	17.0	15.9	20.3	19.0	17.3	23.2	22.9		
009240 Bickley	15.8	16.7	17.8	15.9	15.0	14.4	13.9	15.5	17.2	14.1	15.3	15.6	15.5	16.7	18.3	18.9	16.2	15.0	13.5	13.3	13.9	15.5	17.6	14.2	12.7	17.6	16.5	16.3	19.6	19.4				
009518 Cape Leeuwin	17.3	+0.7	17.7	18.5	19.8	15.7	15.6	17.1	17.8	16.4	17.3	16.6	18.1	16.9	16.8	18.2	19.7	19.9	19.5	17.4	17.5	17.0	17.1	16.1	16.9	17.8	14.5	13.0	14.9	14.9	16.2	18.1	19.2	19.0
009617 Bridgetown	16.3	16.2	17.9	18.8	16.2	11.6	16.0	15.9	16.8	16.5	16.3	16.4	18.5	16.5	15.3	16.1	18.9	18.8	16.7	17.2	15.0	15.3	14.4	15.6	15.2	12.7	12.3	16.0	16.8	17.4	19.8	20.3		
009746 Witchcliffe	16.7	17.0	17.9	18.1	12.4	13.9	15.9	17.6	16.0	17.0	16.7	17.5	16.8	16.4	17.4	17.3	19.9	19.4	17.5	16.4	15.9	16.4	15.1	16.2	16.9	14.0	12.3	16.0	16.0	17.6	19.4	19.3		
009789 Esperance	17.7	17.9	18.8	21.0	22.2	14.5	15.5	18.9	20.7	17.4	17.0	17.7	16.2	15.5	16.4	17.6	20.1	22.6	16.6	16.4	14.5	19.0	14.1	16.7	20.4	14.3	13.5	16.1	16.4	15.3	18.7	19.6		
009965 Bunbury	17.9	17.5	19.2	20.4	14.2	14.8	16.2	16.4	18.1	17.9	17.4	17.5	17.2	17.5	17.8	19.1	20.4	21.2	20.9	19.6	17.5	19.5	18.3	18.0	16.0	16.1	18.3	17.3	18.5	19.3	19.6			
009977 Mandurah	18.1	18.5	18.6	20.4	18.6	14.3	17.6	17.0	18.5	17.8	18.1	18.0	16.2	19.1	18.9	19.5	18.6	19.8	19.2	17.9	18.7	17.3	16.4	16.3	19.3	18.3	18.9	18.9						
009999 Albany Airport	16.7	16.3	19.5	18.0	18.3	12.1	14.9	17.4	17.4	17.2	16.9	17.8	15.3	17.7	17.0	17.1	16.7	17.3	17.0	15.3	15.5	15.2	14.7	14.5	15.2	17.7	18.9	18.4						
010007 Bencubbin	17.4	+1.2	16.0	17.5	20.4	21.3	12.7	14.4	16.7	18.1	15.5	15.2	14.8	15.9	16.0	17.0	19.0	20.6	19.5	14.8	16.3	15.2	16.1	15.1	15.5	16.2	20.6	17.1	18.8	20.7	18.3			
010092 Merredin	17.3	+1.3	15.2	17.8	19.6	20.0	13.5	14.5	16.8	18.4	16.2	16.0	14.2	17.2	16.4	17.6	17.0	18.0	20.8	21.1	20.7	20.1	20.4	17.9	20.5	16.2	16.5	18.0	18.8	18.8				
012086 Cunderdin Airfield	17.9	18.1	18.9	20.6	19.4	14.4	16.2	17.3	18.5	16.4	17.6	16.6	16.5	17.0	17.8	18.2	18.6	19.2	19.6	21.4	19.9	19.8	19.4	18.5	18.0	18.0	21.1	19.6	19.6					
010633 Ravensthorpe	17.5	+4.4	15.5	17.5	19.8	23.0	12.6	15.0	17.0	19.5	18.0	18.0	18.1	15.5	14.8	17.5	19.0	20.0	21.0	18.5	20.0	14.3	19.0	15.6	15.8	18.5	18.0	19.0	20.5	21.6	19.6			
010911 Lake Grace	16.1	15.1	16.0	18.3	19.2	12.1	14.6	15.5	17.9	15.6	15.2	15.8	16.3	17.3	16.7	18.3	19.0	20.0	21.1	17.7	18.3	19.0	19.5	18.6	19.5	19.5	20.8	19.5	19.5					
010916 Katanning	15.1	14.5	15.8	16.8	20.1	22.0	24.1	24.7	22.3	24.6	22.6	22.5	18.2	15.6	17.1	18.3	20.9	22.9	23.2	25.7	21.7	18.4	24.5	25.6	22.7	24.8	25.7							

Daily and mean maximum temperatures for July 2019

	Mean Anom	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
New South Wales	Mean Anom	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
048027 Cobar MO	17.9	+2.4	16.7	16.5	18.0	20.7	20.5	21.0	17.2	16.5	14.9	16.9	17.0	18.1	13.1	13.0	13.8	15.8	16.0	16.2	17.8	19.4	22.8	20.6	21.1	17.3	17.9	18.2	20.5	20.7	19.5	16.7	19.0
048245 Bourke Airport AWS	19.9		18.5	19.3	20.5	22.7	22.4	21.9	20.9	20.9	16.7	19.4	19.8	20.2	15.5	14.6	15.9	17.7	17.1	18.3	18.6	20.1	24.3	23.7	22.4	21.0	19.1	19.7	21.2	22.3	23.5	20.5	19.6
049000 Ivanhoe Aerodrome AWS	17.7		15.5	16.5	16.7	20.5	20.6	21.8	16.8	15.6	15.3	17.6	17.1	18.0	13.5	13.9	15.2	15.8	16.7	16.8	18.9	19.5	19.8	19.1	20.7	16.7	17.4	18.8	21.1	22.1	18.8	16.4	15.4
050052 Condobolin Ag Research Stn	16.4	+1.5	13.8	16.0	16.0	19.2	20.5	20.4	16.5	14.5	13.3	14.5	15.5	16.5	12.7	11.3	14.0	15.0	14.3	13.2	17.0	18.9	21.9	20.0	20.8	15.3	16.2	14.7	18.1	19.9	18.2	13.5	17.2
051039 Nyngan Airport	18.9	+2.3	17.8	18.5	20.0	22.0	21.5	22.0	19.0	17.5	14.5	16.9	18.0	20.0	14.5	14.3	16.0	16.2	16.4	23.4	23.7	22.0	18.5	18.0	18.5	21.7	21.2	17.0	20.4				
052088 Walgett Airport AWS	20.4		20.6	20.8	20.5	23.5	22.5	22.1	21.9	19.7	14.9	18.1	21.1	21.5	16.7	15.1	17.2	18.7	17.2	17.9	18.6	20.7	23.8	25.4	22.7	21.4	20.2	20.7	21.0	22.0	22.1	22.7	21.7
