



Monana

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The **AMETA April meeting** featured a presentation by Mark Little dealing with the installation of a home weather station and a sky camera. It also dealt with how to publish the observations on the Internet using services such as the Bureau of Meteorology (BoM) WOW website and the Weather Underground website. Mark also spoke about the Purple Air Quality Monitor and additional measurements such as ground temperatures.

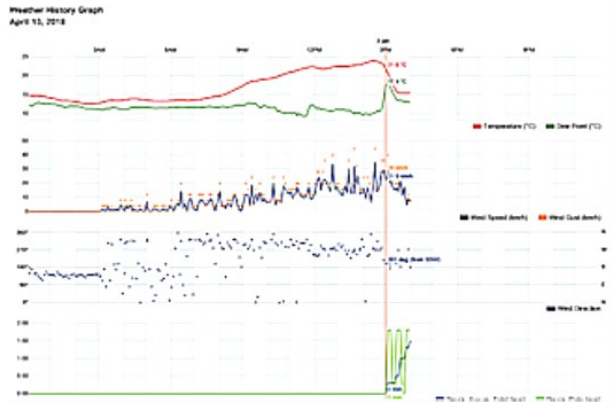


Mark used the generic HP1000C family of weather stations to run though a few points to take into consideration when installing a home weather station. Mark stressed that it is unlikely that most home weather systems could be installed to meet the stringent siting locations required by an official BoM Automatic Weather Station (AWS), but with some care, the reading obtained from the weather station would provide a good reflection of the local micro-climate.

Mark discussed installation problems such as getting adequate clearance from buildings and trees to reduce the disturbance of the air flow to the wind sensor, “heat-banks” caused by adjacent brick walls that could cause the temperature to seem higher at night than it really was, and keeping the internal temperature sensors away from the air-flow from air-conditioners, but away from corners where pockets of air could miss out on the general circulation of air.

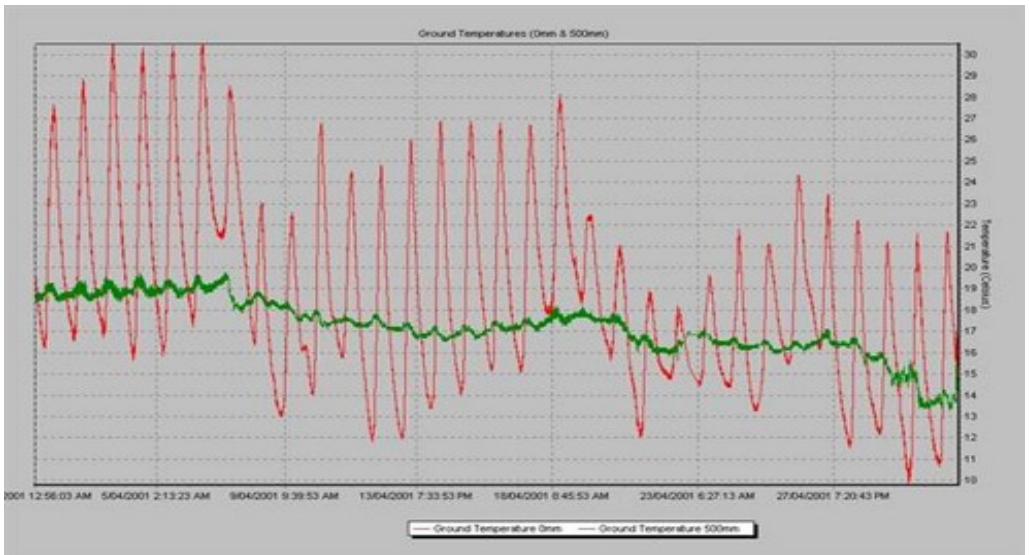


A sample of the graphs obtained from Mark's weather station was used to illustrate how the readings can show and record local weather events. The graph is a bit fuzzy here, but it showed a sharp fall in temperature and dew point just before some strong precipitation. The sky camera movie showed the approaching cloud and the resulting rainfall.



As well as discussing the Purple Air Monitor, Mark outlined other sensors that can be used to supplement the readings provided by most home weather stations. This included atmospheric sensors, lightning detectors, and ground temperature sensors.

As an example, Mark provided a graph of the ground temperature measured in his back yard at surface level (red) and at a depth of 500mm (green). The graph showed that even at only 500mm, the temperature was much more constant than at the surface. The graph also showed the falling temperatures as the season moved towards winter.



New Bureau of Meteorology Re-analysis dataset

What is re-analysis? This is the process of using a state of the art weather model, as if it was available in the past, using available observations at that time, and running the model to build up a depiction of the weather and atmosphere using the physics of the model.

Global coarse resolution reanalysis have been available for ~20 years, but the Bureau of Meteorology is now completing it's own high resolution versions for Australia, called BARRA.

This allows improved understanding of trends over recent decades in processes such as wind, fire danger, evapotranspiration.

For more information see: <http://www.bom.gov.au/research/projects/reanalysis/>

Bureau of Meteorology webinars

The Bureau of Meteorology has started offering webinars on how to use and get the most out of Bureau of Meteorology products, with an initial focus on water information products and services as a starting point.

To be notified of upcoming webinars subscribe at:

<https://e.bom.gov.au/pub/pubType/EO/pubID/zzzz5afc18915b17b538/interface.h>

Drier than average start to 2018

It has been a drier start to the year across much of Australia, challenging those looking after livestock, and meaning a patchy start to the growing season for cropping farmers.

To look at rainfall and temperatures over recent months, see:

<http://www.bom.gov.au/climate/maps/>

And the impacts on soil moisture levels can be seen at the AWRA-L water balance modelling page. Select 'Relative' to look at the difference from average conditions for this time of the year.

<http://www.bom.gov.au/water/landscape/>

Greater Adelaide in April 2018: very warm and slightly drier than average

Rainfall in April was below average across Adelaide and the Hills, despite some heavy rain in the middle of the month. Both days and nights were warmer than average across all sites in Greater Adelaide.