053115 Moree Aero	20.9		23.2	23.0	24.2	24.2	24.0	22.8	23.3	16.5	17.3	21.8	20.8	17.6	14.5	15.5	17.9	17.8	17.7	18.7	22.3	24.2	24.5	24.3	21.7	22.2	21.6	21.8	21.8	22.3	22.0	22.2	
054038 Narrabri Airport AWS	20.0		22.9	21.5	23.0	22.1	23.2	21.9	21.8	14.5	17.5	15.1	19.8	19.3	16.5	14.9	15.8	18.4	17.9	17.5	17.0	21.3	22.6	23.7	23.2	21.1	21.3	19.2	20.9	21.3	21.8	21.8	21.1
055325 Tamworth Airport AWS	18.2		20.8	20.1	21.9	20.4	22.2	20.7	21.4	13.0	15.8	15.2	17.9	17.7	14.8	12.9	14.3	15.5	14.4	15.7	15.1	19.3	20.5	17.9	21.3	19.5	19.9	18.9	19.4	20.2	19.6	19.2	19.2
056242 Inverell (Raglan St)	18.8		21.3	20.8	23.4	21.9	21.2	18.2	21.7	15.2	16.6	15.1	18.4	17.8	15.9	12.7	13.4	18.4	17.3	18.8	18.4	19.8	19.4	21.5	20.3	20.9	19.6	19.6	20.3	19.6	18.4	19.6	
057095 Tabulam (Muirine)	18.3		16.1	20.3	17.6	16.3	13.8	14.0	15.6	15.9	19.2	16.8	18.7	20.7	17.4	16.3	15.0	20.1	19.3	17.7	19.8	18.0	19.6	20.4	22.1	21.3	18.2	20.1	21.4	18.8	19.0	15.8	
058012 Yamba Pilot Station	21.0	+2.1	19.7	21.8	20.8	21.5	20.7	20.5	19.5	18.1	20.5	21.6	23.4	24.8	23.1	17.9	19.4	22.0	19.8	19.2	21.9	21.0	23.3	23.2	23.3	25.0	17.6	22.6	20.9	20.6	21.6	21.6	14.6
060139 Port Macquarie Airport AWS	21.0		19.2	21.5	21.9	19.3	20.8	18.2	20.2	19.1	23.7	23.6	21.7	18.3	19.2	20.1	19.9	21.8	19.8	20.5	23.4	24.3	24.9	24.4	21.0	22.7	21.5	21.1	21.4	20.7	17.5		
061078 Williamtown RAAF	19.3	+2.3	17.1	21.0	19.8	19.0	19.3	18.8	16.8	18.3	17.0	20.3	20.3	17.4	16.1	18.4	19.6	18.6	19.2	18.6	20.5	23.7	21.5	23.9	21.8	19.0	20.3	19.4	19.6	20.8	16.1	17.3	
061363 Scone Airport AWS	19.0		17.4	22.4	20.2	16.3	19.2	18.0	18.1	16.0	18.8	16.4	20.4	19.7	14.9	14.9	16.7	19.2	18.1	18.2	18.0	21.7	21.8	22.8	22.5	21.1	18.8	19.7	20.5	19.6	21.8	17.7	17.8
062101 Mudgee Airport AWS	16.9		17.9	19.8	19.0	17.6	17.9	17.8	19.4	15.7	15.1	13.7	15.6	16.0	11.3	11.3	13.1	15.7	14.5	15.1	16.8	18.5	20.4	21.2	17.6	20.1	18.7	18.0	18.0	18.7	19.5	16.2	16.7
063005 Bathurst Agricultural Station	14.0	+3.0	14.1	16.3	17.0	17.0	16.8	16.0	16.8	14.0	12.0	10.2	11.6	11.5	7.7	7.5	10.5	11.0	11.0	12.5	12.5	16.5	17.4	18.8	16.5	11.5	17.5	15.0	14.8	14.9	14.3	15.5	
063254 Orange Agricultural Institute			14.0	14.3	14.2	13.5			14.1	10.4	9.1	7.0	8.5			9.2	6.8		8.7	9.3			13.8	15.4	12.9	9.6	14.5			12.6	13.8	10.8	13.1
064008 Coonabarabran (Showgrounds)	17.0	+1.9	19.0	18.2	20.5	18.5	18.6	19.0	19.1	13.8	16.4	14.0	16.5	16.3	11.8	11.8	11.6	14.0	14.9	14.5	15.3	18.7	19.5	21.6	19.8	17.5	19.5			18.5	18.1	19.3	16.8
065070 Dubbo Airport AWS	18.0		17.9	17.8	21.1	21.2	20.6	20.4	16.6	16.3	14.7	14.3	15.9	18.9	13.5	12.4	15.1	15.2	15.6	15.7	17.2	18.8	21.9	23.1	20.0	17.2	19.5	17.7	19.6	19.9	19.2	17.6	19.4
066062 Sydney (Observatory Hill)	19.7	+2.6	18.3	20.4	19.4	18.0	19.0	18.6	19.3	20.8	18.5	17.6	19.9	20.1	15.6	17.4	18.8	21.5	21.8	20.8	20.9	21.1	23.9	23.4	23.6	20.6	20.3	18.6	20.2	20.1	21.3	15.4	17.6
067105 Richmond RAAF	19.4		17.4	18.1	19.7	16.1	17.4	17.5	18.5	17.8	20.4	18.1	17.6	19.7	20.3	15.9	17.3	18.3	21.3	20.8	19.6	20.6	24.6	23.2	24.4	20.7	19.7	17.6	20.1	20.0	20.3	16.8	18.4
068072 Nowra RAN Air Station AWS	17.9		18.3	21.3	15.2	16.5	16.8	17.3	19.5	19.6	17.3	16.4	16.0	18.2	13.3	13.2	17.3	18.7	16.8	18.4	18.7	19.7	21.3	21.3	18.4	18.5	19.2	18.0	17.0	19.9	15.6	15.4	
068151 Jervis Bay (Point Perpendicular)	17.0		16.8	20.1	16.1	16.2	17.2	17.3	18.8	18.8	16.5	16.6	15.3	17.0	13.0	13.3	15.7	18.3	16.3	17.4	17.6	17.7	20.9	20.8	20.8	15.8	16.4	16.5	15.8	17.4	14.1	14.0	
068241 Albion Park (Wollongong Airport)	18.7		17.9	20.5	18.4	17.3	17.4	17.9	19.8	19.5	17.6	17.0	16.9	19.7	14.3	14.3	17.3	19.8	18.4	20.0	20.3	23.1	20.8	22.7	18.8	17.7	19.0	20.0	18.5	21.0	16.7	17.0	
069018 Moruya Heads Pilot Station	17.7	+1.6	15.9	19.7	18.3	14.8	15.5	17.8	18.5	19.0	17.2	18.4	17.9	20.4	17.0	17.5	18.5	20.4	18.5	18.6	22.5	17.8	23.0	16.3	16.2	16.7	16.2	16.9	15.3	15.3	15.3	15.3	