Slightly drier than average

- Despite some heavy rain in the middle of the month, April was drier than average across Greater Adelaide
- Falls at several sites in the Adelaide Hills exceeded 30 mm in the 24 hours to 9am on the 14th, which contributed to Mount Barker receiving close to its monthly average
- April rainfall totals ranged from 33% of average at Adelaide (West Terrace / ngayirdapira) and Edinburgh RAAF to 92% of average at Mount Barker
- Although the monthly rainfall total was less than average, the total count of rain days in the city during April was close to the long term average

Much warmer than average

- April temperatures were much warmer than average across Adelaide and the Hills
- For the city, it was Adelaide's second-warmest April on record, with a mean maximum of 26.2 °C at West Terrace / ngayirdapira behind 26.9 °C in 1923
- Adelaide city had a total of ten days of 30 °C or more during the month, equalling the April record for counts of such days from 1941 and 1904
- Adelaide city also had a run of five consecutive days of 30 °C or above from the 19th to the 23rd, which was the latest such a run of days has occurred in the year (previous latest run of at least five consecutive 30 °C days ended on 21 April at the old West Terrace site in both 1919 and 1902)
- Mean maximum temperatures ranged from 3.0 °C warmer than average at Noarlunga to 5.3 °C warmer than average at Mount Lofty
- Mean minimum temperatures ranged from 1.2 °C warmer than average at Rosedale to 2.8 °C warmer than average at Mount Barker
- On the 10th and 11th, several sites had their highest April temperature on record
- Several sites around Greater Adelaide had their highest April mean daily maximum temperature on record, exceeding records from 2005
- On the 10th, Mount Crawford and Kuitpo Forest Reserve had their warmest April night on record
- Mount Crawford and Kuitpo Forest Reserve also had their highest April mean daily minimum temperature on record, and Mount Barker had its highest April mean daily minimum temperature since 1968
- Several sites had their highest April mean temperature on record

Adelaide (West Terrace / ngayirdapira)

- Total rainfall for Adelaide was 14.4 mm, which is 33% of the long-term average of 44.1 mm
- The mean daily maximum temperature for Adelaide was 26.2 °C, which is 4.1 °C above the long-term average of 22.1 °C. The warmest day was 36.3 °C on the 11th, and the coolest day was on the 16th when the temperature reached 19.2 °C
- The mean daily minimum temperature for Adelaide was 14.7 °C, which is 2.0 °C above the long-term average of 12.7 °C. The coldest morning was 8.9 °C on the 30th, and the warmest morning was on the 10th when the minimum temperature was 24.0 °C

Greater Adelaide Extremes in April 2018

Hottest day	38.2 °C at Edinburgh RAAF on the 11th 38.2 °C at Parafield Airport on the 11th
Warmest days on average	27.4 °C at Rosedale (Turretfield Research Centre)
Coollest days on average	21.1 °C at Mount Lofty
Coldest day	12.9 °C at Mount Lofty on the 14th
Coldest night	5.3 °C at Mount Barker on the 28th
Coollest nights on average	11.2 °C at Mount Barker
Warmest nights on average	15.5 °C at Noarlunga
Warmest night	24.7 °C at Mount Crawford AWS on the 10th
Warmest on average overall	20.5 °C at Adelaide (Kent Town) 20.5 °C at Adelaide (West Terrace / ngayirdapira)
Coollest on average overall	16.6 °C at Mount Lofty
Wettest overall	95.4 mm at Crafers West
Driest overall	8.0 mm at Halbury Road Salisbury (Halbury Road)
Wettest day	40.0 mm at Crafers West on the 15th
Strongest wind gust	106 km/h at Mount Crawford AWS on the 14th

Some notable statistics for April were:

Record highest April temperature

	New record (°C)	Old record	Duration	April Average
Adelaide	36.3 on the 11th	35.8 on the 5th in 1938	93 yrs	22.1
Mt. Barker	36.0 on the 10th	35.2 on the 2nd in 2005	62 yrs	20.5
Parafield	38.2 on the 11th	= 38.2 on the 9th in 2005	62 yrs	22.7
Kent Town	36.9 on the 11th	= 36.9 on the 9th in 2005	42 yrs	22.7

Record highest April daily minimum temperature

	New record (°C)	Old record	Duration	April Average
Mt. Crawford	24.7 on the 10th	23.1 on the 2nd in 2005	24	10.4

Record highest April mean temperature

	New record	Old record	Duration	April Average
Mount Barker	18.2	17.6 in 2005	117	14.4
Adelaide Airport	19.7	19.0 in 2007	63	17.0
Rosedale	19.7	19.6 in 2005	56	16.9
Edinburgh RAAF	20.2	= 20.2 in 2005	45	17.4
Kent Town	20.5	20.2 in 2005	41	17.6
Mount Crawford	18.0	17.2 in 2005	23	14.8
Kuitpo Forest	18.2	17.7 in 2005	20	15.4

Kuitpo Forest	23.7 on the 10th	22.0 on the 10th in 2005	21	11.2
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Many other temperature records were also set in April. For more information plus a summary of statistics please see:

<http://www.bom.gov.au/climate/current/month/sa/archive/201804.adelaide.shtml>

Adelaide (West Terrace / Ngayirdapira), South Australia April 2018 Daily Weather Observations

The official site for Adelaide, having reopened in May 2017.



Date	Temps		Max wind gust		9am		3pm											
	Min °C	Max °C	Dirn	Spd km/h	Time local	Temp °C	RH %	Cld eighths	Dirn	Spd km/h	MSLP hPa							
1	Su	27.3				20.1	52			Calm	1014.0	24.5	44		WSW	13	1013.3	
2	Mo	21.6	21.6	0	16:20	18.2	56		S	15	1022.3	21.0	53		SW	22	1020.9	
3	Tu	22.2	22.2	0	12:45	17.8	62		ESE	9	1024.8	21.1	54		SW	17	1021.4	
4	We	10.2	24.7	0	15:41	17.7	63		S	4	1020.6	24.4	36		SW	13	1016.2	
5	Th	10.4	23.9	0	14:30	19.0	52			Calm	1017.7	22.8	52		SW	15	1016.2	
6	Fr	10.6	25.8	0	15:01	17.8	62			Calm	1021.7	23.3	52		SW	17	1018.2	
7	Sa	12.0	31.2	0	13:49	21.7	46		NE	13	1019.0	30.1	21		W	13	1014.7	
8	Su	17.9	34.0	0	12:15	26.2	24		NE	13	1015.2	28.9	27		SW	15	1014.1	
9	Mo	20.2	36.3	0	15:19	28.3	28		NE	11	1016.1	35.7	11		NW	24	1012.8	
10	Tu	24.0	35.4	0	11:55	29.2	20		NNE	11	1025.4	18.4	21		SW	11	1014.4	
11	We	17.5	36.3	0	13:51	29.4	20		NNE	11	1013.0	35.5	13		NW	33	1007.9	
12	Th	17.4	23.7	0	14:37	19.3	66		W	17	1014.1	22.5	47		WNNW	19	1012.3	
13	Fr	13.9	23.4	0	14:53	17.7	72		N	17	1010.5	15.1	83		WSW	35	1006.5	
14	Sa	14.1	19.3	5.4	10:10	17.0	83		W	31	1005.3	17.6	62		WSW	28	1006.9	
15	Su	14.1	20.1	2.2	12:12	17.9	83		W	20	1012.3	19.9	76		WSW	22	1012.9	
16	Mo	16.5	19.2	2.4	10:26	17.3	89		SW	13	1018.6	18.7	69		SW	13	1019.0	
17	Tu	11.9	21.1	0.6	09:26	16.0	59		NE	11	1025.4	19.4	52		W	15	1022.3	
18	We	14.4	26.8	0	26	08:03	19.3	42	NNE	15	1019.6	26.3	36		WNNW	6	1015.4	
19	Th	30.5	30.5	0	20	05:17	22.6	46	NE	11	1017.4	30.0	26		WNNW	7	1014.9	
20	Fr	21.2	31.5	0	23:57	24.9	35		NE	7	1019.0	30.4	24		NNE	7	1015.9	
21	Sa	18.1	30.6	1.2	05:25	24.9	39		ENE	17	1020.0	29.6	29		WSW	11	1018.2	
22	Su	13.9	31.9	0	23:45	22.3	56			Calm	1020.5	31.4	19		N	9	1016.8	
23	Mo	20.6	31.2	0	11:26	25.4	26		N	13	1016.8	28.9	27		WNNW	15	1014.3	
24	Tu	19.5	21.9	0.6	24	12:57	20.2	85	W	6	1017.7	21.6	65		SW	11	1016.6	
25	We	12.9	22.6	2.0	22	13:55	17.7	72	NE	9	1018.5	21.4	46		SW	13	1016.3	
26	Th	11.4	21.3	0	30	16:39	17.8	67		Calm	1023.2	20.5	55		SW	13	1021.7	
27	Fr	10.4	23.0	0	26	17:16	16.9	56	ENE	15	1026.2	22.7	44		SW	9	1023.6	
28	Sa	10.0	23.3	0	33	13:36	17.9	52		Calm	1026.4	21.1	47		SW	17	1024.7	
29	Su	10.1	23.3	0	24	04:30	16.9	52	W	4	1030.2	22.3	36		SSE	11	1027.5	
30	Mo	8.9	22.4	0	23:01	16.3	61		NW	2	1028.8	21.6	48		WSW	11	1025.2	
Statistics for April 2018																		
Mean		14.7	26.2				20.5	54		9	1019.0	24.7	42			15	1016.7	
Lowest		8.9	19.2				16.0	20		Calm	1005.3	15.1	11		WNNW	6	1006.5	
Highest		24.0	36.3	5.4			29.4	89		W	31	1030.2	35.7	83		WSW	35	1027.5
Total				14.4														

Observations were drawn from Adelaide (West Terrace / Ngayirdapira) [station 023000]
This is now the 'official' site for Adelaide, having reopened in May 2017. Observations are also available from the Kent Town site (station number 023050).

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<http://www.bom.gov.au/climate/dw/IDW5080-06.pdf>

South Australia in April 2018: warmest April on record

April in South Australia was much warmer than average. Both mean and daytime temperatures were the warmest on record, while overnight temperatures were third-warmest. Rainfall was below average throughout the State, with parts of the Agricultural and southern Pastoral districts very much drier than average.

Drier than average

- April rainfall totals were below average throughout the State
- Little or no rain fell in the Far North during April
- South Australia's driest April since 2005, with total rainfall 78% below average

Warmest April on record

- April 2018 was South Australia's overall warmest April on record
- For the State as a whole, the mean temperature was 3.42 °C warmer than average, exceeding the previous record of +3.40 °C from 2005
- Both daytime and overnight temperatures were warmer than average throughout
- Mean maximum temperatures were highest on record across large areas of central, eastern, and northwestern South Australia
- The highest temperatures occurred during the second week of the month, with total fire bans for parts of South Australia during the hot and windy conditions
- Between the 9th and 11th, some sites reached their highest April temperature on record, many of them exceeding records from early April 2005
- Overnight temperatures were also very much above average across most of South Australia, including areas of highest on record through central areas
- On the 10th, five sites had their warmest April night on record
- A large number of sites had their highest April mean daily maximum temperature on record, with most exceeding their previous records from April 2005
- Many sites had either record highest April mean daily minimum temperatures or their highest April mean daily minimum temperature for at least 20 years
- Many sites had their highest April mean temperature on record
- More information about the heat that affected large parts of Australia can be found in a Special Climate Statement: Persistent summer-like heat sets many April records (<http://www.bom.gov.au/climate/current/statements/scs65.pdf>).