070351 Canberra Airport	13.7		12.5	15.0	15.6	13.3	15.8	15.6	15.3	15.9	13.4	10.8	10.6	13.1	8.7	8.6	12.8	14.0	12.5	13.0	13.3	12.7	15.8	17.3	16.0	13.5	15.7	11.1	16.2	14.3	14.2	13.6	13.7
071041 Thredbo Village	6.7		7.0	6.0	8.0	8.5	10.0	8.0	6.5	3.9	4.2	4.0	5.0		2.0	6.0	6.5	4.2	8.0	11.0	7.2	9.0	6.5	5.5	11.0	8.0	7.0	6.0	6.0	9.1			
072150 Wagga Wagga AMO	13.8	+1.3	12.0	14.7	15.7	16.7	17.8	17.5	14.9	15.0	12.6	13.3	13.1	12.9	9.0	9.6	12.6	13.4	11.1	11.6	13.3	14.8	17.0	16.5	15.1	12.5	13.5	13.8	15.1	10.3	13.8	15.1	
072160 Albury Airport AWS	13.6		11.6	12.8	15.3	16.0	17.4	16.6	13.5	13.2	13.5	13.9	13.3	12.5	10.3	14.0	13.0	12.5	11.2	11.0	15.3	15.2	15.2	14.6	12.0	12.0	11.7	15.1	14.9	11.6	15.2		
072161 Cabramurra SMHWA AWS	4.7		4.7	5.2	8.6	7.9	9.5	10.4	7.3	4.6	5.5	2.0	3.4	-2.3	0.0	0.9	1.1	1.5	6.6	6.8	5.8	7.9	4.2	5.9	9.0	4.7	4.7	5.3	2.9	6.2	7.0		
074258 Deniliquin Airport AWS	14.4		12.2	15.3	15.4	16.7	17.6	18.6	14.0	14.0	13.7	15.4	14.7	14.0	11.2	10.7	12.9	14.4	13.2	13.0	13.5	16.8	14.9	16.1	16.3	13.5	13.5	14.3	16.0	15.8	13.0	12.3	14.8
Tasmania	Mean Anom	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
091126 Devonport Airport	13.3		13.2	14.1	13.6	14.9	14.6	16.1	13.1	14.8	13.6	13.9	12.8	11.4	11.1	13.3	15.7	13.1	12.2	15.0	14.3	13.6	14.1	11.0	12.8	14.4	14.4	11.9	12.8	13.9	10.8	11.0	

Daily and mean minimum temperatures for July 2019

	Mean Anom	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Western Australia	Mean Anom	13.3	14.4	14.6	11.2	9.5	7.5	8.5	9.2	10.8	11.5	12.2	12.9	11.3	16.0	13.5	17.0	18.1	15.8	13.8	11.3	11.9	12.5	15.0	18.1	13.1	10.8	11.5	16.9	15.5	15.3	16.2	15.7	
001019 Kalumburu	13.1	17.1	14.1	12.8	12.1	10.1	8.9	10.4	11.6	12.8	14.3	12.1	12.3	14.1	18.0	14.9	16.3	13.7	12.2	10.1	10.7	11.9	12.9	13.5	14.7	10.7	12.8	14.2	14.0	14.6	14.6	13.7		
002056 Kununurra Aero	13.1	13.0	13.1	14.1	13.1	18.3	16.3	12.6	12.2	12.1	15.0	14.3	13.7	13.3	16.7	14.6	8.5	10.7	12.7	12.6	13.2	11.8	12.5	13.6	12.5	12.7	12.1	12.6	13.4	16.6	14.6	15.5	15.5	
003003 Broome Airport	13.5	+0.1	13.1	14.6	14.1	13.1	18.3	16.3	12.6	12.2	12.1	15.0	14.3	13.7	13.3	16.7	14.6	8.5	10.7	12.7	12.6	13.2	11.8	12.5	13.6	12.5	12.7	12.1	12.6	13.4	16.6	14.6	15.5	15.5
003032 Derby Aero	14.2	13.9	16.5	13.9	13.0	15.0	15.8	11.7	12.0	16.8	15.4	16.1	12.7	18.2	18.0	13.5	10.9	15.6	13.4	11.8	13.2	14.4	11.6	13.0	12.1	14.1	12.3	13.7	14.2	17.0	15.5	14.0		
004032 Port Hedland Airport	13.5	+1.4	12.0	11.5	13.2	13.1	14.9	16.5	12.8	11.8	11.8	13.6	15.4	16.3	12.6	14.1	11.1	8.5	9.0	9.5	12.0	14.5	14.7	11.2	12.3	17.0	16.7	13.2	16.1	14.6	14.3	15.6	17.3	
004083 Karratha Aero	15.1	13.0	13.2	13.4	14.4	19.2	13.6	16.9	13.7	14.7	15.3	17.8	14.5	14.3	15.6	14.7	12.7	13.1	10.7	12.5	16.3	14.4	12.5	14.6	14.5	14.7	18.4	18.4	15.9	17.2				
004106 Marble Bar	13.1	8.9	9.9	11.0	10.5	12.9	15.7	13.0	11.9	11.2	12.1	15.3	17.7	15.4	15.1	9.7	8.9	12.2	8.4	10.9	13.4	12.4	8.3	13.9	15.9	20.8	13.8	14.1	18.5	14.4	15.0	15.1		
005007 Learmonth Airport	11.5	11.4	14.2	11.8	17.0	16.0	9.1	9.4	11.6	12.4	13.1	16.1	10.2	12.9	8.2	8.7	8.7	6.5	8.7	7.5	11.9	8.9	9.7	11.5	13.9	12.6	11.0	15.0	13.7	11.7	13.7			
006011 Carnarvon Airport	11.1	+0.2	13.7	13.5	12.3	16.9	11.1	8.9	8.2	9.9	13.0	11.0	12.6	10.6	10.1	11.0	8.5	8.8	6.4	8.2	7.3	15.5	10.2	9.1	8.5	12.0	14.5	10.9	15.8	10.2	10.6	12.5	13.0	
006044 Denham	13.1	13.2	13.4	13.0	13.2	13.0	13.0	13.0	13.2	13.1	13.0	13.0	13.2	13.2	13.1	13.2	13.1	13.1	13.1	13.1	13.1	13.1	13.0	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	
007176 Newman Aero	8.2	3.3	6.3	7.0	7.0	16.4	9.0	5.2	7.6	7.2	8.1	11.1	10.4	8.7	9.1	8.1	2.6	3.2	3.0	3.9	12.8	4.1	3.2	3.5	6.6	12.4	8.7	10.6	16.2	13.9	10.5			
007185 Paraburdoo Aero	11.4	9.5	9.5	11.1	10.4	13.1	8.8	10.0	13.3	9.0	11.7	16.3	10.3	14.6	13.4	11.3	10.3	11.2	9.4	7.3	10.8	10.2	9.5	9.1	14.7	9.3	9.1	10.3	16.5	10.3	17.9	16.1		