South Australia Extremes in April 2018

Hottest day	42.2 °C at Nullarbor on the 9th
Warmest days on average	33.2 °C at Oodnadatta Airport
Coollest days on average	21.0 °C at Neptune Island
Coldest day	12.9 °C at Mount Lofty on the 14th
Coldest night	0.9 °C at Keith (Munkora) on the 27th
Coollest nights on average	9.1 °C at Keith (Munkora)
Warmest nights on average	18.4 °C at Moomba Airport
Warmest night	25.2 °C at Cleve Aerodrome on the 10th
Warmest on average overall	25.7 °C at Moomba Airport
Coollest on average overall	15.9 °C at Mount Gambier Aero
Wettest overall	95.4 mm at Crafers West
Driest overall	0 mm at several locations
Wettest day	40.0 mm at Crafers West on the 15th

Some of April's many temperature records in South Australia were:

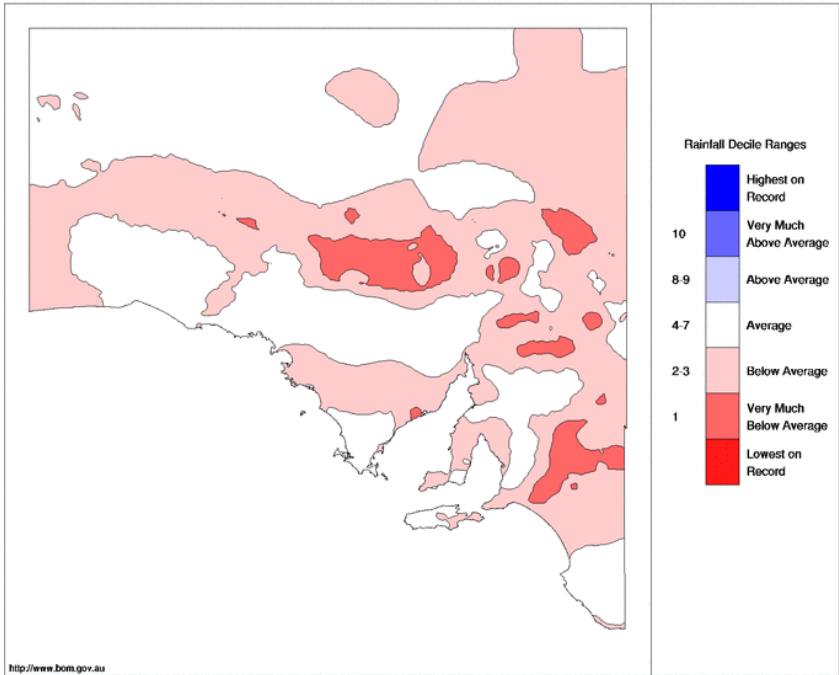
Record highest April temperature				
	New record (°C)	Old record	Duration	April
Adelaide	36.3 on the 11th	35.8 on the 5th in	93	22.1
Ceduna	41.3 on the 9th	40.8 on the 9th in	77	24.2
Mt Barker	36.0 on the 10th	35.2 on the 2nd in 2005	62	20.5
Parafield	38.2 on the 11th	= 38.2 on the 9th in	62	22.7
Cleve	38.1 on the 9th	38.0 on the 2nd in	61	22.7
Streaky Bay	38.1 on the 9th	37.5 on the 1st in 2009	61	23.7
Eudunda	36.0 on the 10th	35.8 on the 2nd in	54	21.4
Warooka	33.5 on the 10th	33.2 on the 3rd in	54	22.0
Hawker	37.0 on the 10th	= 37.0 on the 2nd in	45	25.4
Kent Town	36.9 on the 11th	= 36.9 on the 9th in	42	22.7
Maitland	37.0 on the 9th	36.5 on the 2nd in	37	22.5
Leigh Creek	37.8 on the 11th	37.3 on the 2nd in	34	26.2
Loxton	39.4 on the 10th	37.9 on the 4th in	34	23.9
Nullarbor	42.2 on the 9th	42.0 on the 1st in 2005	32	24.7
Edithburgh	37.9 on the 11th	= 37.9 on the 1st in	26	21.1
Kingscote	34.4 on the 9th	33.9 on the 9th in	24	21.6
Renmark	39.7 on the 10th	38.2 on the 2nd in	23	24.4
Gluepot	40.0 on the 10th	37.9 on the 2nd in	20	24.8
Snowtown	38.0 on the 10th	37.6 on the 1st in 2014	20	24.6
Wudinna	40.0 on the 9th	= 40.0 on the 2nd in	20	25.2
Yunta	37.6 on the 10th	36.4 on the 2nd in	20	24.4

Record highest April mean temperatures in South Australia				
	New (°C)	Old	Years Held	April Average
Mount Barker	18.2	17.6 in 2005	117	14.4
Kyancutta	20.9	20.1 in 2005	86	17.4
Ceduna	20.0	= 20.0 in 1967	76	17.5
Cleve	20.9	20.1 in 2005	76	17.5
Oodnadatta	25.3	= 25.3 in 2005	69	21.5
Woomera	23.2	22.7 in 2005	69	19.3
Adelaide Airport	19.7	19.0 in 2007	63	17.0
Keith	18.4	18.3 in 2005	63	15.9
Warooka	19.7	18.9 in 2005	58	17.3
Elliston	19.4	= 19.4 in 2005	56	17.3
Rosedale	19.7	19.6 in 2005	56	16.9
Eudunda	18.9	18.3 in 2005	53	15.6
Cape Willoughby	18.5	= 18.5 in 2007	50	16.7
Andamooka	24.2	23.8 in 2005	48	20.7
Edinburgh RAAF	20.2	= 20.2 in 2005	45	17.4
Kent Town	20.5	20.2 in 2005	41	17.6
Arkaroola	21.4	= 21.4 in 2005	39	18.2
Leigh Creek	23.4	= 23.4 in 2005	33	19.6
Loxton	18.9	18.3 in 2005	33	16.2
Coonawarra	16.5	16.2 in 2005	32	14.4
Nullarbor	20.5	20.2 in 2005	31	18.2
Whyalla	20.9	20.4 in 2005	29	17.9
Cape Jaffa	17.2	17.0 in 2007	26	15.3
Port Lincoln	19.5	18.9 in 2007	26	17.2
Edithburgh	19.2	18.7 in 2005	25	17.1
Clare	18.5	18.1 in 2005	24	15.3
Cooper Pedy	24.4	23.6 in 2005	23	20.6
Kingscote	17.6	16.6 in 2007	23	15.2
Mount Crawford	18.0	17.2 in 2005	23	14.8
Parawa	17.5	16.9 in 2007	23	14.6
Renmark	19.4	19.3 in 2005	22	16.8
Stenhouse Bay	19.7	19.1 in 2007	22	17.5
Cleve	20.5	20.1 in 2005	21	17.7
Nuriootpa	18.0	= 18.0 in 2005	21	15.4
Strathalbyn	18.9	18.5 in 2005	21	16.4
Kuitpo Forest	18.2	17.7 in 2005	20	15.4
Minnipa	21.4	20.8 in 2005	20	18.4
Roseworthy	20.2	19.4 in 2005	20	17.2
Roxby Downs	23.3	22.1 in 2002	20	19.9
Tarcoola	22.8	22.1 in 2005	20	19.6

See:

<http://www.bom.gov.au/climate/current/month/sa/>

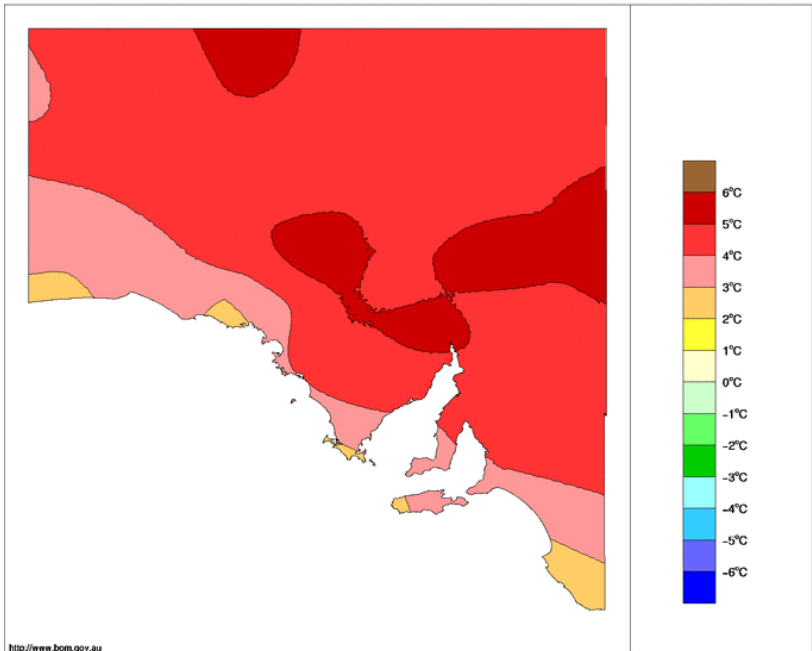
South Australian Rainfall Deciles April 2018
 Distribution Based on Gridded Data
 Australian Bureau of Meteorology



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Issued: 27/05/2018

Maximum Temperature Anomaly (°C) April 2018
 Australian Bureau of Meteorology



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Greater Adelaide in May 2018: An average month

Rainfall in May was generally close to average across Adelaide and the Hills, with moderate rainfall in the early and middle parts of the month. Daytime temperatures were generally close to average, while nights were slightly warmer than average across most sites in Greater Adelaide.

Average rainfall

- Rainfall totals for May 2018 were close to or below average across Greater Adelaide
- A cold front crossed central parts of South Australia on the 3rd, bringing moderate to heavy rainfall to the Greater Adelaide region
- The 48.0mm at Uraidla in the 24 hours to 9am on the 4th was the highest daily rainfall for May 2018 in Greater Adelaide
- A trough brought showers to the Adelaide area during the middle of the month, with totals at several sites reaching close to 40mm in the 24 hours to 9am on the 19th

Average temperatures

- Maximum temperatures were close to average for most sites, ranging from 1.1°C below average at Noarlunga to 0.6°C above average at Mount Lofty
- May 2018 saw a warm start to the month, with most sites observing their warmest day on the 2nd where temperatures were generally in the mid to high twenties
- Parafield Airport reported the warmest day with 28.2°C on the 2nd, as well as the warmest days on average with 19.2°C
- Generally cooler than average conditions were observed from the 10th to the 24th; Mount Lofty reached a maximum temperature of only 8.6°C on the 10th, the coolest day in the Greater Adelaide area during May 2018
- Minimum temperatures were generally warmer than average for most sites, ranging from 0.7°C below average at Rosedale to 1.9°C above average at Adelaide Airport and Mount Barker
- Most sites reported their coolest night on the 16th when temperatures were below 5°C at numerous locations
- The the coolest night in Greater Adelaide was at Rosedale which reported 1.2°C on the 14th

Adelaide (West Terrace / ngayirdapira)

- Total rainfall for Adelaide (West Terrace / ngayirdapira) was 62.4 mm, which is 92% of the long-term average of 68.0 mm
- The mean daily maximum temperature for Adelaide (West Terrace / ngayirdapira) was 18.6°C, equal to the long-term average.. The warmest day was 26.6°C on the 2nd, and the coolest day was on the 17th when the temperature reached 15.2°C
- The mean daily minimum temperature for Adelaide (West Terrace / ngayirdapira) was 11.5°C, which is 1.1°C above the long-term average of 10.4°C. The coldest morning was 4.8°C on the 16th, and the warmest morning was on the 27th when the minimum temperature was 16.8°C

Wind

- A cold front crossed central South Australia on the 3rd, bringing severe wind gusts to the Adelaide area; Adelaide Airport reported daily maximum wind gusts of 98km/h and 94km/h on the 3rd and 4th respectively, while Mount Crawford and Outer Harbour (Black Pole) both reported 91km/h on the 4th.