007045 Meekatharra Airport	8.2	+0.7	6.8	7.9	11.8	12.0	10.2	4.3	5.4	12.2	8.2	8.2	8.6	8.1	8.7	7.5	6.0	6.4	6.9	4.3	7.2	11.0	3.8	5.4	8.1	10.2	8.2	8.7	12.7	6.1	9.2	11.9	8.8	
007600 Mount Magnet Aero	7.0	4.4	5.4	7.3	12.2	8.2	4.6	4.5	10.0	7.4	5.5	5.9	6.6	7.4	5.2	4.4	5.5	5.4	6.2	4.9	5.2	5.2	7.4	7.3	6.0	7.4	9.2	10.4	7.8	9.0	6.2			
008296 Morawa Airport	5.7	5.0	5.8	7.1	11.5	6.7	3.7	5.0	4.2	4.3	3.9	3.9	3.6	4.1	6.6	2.8	4.5	2.9	2.7	3.9	8.2	5.5	8.4	6.5	4.3	7.1	8.1	8.8	8.2	7.4	6.0	4.8		
008297 Dalwallinu	5.9	6.2	9.0	5.2	9.9	6.5	5.4	3.8	5.5	5.7	6.8	6.0	4.5	5.6	3.8	2.3	4.0	4.7	4.0	5.6	6.0	6.6	10.2	5.4	4.9	5.8	6.8	7.0	8.4	6.0	6.2	5.1		
008315 Geraldton Airport	8.8	9.5	9.5	13.4	14.6	12.0	9.8	6.5	6.5	7.8	8.1	8.6	6.4	9.1	9.6	7.4	6.9	6.1	4.6	7.3	12.1	12.4	11.8	8.5	8.1	9.9	8.1	6.4	7.7	10.1	9.9			
009021 Perth Airport	8.4	+0.3	12.1	5.8	7.2	13.1	8.4	5.1	9.0	6.3	8.2	8.7	9.0	4.9	6.7	7.5	9.1	7.6	5.4	7.8	10.7	10.8	5.9	6.7	10.1	10.7	11.4	9.8	8.9	8.1	6.6			
009131 Jurien Bay	8.9	12.9	8.9	8.9	14.4	11.2	6.9	7.6	4.4	8.8	10.0	5.4	5.1	7.9	7.7	4.4	7.8	8.2	7.4	11.0	14.3	15.2	7.9	8.4	10.3	11.2	7.9	8.4	7.4	9.5	8.0			
009225 Perth Metro	8.4	11.9	6.0	6.1	12.0	8.9	6.8	9.8	5.5	8.8	9.7	10.6	4.4	6.7	5.8	6.4	3.8	3.3	8.6	12.0	12.5	7.4	7.1	11.0	10.8	11.4	10.2	7.3	7.7	6.7				
009240 Bickley	7.8	9.7	7.7	6.7	8.3	6.0	5.4	7.7	7.8	8.4	10.1	8.7	5.8	7.9	4.7	5.3	6.1	7.2	10.7	11.1	6.8	8.8	8.5	8.3	9.5	7.5	8.6	7.8	6.5	7.2	7.8			
009518 Cape Leeuwin	12.2	+1.1	14.2	14.5	11.4	12.5	10.1	10.4	12.3	12.7	13.3	14.1	14.2	13.1	10.8	9.3	9.8	11.9	13.9	13.3	14.2	12.1	14.1	12.9	13.4	13.8	12.5	9.6	10.0	11.3	9.9	11.1	12.2	
009617 Bridgetown	5.3	8.3	9.8	1.8	6.2	6.9	3.2	5.9	5.4	3.0	10.3	4.9	5.2	5.7	1.4	1.3	0.7	2.3	4.2	7.5	5.2	9.2	8.6	9.8	10.9	7.7	4.5	5.1	2.0	2.2	5.4			
009746 Witchcliffe	8.4	12.5	10.8	7.9	12.0	7.7	9.1	8.2	10.5	10.0	17.2	9.2	8.5	4.8	3.5	4.5	5.5	8.1	10.8	8.4	8.1	10.1	11.2	10.8	12.3	11.3	12.2	10.0	9.6	10.2	10.7			
009789 Esperance	8.4	9.9	8.4	8.2	10.2	10.3	5.3	8.4	7.2	6.6	11.3	10.3	11.9	10.5	4.4	4.3	5.3	4.7	9.1	7.9	8.0	9.3	10.0	8.7	8.3	8.0	9.2	9.2	5.8	7.2				
009965 Bunbury	7.5	13.6	11.2	4.7	11.7	6.9	3.2	7.3	10.3	7.4	11.9	5.6	3.5	6.6	3.7	4.6	2.2	3.5	10.6	9.5	5.3	11.7	8.0	10.4	12.1	9.9	8.8	8.2	3.9	4.0	5.2			
009977 Mandurah	10.9	11.6	11.8	10.5	14.2	9.0	9.1	11.0	11.1	12.1	13.0	11.4	8.1	9.3	8.0	9.4	8.8	10.0	12.3	14.6	9.9	13.8	11.6	10.2	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7		
009999 Albany Airport	7.8	10.8	9.4	2.7	10.2	8.9	6.3	9.3	8.7	9.9	11.1	10.5	10.1	10.1	4.1	6.7	4.5	3.1	7.5	10.0	9.9	7.8	9.6	10.1	11.1	10.2	5.3	5.8	4.0	6.1				
010092 Merredin	5.6	+0.2	4.1	8.9	5.6	11.2	7.0	5.8	4.0	1.5	3.0	4.2	2.4	1.5	6.4	5.2	6.8	2.8	2.0	3.4	6.5	8.0	2.8	4.4	6.6	5.5	7.6	5.6	7.6	9.2	10.2	7.4		
010286 Cunderdin Airfield	5.2	8.8	8.6	6.1	11.2	7.4	3.2	4.2	2.0	5.5	6.2	4.6	2.4	5.4	2.6	3.7	2.6	1.0	1.8	1.9	6.4	7.8	13.5	5.7	3.4	4.8	9.3	14.9	10.4	11.5	12.6	15.2	8.7	8.3
010317 Giles Meteorological Office	8.8	+2.3	7.2	6.8	11.1	11.1	11.4	16.5	8.2	9.7	9.0	9.4	8.1	10.8	5.6	4.9	4.8	4.3	1.9	6.4	7.8	13.5	5.7	3.4	4.8	9.3	14.9	10.4	11.5	12.6	15.2	8.7	8.3	
010323 Ravensthorpe	7.5	10.0	8.0	7.5	6.0	4.5	6.8	2.1	9.9	10.2	12.1	10.7	10.2	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
Northern Territory	Mean Anom	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
014015 Darwin Airport	18.5	-0.7	21.9	19.1	17.8	16.7	14.4	15.9	17.7	16.8	18.4	18.7	18.5	19.1	20.2	18.2	20.1	21.2	19.0	17.4	18.1	18.3	17.9	17.5	16.8	17.2	19.5	21.1	19.5	19.1	18.9	18.9		
014198 Jabiru Airport	18.1	22.9	19.4	16.4	15.5	14.8	17.2	17.6	18.7	18.1	16.6	20.8	20.0	21.8	18.4	17.5	18.7	18.3	19.0	15.9	14.9	14.2	16.4	22.0	20.1	18.4	18.6	19.6	17.8	17.4				
014932 Tindal RAAF	11.8	16.7	11.6	10.8	10.3	8.8	9.6	11.0	10																									

Daily and mean minimum temperatures for July 2019

	Mean Anom	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
New South Wales	Mean Anom	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