Greater Adelaide Extremes in May 2018

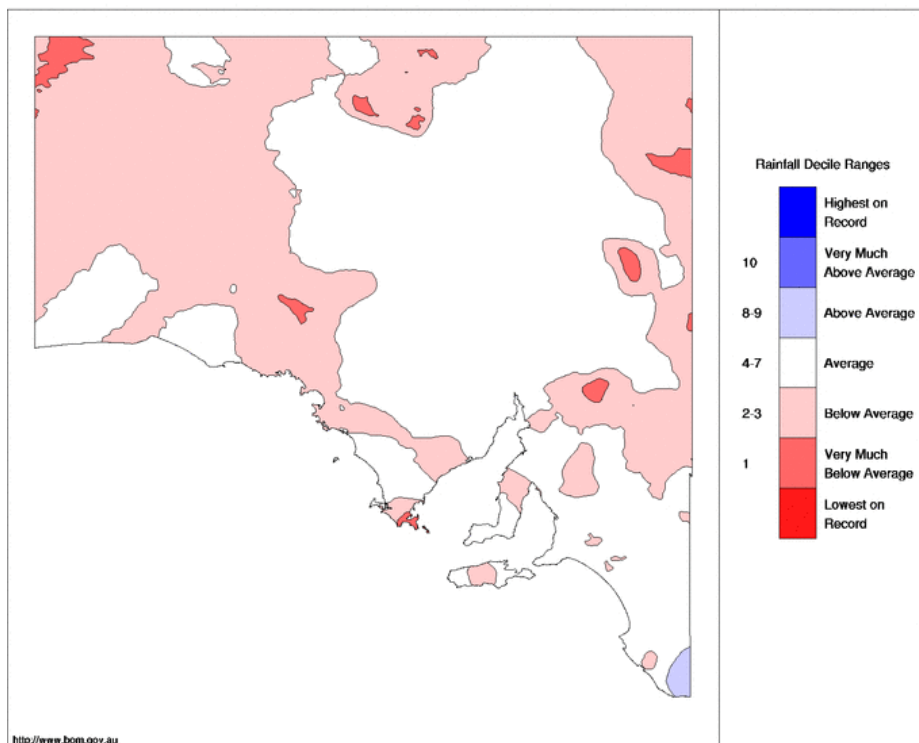
Hottest day	28.2 °C at Parafield Airport on the 2nd
Warmest days on average	19.1 °C at Parafield Airport
Coollest days on average	12.8 °C at Mount Lofty
Coldest day	8.6 °C at Mount Lofty on the 10th
Coldest night	1.2 °C at Rosedale on the 14th
Coollest nights on average	7.6 °C at Rosedale
Warmest nights on average	11.6 °C at Noarlunga
Warmest night	17.7 °C at Noarlunga on the 27th
Warmest on average overall	15.1 °C at Adelaide (West Terrace / ngayirdapira)
Coollest on average overall	10.3 °C at Mount Lofty
Wettest overall	102.3 mm at Uraidla
Wettest day	48.0 mm at Uraidla on the 4th
Strongest wind gust	98 km/h at Adelaide Airport on the 3 rd

For more information on May's temperatures and rainfall, plus a summary of statistics please see:

<http://www.bom.gov.au/climate/current/month/sa/archive/201805.adelaide.shtml>

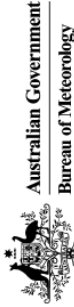
South Australian Rainfall Deciles May 2018

Distribution Based on Gridded Data
Australian Bureau of Meteorology



Adelaide (West Terrace / Ngayirdapira), South Australia May 2018 Daily Weather Observations

The official site for Adelaide, having reopened in May 2017.