048027 Cobar MO	6.3	+1.4	4.0	2.5	1.6	8.0	10.5	10.3	11.7	11.8	7.5	2.9	6.4	7.6	7.2	1.6	5.3	7.6	5.3	4.2	4.4	6.1	7.6	4.4	4.9	7.7	3.4	6.9	6.7	8.2	8.7	7.1	2.2				
048245 Bourke Airport AWS	5.3	0.4	0.1	2.0	5.7	11.2	12.3	14.8	14.1	7.2	5.6	8.4	5.0	9.1	0.8	3.5	3.4	1.7	3.4	3.1	1.4	3.7	3.8	0.8	5.7	5.0	2.9	5.5	4.5	4.5	8.4	5.0					
049000 Ivanhoe Aerodrome AWS	6.2	3.9	2.4	1.3	3.4	7.5	7.1	11.4	10.7	4.1	5.3	7.9	8.9	6.8	2.2	5.8	10.3	8.3	8.7	5.0	5.1	6.9	3.4	6.8	7.6	3.8	6.7	6.0	6.5	10.7	5.2	1.5					
050052 Condobolin Ag Research Stn	4.8	+2.5	1.0	0.0	4.0	5.8	4.9	9.6	12.0	5.5	3.3	5.9	9.5	6.5	1.6	4.5	6.4	9.5	7.5	1.1	1.2	5.4	3.5	2.0	7.3	0.2	3.3	2.8	2.8	5.7	7.9	2.1					
051039 Nyngan Airport	5.9	+2.2	4.0	4.0	5.5	9.0	9.0	9.8	12.5	12.8	6.7	1.8	6.5	4.8	9.3	3.8	6.5	7.4	6.0	3.0	1.7	1.5	1.2	5.3	3.6	5.3	4.0	4.4	8.5	6.0							
052088 Walgett Airport AWS	3.9	0.1	1.3	1.5	3.5	10.7	10.6	13.2	12.7	4.1	0.8	7.4	2.9	7.7	0.4	3.3	2.9	2.1	1.5	-1.2	-1.8	2.6	9.0	1.5	4.9	2.6	1.8	2.7	1.7	0.7	7.9	3.3					
053115 Moree Aero	4.9	3.5	6.5	5.1	6.8	8.7	9.8	8.1	12.7	10.8	2.6	5.6	3.6	8.8	-1.1	2.1	0.2	2.0	1.7	0.2	0.9	5.9	6.9	4.3	2.4	2.2	4.2	5.1	3.0	3.9	8.9	6.8					
054038 Narrabri Airport AWS	4.5	6.3	5.4	3.7	10.5	9.3	8.6	4.9	11.5	7.6	2.8	6.7	3.3	8.5	-0.2	1.1	-0.5	0.8	1.9	-0.8	1.9	3.2	8.0	2.1	3.3	0.9	3.2	3.2	2.5	3.7	7.4	7.6					
055325 Tamworth Airport AWS	2.2	0.2	3.3	3.0	6.6	6.8	8.0	5.2	9.9	7.9	1.4	1.8	1.0	6.7	-1.2	3.5	-3.1	-2.6	1.6	-4.1	-3.0	-0.6	2.8	0.5	-0.4	0.2	1.6	1.7	0.3	0.4	5.8	2.9					
056242 Inverell (Raglan St)	3.2	5.1	5.4	4.4	5.9	5.2	8.2	5.1	8.1	7.2	3.1	3.1	2.5	4.1	-1.5	-2.1	-3.0	-1.0	0.0	-0.6	-1.0	2.4	3.1	3.3	0.0	3.2	5.1	4.2	3.2	4.4	8.1	5.1					
057095 Tabulam (Muirine)	8.7	11.1	11.0	10.2	11.7	10.8	10.6	10.1	10.7	10.6	7.3	6.7	10.3	11.2	4.1	3.6	3.2	4.8	6.2	5.0	7.1	6.9	8.3	9.8	9.9	9.7	9.3	11.0	10.1	10.4	10.2	7.7					
058012 Yamba Pilot Station	11.1	+1.8	13.7	12.5	11.9	13.5	15.9	16.2	12.7	14.1	11.2	10.2	11.2	11.2	13.1	8.0	8.2	7.3	7.7	9.8	7.4	8.1	9.4	9.6	11.2	9.3	10.5	11.8	13.4	10.8	10.5	11.4	11.1				
060139 Port Macquarie Airport AWS	5.6	6.3	7.1	4.2	12.2	13.5	12.2	9.8	9.2	7.5	5.3	0.6	0.8	5.8	4.7	1.9	0.1	3.0	2.8	0.5	3.4	1.4	5.3	5.1	1.5	5.7	4.9	9.3	7.1	5.5	6.3	11.3					
061078 Williamtown RAAF	6.9	+0.8	3.8	3.8	4.1	10.2	8.7	10.6	8.2	7.4	10.1	4.8	4.7	10.1	10.1	6.7	9.8	7.2	8.1	9.3	6.6	1.5	2.2	4.2	4.1	6.9	6.6	3.3	8.7	6.9	4.7	9.6	10.1				
061363 Scone Airport AWS	3.9	-0.8	1.0	-1.0	9.0	10.0	9.1	7.8	5.8	5.7	0.1	3.7	4.3	11.7	2.8	8.9	0.0	-0.1	9.1	-0.8	-2.6	-0.7	4.1	3.5	8.0	-0.7	1.0	2.3	1.0	0.4	8.5	9.4					
062101 Mudgee Airport AWS	0.9	-2.4	-1.3	-3.6	8.9	6.4	8.4	2.0	8.6	-0.8	-3.9	-1.5	-0.2	6.0	-1.2	6.1	1.7	-1.3	7.1	-4.6	-4.1	-3.4	4.1	-3.3	-1.7	-0.6	-0.5	-3.2	4.4	4.9							
063005 Bathurst Agricultural Station	0.8	+1.0	-3.0	-2.0	-4.8	7.8	7.0	-0.8	-2.2	-1.0	3.0	6.0	3.8	2.0	-0.5	6.5	5.7	-1.6	-0.0	-3.3	0.5	-3.5	4.5	-4.0	-2.5	2.3	-1.5	-3.6	2.2	-1.0							
063254 Orange Agricultural Institute	-0.1	0.6	1.6	6.2	6.9			4.5	2.6	-1.5	3.5	4.5		0.2	3.1	4.2	3.8	-1.7			-1.3	5.3	5.5	0.8	1.2		0.0	5.6	0.7								
064008 Coonabarabran (Showgrounds)	1.7	+1.0	-1.1	-0.8	-2.3	1.7	4.2	2.5	5.6	9.8	6.2	-1.7	3.0	-0.5	7.7	2.9	1.8	6.0	5.8	0.6	-3.8	-3.2	-0.5	3.2	-1.9	0.2	-0.5	1.0	-0.4	-1.6	5.6	0.0					
065070 Dubbo Airport AWS	3.4	1.9	2.4	1.2	7.3	8.3	10.0	11.1	11.2	2.2	-0.5	2.2	2.8	8.2	-1.8	4.6	2.9	2.6	4.1	-2.4	-1.4	-0.1	6.8	-0.3	3.0	-0.9	1.7	2.0	1.8	0.7	7.6	4.8					
066062 Sydney (Observatory Hill)	9.5	+1.1	7.4	7.2	8.0	9.5	13.2	11.0	11.5	11.6	9.8	8.1	10.3	11.8	12.0	7.2	9.2	9.6	10.2	6.4	7.0	8.4	11.7	10.1	11.4	8.0	8.4	9.9	9.0	7.9	9.8	8.8					
067105 Richmond RAAF	3.4	-0.5	-0.2	-0.8	4.4	12.2	8.5	10.4	8.7	2.6	1.1	6.3	8.7	10.9	-0.3	6.7	-1.1	-0.3	1.6	-2.5	-0.9	-0.8	5.5	1.0	6.2	-0.2	1.9	4.7	2.2	0.2	7.1	3.6					
068072 Nowra RAN Air Station AWS	7.8	6.0	8.4	7.7	9.2	9.1	7.6	10.7	7.7	7.8	8.7	12.3	9.4	6.3	9.2	9.8	9.7	10.8	8.2	7.0	5.1	5.9	6.1	11.7	5.9	5.7	9.5	4.9	1.7	8.4	4.9						
068151 Jervis Bay (Point Perpendicular)	10.7	7.7	9.8	10.4	11.7	12.2	11.2	11.1	12.9	10.0	9.8	10.6	12.8	10.8	7.8	9.1	11.3	11.0	11.8	9.2	8.9	10.7	11.9	11.9	14.0	7.5	10.0	11.7	10.2	9.4	11.4	10.3					
068241 Albion Park (Wollongong Airport)	6.8	1.1	3.0	4.4	6.9	10.5	9.0	8.3	8.1	11.1	9.9	4.1	10.9	10.4	7.2	10.0	11.2	10.9	11.5	8.7	1.2	1.6	7.5	2.5	4.8	1.7	2.8	8.5	3.3	1.2	10.9	7.2					
069018 Moruya Heads Pilot Station	7.4	+1.6	4.1	6.1	8.6	9.5	9.6	8.9	12.7	5.1	6.9	10.2	11.2	11.2	7.0	6.9	4.5	7.2	5.0	7.6	5.8	8.2	7.5	9.6	10.8	5.1	4.0	7.6	6.6	5.1	5.5	4.6					
070351 Canberra Airport	0.7	-4.7	-3.6	-3.1	2.5	0.0	4.6	0.2	7.3	-12.3	3.9	6.0	7.7	3.2	1.0	4.6	-2.1	4.4	5.9	2.3	-0.7	-4.7	-1.6	2.4	7.8	-5.1	-1.8	0.2	-3.3	-2.4	-1.8	-2.8	-0.4	-2.1	-0.9	-5.8	-4.4
071041 Thredbo Village	-2.2	-6.0	-5.0	-6.0	-2.0	-4.5	-4.7	1.5	-1.5	0.7	-0.8	-1.5	-2.5	-1.5	-0.7	-1.0	-0.2	0.6	0.3	-5.8	-2.8	2.5	0.0	-0.5	-6.0	-3.0	-5.5	-3.5	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5		
072150 Wagga Wagga AMO	3.4	+1.1	-0.3	-0.1	-0.6	4.9	3.3	7.9	9.3	10.3	2.6	4.3	6.3	7.5	4.5	0.1	2.7	8.0	6.0	5.0	0.7	2.5	2.5	0.5	0.0	5.3	-2.4	1.8	4.3	0.4	2.9	5.7	0.9				
072160 Albury Airport AWS	3.9	1.8	0.1	1.5	1.5	2.6	1.2	5.2	7.6	4.7	6.3	7.8	8.3	8.3	5.2	0.8	4.7	8.7	5.4	4.6	5.6	3.9	1.0	1.5	-0.4	3.8	5.3	2.7	5.3	3.8	5.0	4.0	1.1	1.0	1.2	-2.0	
074258 Deniliquin Airport AWS	5.4	3.7	3.3	3.4	3.5	5.6	7.0	9.5	10.8	7.0	4.8	6.5	8.5	3.5	2.1	4.9	8.0	7.1	6.6	5.5	5.3	7.0	0.3	6.6	2.5	6.2	7.0	5.6	4.6	3.7	9.9	3.1	-0.2				
Victoria	Mean Anom	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
070301 Mildura Airport	6.1	+1.7	2.6	1.5	6.0	3.7	6.3	9.4	12.3	4.5	2.8	5.4	8.4	9.9	4.7	3.0	6.6	7.0	8.0	7.2	4.0	3.9	8.6	3.3	8.0	6.0	8.0	10.4	5.0	3.4	9.1	4.0	5.9				
070815 Nhill Aerodrome	6.0	5.0	4.4	6.4	4.3	5.7	7.0	9.1	5.0	5.0	5.6	5.4	8.7	4.3	3.0	8.4	8.9	8.1	3.5	6.8	5.6	7.4	6.0	8.0	5.0	7.2	8.8	6.7	1.5	6.4	2.1	5.8					
080023 Kerang	5.5	+4.4	4.0	2.0	6.3	4.3	4.5	7.3	10.6	8.6	5.7	5.2	6.5	8.5	4.0	2.0	6.5	7.3	6.7	4.4	9.0	7.8	2.2	5.7	4.3	7.2	8.0	8.4	1.3	4.3	4.7	2.0					
081123 Bendigo Airport	4.5	5.0	0.2	1.7	5.7	4.8	5.9	8.2	9.1	5.2	4.3	4.9	6.4	2.1	0.0	4.9	8.8	6.1	1.9	6.9	4.8	7.3	-0.9	4.5	0.2	4.7	6.2	7.5	1.1	6.8	2.1	3.3					
082039 Threlkeld Research	3.0	+1.2	1.0	-0.5	1.2	0.5	1.6	1.8	4.9	11.1	4.2	4.6	6.2	7.6	4.3	1.3	3.6	5.2	2.3	2.7																	

Daily and total rainfall for July 2019

	Total	Avg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Western Australia																																		
001019 Kalumburu	
002056 Kununurra Aero		
003003 Broome Airport	1.2	2.5	0.2	0.2	0.2	0.2	0.2	0.2	.		
003032 Derby Aero	.	4.7		
004032 Port Hedland Airport	.	8.0		
004083 Karratha Aero	0.8	0.6	0.2			
004106 Marble Bar		
005007 Learmonth Airport	25.0	23	19.8	.	0.2	4.8	0.2		
006011 Carnarvon Airport	18.2	41	.	0.2	0.2	.	16.0	.	0.2	1.0	0.2	.	0.2	0.2			
006044 Denham	10.6	38	0.8	7.6	2.2			
007176 Newman Aero		
007185 Paraburdoo Aero	3.6	3.4	0.2			
007045 Meekatharra Airport	6.8	25	6.6	0.2			
007600 Mount Magnet Aero	2.0	0.2	0.2	0.2	1.2	.	0.2			
008296 Morawa Airport	34.6	.	0.2	.	.	27.4	0.2	.	0.2	.	0.2	6.2	.	0.2			
008297 Dalwallinu	38.0	.	0.2	.	.	28.6	0.6	.	0.2	.	0.4	6.6	0.4	0.2	0.2	0.2	.	0.2				
008315 Geraldton Airport	42.8	.	0.2	.	.	35.0	0.6	0.2	0.2	.	0.2	6.4					
009021 Perth Airport	99.6	158	5.8	.	.	41.0	5.2	2.8	0.6	0.4	18	22.4	4.0	4.8	0.2	1.0	0.2	9.2	0.2	.	0.2	0.2				
009131 Jurien Bay	80.2	9.2	0.2	.	.	47.6	3.8	0.2	1.2	2.2	0.2	0.2	0.4	10.0	0.2	0.6	3.6	0.2	.	0.2	.	0.2	.	.				
009225 Perth Metro	108.6	9.4	0.2	.	.	44.2	11.2	1.6	.	0.2	0.8	5.0	13.2	5.8	3.6	0.2	2.6	10.4	0.2			
009240 Bickley	138.4	9.0	0.2	0.2	.	51.6	3.8	1.8	0.2	1.2	0.4	.	0.2	.	.	.	0.6	6.0	38.8	5.8	9.4	0.2	1.2	5.8	1.2	0.2	0.4	.	.	.				