Date	Temps		Rain	Evap	Sun	Max wind gust			9am			3pm									
	Min °C	Max °C				mm	mm	hours	Dirn	Spd km/h	Time local	Temp °C	RH %	Cld eighths	Dirn	Spd km/h	MSLP hPa				
1 Tu	14.2	23.5	0	11.03		NNW	24	11:03	18.1	41		N	9	1022.9	21.6	26	NW	11	1018.5		
2 We	15.2	26.6	0	19.1	34	NNW	37	23:10	19.1	34		NE	11	1014.8	25.9	23	NW	17	1009.8		
3 Th	15.9	17.4	4.8	21:08	90	NW	50	21:08	16.5	90		N	15	1008.1	17.1	74	NW	20	1007.6		
4 Fr	11.2	18.4	15.8	00:05	49	WSW	63	00:05	15.6	49		SW	20	1020.2	17.3	61	WSW	19	1022.6		
5 Sa	11.2	20.3	0	11:40	74	NNW	24	11:40	14.2	74		N	11	1030.5	19.8	57	WSW	11	1030.3		
6 Su	9.8	21.8	0	11:29	70	NNE	28	11:29	15.4	70		NE	7	1031.7	20.9	40	WNNW	13	1026.3		
7 Mo	14.3	20.5	0	13:15	46	NW	50	13:15	16.1	46		N	17	1018.3	19.3	45	NW	17	1016.4		
8 Tu	9.9	19.2	0.6	15:27	83	WNNW	20	15:27	14.1	83		NNE	4	1023.5	18.4	51	WNNW	9	1021.5		
9 We	8.7	18.5	0	19:27	75	W	54	19:27	12.8	75		N	11	1022.1	17.4	65	NW	17	1019.1		
10 Th	10.4	15.4	4.4	13:27	74	SSW	63	13:27	12.0	74		SSW	37	1021.4	12.2	76	SSW	20	1020.7		
11 Fr	9.3	17.8	2.8	12:35	68	SSW	54	12:35	12.3	68		S	19	1026.3	15.1	56	SSW	17	1026.3		
12 Sa	10.0	17.7	0	11:01	59	S	35	11:01	14.4	59		SSW	9	1030.5	16.8	55	S	15	1028.9		
13 Su	11.0	18.9	0	01:14	69	S	28	01:14	14.6	69		SSE	9	1032.3	18.2	52	SSE	13	1029.3		
14 Mo	5.9	16.1	0	15:20	83	WSW	22	15:20	10.8	83			Calm	1030.7	15.8	61	WSW	11	1028.0		
15 Tu	10.8	17.7	0	13:20	70	SE	35	13:20	14.0	70		N	4	1029.6	15.6	65	SSE	17	1029.3		
16 We	4.8	17.1	0.4	15:47	10.5	SSE	28	15:47	10.5	66			Calm	1034.3	16.6	48	SSE	13	1032.1		
17 Th	10.5	15.2	0	12:31	13.3	WSW	30	12:31	13.3	59		S	6	1032.7	15.0	58	SSE	13	1030.0		
18 Fr	12.9	17.8	6.8	12:30	15.2	WSW	28	12:30	15.2	94		W	9	1028.4	15.2	81	WSW	11	1026.8		
19 Sa	12.2	17.6	22.8	15:14	13.7	SSW	30	15:14	13.7	91		NNE	7	1028.3	16.3	71	SSW	17	1026.4		
20 Su	10.4	16.0	0	13:22	12.2	WSW	26	13:22	12.2	82			Calm	1029.6	15.4	66	SSW	11	1028.5		
21 Mo	12.2	16.4	0	13:37	15.2	WSW	35	13:37	15.2	72		SW	9	1030.6	15.7	68	WSW	17	1029.3		
22 Tu	14.0	16.8	0	06:50	15.5	SW	31	06:50	15.5	64		SSW	13	1031.3	16.0	71	SSW	11	1029.3		
23 We	12.6	16.6	0.2	11:50	14.3	S	20	11:50	14.3	80			Calm	1031.2	15.9	60	SSW	9	1028.7		
24 Th	12.7	16.0	0	23:38	14.4	E	24	23:38	14.4	62		ESE	7	1029.8	15.3	56	E	13	1026.6		
25 Fr	8.5	20.1	0	22:41	14.1	ENE	28	22:41	14.1	58		NNE	9	1026.7	19.5	41	NNE	9	1023.1		
26 Sa	14.1	24.8	0	13:32	16.9	NNE	31	13:32	16.9	47		NNE	9	1022.7	22.2	31	NNE	9	1018.9		
27 Su	16.8	19.4	0	03:59	18.2	NNE	33	03:59	18.2	62		E	2	1019.2	17.3	77	NNW	11	1017.0		
28 Mo	15.0	21.7	1.4	13:55	16.3	NW	43	13:55	16.3	77		NNE	17	1016.6	21.2	59	NNW	24	1012.1		
29 Tu	13.0	15.7	0.2	15:56	14.7	WSW	61	15:56	14.7	64		W	19	1019.4	14.7	44	WSW	30	1020.1		
30 We	8.0	16.3	1.6	15:10	11.3	WNNW	31	15:10	11.3	73		NNE	7	1028.9	15.5	61	WNNW	17	1027.9		
31 Th	10.5	18.1	0.6	14:42	13.1	W	19	14:42	13.1	84		NNW	4	1031.0	16.9	66	WSW	11	1029.1		
Statistics for May 2018																					
Mean	11.5	18.6			14.5				14.5	68				1025.9	17.4	56			14	1023.9	
Lowest	4.8	15.2			10.5				10.5	34			Calm	1008.1	12.2	23		#	9	1007.6	
Highest	16.8	26.6	22.8		19.1	63			19.1	94		SSW	37	1034.3	25.9	81	WSW	30	1032.1		
Total			62.4																		

Observations were drawn from Adelaide (West Terrace / Ngayirdapira) (station 023000)
This is now the "official" site for Adelaide, having reopened in May 2017. Observations are also available from the Kent Town site (station number 023090).
ICDJM5081_201805 - Prepared at 13:03 UTC on 7 Jun 2018
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South Australia in May 2018: drier than average, close to average temperatures

Rainfall during May was generally below average across much of South Australia, continuing a run of five consecutive months of below average rainfall for the State as a whole. Daytime temperatures were close to average in most districts, while overnight temperatures were generally cooler than average in the north but warm across the Southeast.

Below average rainfall

- Rainfall during May was 58% below average
- Rainfall was generally below average across most of South Australia
- The northern Pastoral districts received little or no rain during the month
- Several cold fronts during the month brought rainfall totals close to average across the southeastern agricultural districts, including a small area of above average rainfall in the Lower Southeast
- May continued a run of five consecutive months of below average rainfall for South Australia as a whole

Daytime temperatures close to average, cooler than average nights in the north

- The mean temperature for South Australia as a whole was close to the May average, just 0.07°C cooler than average
- Daytime temperatures were close to average throughout most of the State, with just a few isolated patches of above average mean maximum temperatures
- The mean maximum temperature for South Australia as a whole was 0.42°C warmer than average, well below the record-breaking heat of April but continuing a run of 13 consecutive months of warmer than average mean maximum temperatures for the State
- Overnight temperatures were generally cooler than average in Pastoral districts but warmer than average in southern Agricultural districts
- A complex low pressure system brought cold temperatures and rain to much of South Australia on the 11th
- Severe weather warnings were issued for damaging winds and thunderstorms in parts of South Australia, including the Mount Lofty Ranges, Murraylands, Upper South East, Lower South East, and Kangaroo Island districts
- Cape Jaffa recorded a maximum wind gust of 100 km/h on the morning of the 10th, the strongest at the site during May since at least 2003
- On the morning of the 14th, cold air associated with a complex low pressure system resulted in minimum temperatures dropping below average and many sites across the State had their coldest night of the year so far
- On the 14th, minimum temperatures were close to freezing in the Lower North and Upper Southeast districts, and below 5°C across large areas of the State
- Another cold front crossed southern parts of the State on the 15th, with the cold air behind the front resulting in overnight temperatures that were more than six degrees below average in parts of the Southeast
- On the 30th, Nullarbor and Tarcoola Aero had their lowest May temperature on record, although the old Tarcoola site recorded a lower temperature of -1.7°C on 27 May, 1937