009518 Cape Leeuwin	89.8	191	1.0	.	0.2	17.4	17.2	4.6	3.0	3.4	0.6	0.2	0.2	1.2	0.4	.	.	0.8	2.2	18.2	2.0	2.8	0.2	0.8	0.6	7.6	2.8	2.2	0.2	.				
009617 Bridgetown	79.4	6.8	.	.	.	35.4	4.6	0.8	2.4	0.8	0.2	0.2	.	0.2	0.2	0.2	0.2	1.6	1.8	17.6	1.4	3.0	0.4	1.2	0.2	0.2	0.2	.	.	.				
009746 Witchcliffe	140.4	6.0	.	.	20.0	21.0	5.2	10.6	11.6	4.2	2.6	1.4	.	0.2	0.2	0.2	0.2	5.2	1.6	23.0	4.0	6.8	2.4	7.0	4.2	2.6	0.2	.	0.2	.				
009789 Esperance	69.6	.	.	.	38	11.2	13.0	0.2	.	0.2	0.6	0.6	0.4	9.2	4.6	12.4	7.2	0.2	4.2	.	0.4	1.0	0.4	.	.	.			
009965 Bunbury	94.6	1.2	1.2	.	6.0	31.8	2.2	5.8	16.8	1.2	0.4	.	0.2	.	.	.	1.0	2.8	12.4	4.2	2.0	0.2	1.2	3.8	0.2		
009977 Mandurah	111.8	14.4	.	.	.	53.0	12.2	1.4	2.2	1.0	0.8	0.2	4.8	2.6	8.0	1.0	2.2	0.2	1.8	5.0	
009999 Albany Airport	92.4	0.4	0.4	.	.	20.6	20.4	9.6	.	0.2	0.2	4.2	1.2	.	.	0.2	1.6	.	23.2	1.6	5.2	1.2	.	.	1.8	.	0.2	0.2	.	.	.			
010007 Bencubbin	33.1	47	.	0.2	0.1	25.8	0.4	0.1	0.1	0.2	0.2	0.2	0.2	4.0	0.2	0.3	0.2	0.2	0.2	.	0.4	
010092 Merredin	36.6	44	.	.	.	23.0	8.8	2.0	2.0	0.2	.	.	0.6	
010286 Cunderdin Airfield	46.0	0.6	0.2	0.2	.	36.2	.	0.2	.	0.2	.	0.2	.	.	0.2	.	0.2	7.2	0.2	0.2	0.2	.	0.2	.	0.2	.	0.2	.	0.2	.	.			
010633 Ravensthorpe	25.9	45	.	0.1	.	15.6	1.4	0.2	.	.	0.6	0.3	0.2	6.2	.	0.4	.	0.3	0.4	0.2	
010911 Lake Grace	33.6	.	0.2	.	.	22.6	0.6	0.4	.	.	0.2	0.2	8.4	0.2	0.2	0.2	0.2	0.2	
010916 Katanning	50.4	1.0	0.2	.	.	26.8	0.8	1.4	.	1.6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.8	11.0	.	1.2	.	1.6	0.6	0.2	0.2	0.2	.	.				
010917 Wandering	72.8	3.2	0.2	0.2	.	23.0	2.4	3.4	.	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	5.8	22.8	2.8	5.4	0.2	2.0	1.4	0.2	0.2	0.2	0.2	.				
011003 Eucla	8.2	30	.	0.2	.	0.6	0.4	0.2	0.2	0.2	0.2	0.2	1.4	1.6	2.2	1.0	
011052 Forrest	6.0	.	.	.	0.2	.	0.2	0.2	0.2	0.4	4.0	0.4	0.4		
012038 Kalgoorlie-Boulder Airport	3.8	26	.	.	.	3.4	0.4		
012046 Leonora	0.4		
012071 Salmon Gums Res.Stn.	15.2	37	.	.	.	7.4	3.4	.	.	.	0.2	.	.	0.2	.	.	.	1.2	0.2	.	.	0.2	.	2.4	
013011 Warburton Airfield	0.4	0.4		
013012 Wiluna	1.5	21	.	.	.	0.5	1.0
013017 Giles Meteorological Office	.	7.6	
Northern Territory	Total	Avg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
014015 Darwin Airport	.	1.0
014198 Jabilup Airport	
014932 Tindal RAAF	
014508 Gove Airport	12.0	1.2	0.4	0.2	3.8	2.8	2.6	0.6	0.2	.	.	.	0.2		
014723 Borroloola Airport	
014825 Victoria River Downs	.	6.1	
015135 Tennant Creek Airport	
015590 Alice Springs Airport	.	16	
015635 Yulara Airport	
015666 Rabbit Flat	
South Australia	Total	Avg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
016001 Woomera Aerodrome	0.6	17	0.2	0.4		
0																																		

Daily and total rainfall for July 2019

	Total	Avg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
New South Wales																																		
046043 Wilcannia (Reid St)	25.4	18	25.0	0.4		
048027 Cobar MO	10.2	30	0.6	8.4	0.2	0.2	0.8				
048245 Bourke Airport AWS	16.0	0.2	15.8			
049000 Ivanhoe Aerodrome AWS	7.6	6.2	.	0.2	1.0	0.2	.				
050052 Condobolin Ag Research Stn	19.6	34	16.0	0.6	.	0.4	0.8	1.8	.				
051039 Nyngan Airport	6.6	32	0.6	6.0			
052088 Walgett Airport AWS	4.0	3.2	0.4	0.2	0.2				
053115 Moree Aero	6.6	4.0	2.4	0.2				
054038 Narrabri Airport AWS	13.8	1.6	11.8	0.4				
055325 Tamworth Airport AWS	18.0	7.8	8.0	0.2	2.0	.				
056242 Inverell (Raglan St)	14.4	3.6	10.0	0.8	.				
057095 Tabulam (Muirne)	40.2	.	0.2	3.4	10.2	13.8	6.0	5.8	0.2	.	0.6	.				
058012 Yamba Pilot Station	61.0	85	0.2	0.2	4.4	25.8	6.4	4.0	10.4	1.2	0.2	2.4	.	.	5.8	.				
060139 Port Macquarie Airport AWS	38.6	.	.	.	3.0	6.4	0.6	14.4	0.2	0.2	13.8	.				
061078 Williamtown RAAF	23.4	62	.	.	5.2	1.8	1.2	0.6	1.6	0.4	2.0	.	0.6	10.0	.			
061363 Scone Airport AWS	5.8	.	.	1.2	0.4	.	0.2	2.4	0.4	0.2	0.2	.	0.6	0.2	.					
062101 Mudgee Airport AWS	4.0	2.0	0.2	.	.	1.0	0.2	0.6	.			
063005 Bathurst Agricultural Station	10.2	45	.	.	0.2	.	.	4.6	3.0	.	0.4	1.0	0.2	.	0.2	.	0.2	0.6	.					
063254 Orange Agricultural Institute	32.2	89	9.8	.	0.2	.	"	7.2	3.4	0.2	0.2	"	"	8.2	0.2	0.6	0.2	1.8	0.2	.					
064008 Coonabarabran (Showgrounds)	19.6	53	8.8	6.6	1.0	0.2	.	.	2.0	1.0	.				
065070 Dubbo Airport AWS	6.4	5.8	0.2	0.2	0.2	.					
066062 Sydney (Observatory Hill)	43.4	56	.	.	1.4	22.8	2.6	1.0	.	0.2	4.2	11.2	.					
067105 Richmond RAAF	14.6	.	.	.	0.4	6.2	4.8	2.2	0.2	0.6	0.2					
068072 Nowra RAN Air Station AWS	11.0	.	.	2.4	3.0	2.6	3.0	.					
068151 Jervis Bay (Point Perpendicular)	18.8	.	.	2.2	7.8	2.6	0.2	1.2	.	4.4	0.4	.			
068241 Albion Park (Wollongong Airport)	20.0	.	.	1.8	11.6	4.8	.	1.2	0.6	.						
069018 Moruya Heads Pilot Station	6.6	43	.	.	1.8	1.0	3.2	.	0.4	0.2	.					
070351 Canberra Airport	5.0	0.2	.	.	.	0.2	0.2	.	.	0.8	.	0.2	.	.	0.2	.	0.2	0.2	.	0.2	0.2	.				
071041 Thredbo Village	168.3	0.4	6.6	0.4	0.4	22.1	39.4	49.4	"	12.6	0.2	0.1	4.0	.	.	0.2	27.9	.	0.6	"	2.0	2.0	.						
072150 Wagga Wagga AMO	34.2	55	12.4	"	.	.	"	4.8	0.2	0.4	0.4	0.2	"	8.2	.	0.8	"	"	0.8	6.0	.					
072160 Albury Airport AWS	39.8	.	0.2	7.8	.	0.4	2.4	2.2	11.4	0.6	1.8	.	0.6	0.2	0.2	0.2	1.2	.	2.0	.	2.6	6.0	0.2	.						
072161 Cabramurra SMHEA AWS	6.0	3.0	3.0	7.0	40.2	32.6	.	10.4	.	0.6	16.4	.	.	.	8.8	.	0.6	.	2.6	6.6	.						
073054 Wyalong Post Office	14.4	42	0.2	0.2	24.2	0.4	1.0	.	3.2	0.2	0.6	.	1.4	.	0.2	.	.	.	0.4	0.2	7.6	4.0	0.2	.					
074258 Deniliquin Airport AWS	44.2	.	0.2	.	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2			
Victoria	Total	Avg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
070331 Mildura Airport	10.4	26	2.4	.	2.4	1.8	.	0.6	1.8	1.4	.	
070008 Birchip (Woodlands)	34.2	35	9.2	.	5.8	.	6.8	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	12.4	.
070902 Nilhi Aerodrome	36.0	.	.	.	0.2	.	0.8	6.8	0.4	0.2	15.4	0.8	1.4	0.4	2.0	.	0.4	1.2	.	0.2	.	0.6	3.8	0.2	.	0.8	.	0.2	0.2	.				
070902 Horsham	47.5	50	10.4	0.4	10.2	3.9	"	4.5	1.4	2.0	0.4	5.2	4.0	0.1	.	.	5.0	
080023 Kerang	32.4	39	0.2	9.8	.	0.2	.	0.2	0.6	0.2	0.4	0.2	.	1.4	.	.	.	0.4	.	.	2.6	.	10.2	0.4	.				
081123 Bendigo Airport	34.8	0.4	.	0.2	0.2	.	0.2	.	9.6	0.2	0.4	5.4	3.2	2.0	0.8	.	0.2	1.0	0.6	0.2	.	0.2	1.4	0.4	.	2.8	0.2	5.0	0.2	.				
082039 Rutherglen Research	35.6	69	.	.	0.2	0.2	.	0.2	.	11.8	0.2	0.2	2.2	4.2	11.0	0.2	0.2	0.2	.	0.2	1.4	0.4	.	2.8	0.2	5.0	0.2	.						
083085 Mount Hotham	3.8	.	0.2	0.2	0.2	.	0.2	.	0.2	0.2	0.2	.	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	.			
084016 Gabo Island Lighthouse	20.2	92	.	.	0.2	0.8	0.2	0.2	.	4.4	0.6	7.6	.	0.4	.	0.2	.	0.2	.	0.2	.	0.2	0.8	.	11.0	.	1.2	.	4.6	1.2	.			
084145 Orbost	29.0	.	0.2	.	0.2	0.2	.	0.4	0.4	.	2.6	0.6	3.0	13.6	11.6	.	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	.	
085072 East Sale	41.0	43	.	.	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
085096 Wilsons Promontory Lighthouse	161.6	134	15.4	0.2	1.0	1.6	.	0.4	2.4	7.4	8.6	17.4	25.2	20.0	10.2	16.8	1.2	6.2	8.8	3.6	.	0.6	11.6	1.4	.	0.2	0.2	1.4	.	.				
087031 Launceston RAAF	32.6	43	0.2	4.4	.	6.8	2.2	0.8	0.6	1.4	3.0	0.8	0.2	0.2	0.2	0.2	0.2	0.4	9.6	.	1.6	.	0.2	0.2	0.2	0.2	0.2	.	
087184 Breakwater (Geelong Racecourse)	33.8	.	.	.	1.0	0.2	.	6.6	0.2	2.4	2.2	3.2	0.4	1.8	.	0.2	0.8	0.2	.	0.4	12.0	.	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
089002 Ballarat Aerodrome	50.0	67	.	0.6	.	0.6	.	10.0	0.2	0.6	11.0	4.6	4.8	2.0	0.4	3.0	0.8	2.6	0.6	.	1.8	3.6	0.8	0.4	2.0	0.2	0.2	0.2	0.2	.				
090005 Cape Otway Lighthouse	134.4	122	0.6	2.0	0.8	.	.	7.8	2.6	26	32.4	30.4	7.0	3.4	10.0	2.2	3.2	2.8	2.8	0.4	0.4	10.6	5.6	.	3.4	0.2	0.4	0.2	0.2	0.2				
Tasmania	Total	Avg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
091126 Devonport Airport	77.8	105	2.8	7.6	.	0.4	.	5.2	0.4	5.0	14.0	5.8	1.2	2.2	.	3.0	3.0	1.5																