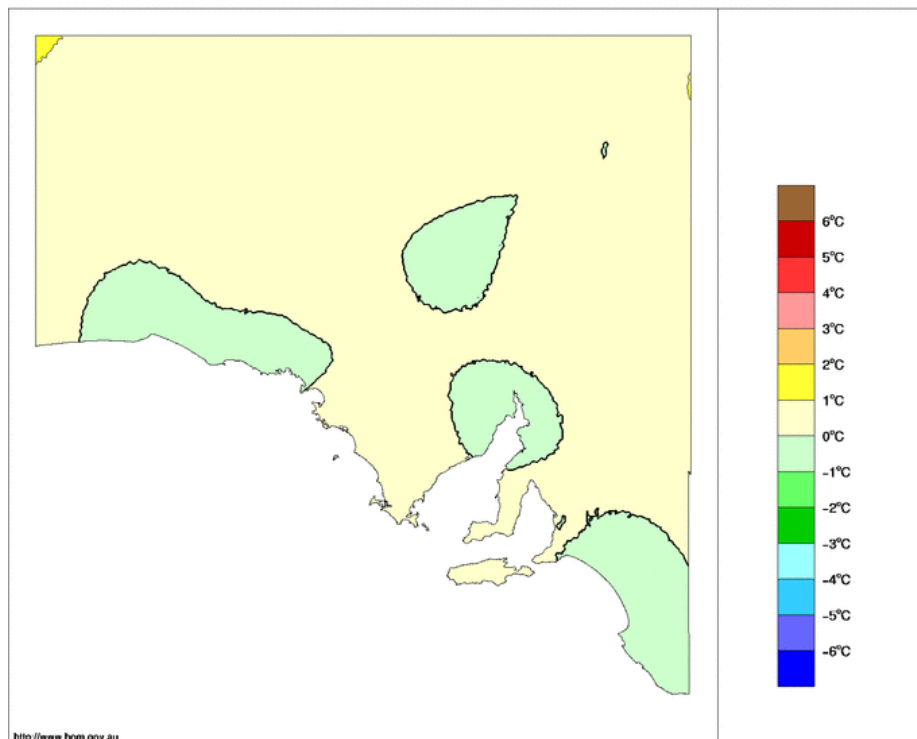
South Australia Extremes in May 2018

Hottest day	31.5 °C at Oodnadatta Airport on the 2nd
Warmest days on average	23.7 °C at Oodnadatta Airport
Coollest days on average	12.8 °C at Mount Lofty
Coldest day	8.6 °C at Mount Lofty on the 10th
Coldest night -	1.2 °C at Keith (Munkora) on the 16th
Coollest nights on average	4.6 °C at Gluepot Reserve (Gluepot)
Warmest nights on average	14.3 °C at Neptune Island
Warmest night	19.3 °C at Oodnadatta Airport on the 3rd
Warmest on average overall	16.5 °C at Moomba Airport
Coollest on average overall	10.3 °C at Mount Lofty
Wettest overall	117.6 mm at Kalangadoo (Mirnat)
Driest overall	0 mm at Moomba Airport
Wettest day	48.0 mm at Uraidla on the 4th
Strongest wind gust	100 km/h at Cape Jaffa (The Limestone) on the 10 th

Record lowest May temperature

New record(°C)	Old record	Years Held	May Average
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Maximum Temperature Anomaly (°C) May 2018
Australian Bureau of Meteorology



Greater Adelaide in autumn 2018: Warm with below average rainfall

Rainfall was below average during autumn 2018, continuing the generally below average rainfall experienced for 2018. Both daytime and night time temperatures were well above average.

Below average rainfall

- Rainfall was below average for autumn 2018, with a closer to average in May, not enough to offset below average rainfall reported in March and April
- Rainfall totals were mostly below 100mm in the Adelaide Plains, reaching the 150mm to 200mm range in the Hills
- Uraidla reported the highest autumn total rainfall with 212.0mm, as well as the highest daily total with 48.0mm in the 24 hours to 9am on 4 May

Above average temperatures

- Both daytime and night time temperatures were well above average, largely due to a warm March and very warm April
- Maximum temperatures were well above average ranging from 0.7°C above average at Noarlunga to 2.9°C above average at Mount Lofty.
- Adelaide (Kent Town) had a total of twenty days of 30°C or more (ten in March and ten in April) breaking the Adelaide city autumn record of nineteen for counts of such days in 1986; Adelaide (West Terrace / ngayirdapira) reported nineteen days of 30°C or more (nine in March and ten in April)
- Both Adelaide city sites had a run of five consecutive days of 30°C or above from 19 April to 23 April, the latest such a run of days has occurred in the year. The previous latest run of at least five consecutive 30°C days ended on 21 April at the old West Terrace site in both 1919 and 1902)
- Minimum temperatures ranged from 0.2°C below average at Rosedale to 2.1°C above average at Mount Barker

Adelaide (West Terrace / ngayirdapira)

- Total rainfall for was 81.2 mm, 60% of the long-term average of 136.1 mm
- The mean daily maximum temperature was 24.0°C, which is 1.8°C above the long-term average of 22.2°C. The warmest day was 36.3°C on 11 Apr, and the coolest day was on 17 May when the temperature reached 15.2°C
- The mean daily minimum temperature was 14.0°C, which is 1.2°C above the long-term average of 12.8°C. The coldest morning was 4.8°C on 16 May, and the warmest morning was on 9 Mar when the minimum temperature was 24.1°C

Extremes in autumn 2018

Hottest day	38.2 °C at Edinburgh RAAF on 11 Apr
	38.2 °C at Parafield Airport on 11 Apr
Warmest days on average	24.8 °C at Parafield Airport
Coollest days on average	18.6 °C at Mount Lofty
Coldest night	1.2 °C at Rosedale on 14 May
Coollest nights on average	10.3 °C at Mount Lofty
Warmest nights on average	14.3 °C at Noarlunga
Warmest night	24.7 °C at Mount Crawford AWS on 10 Apr
Warmest on average overall	19.1 °C at Adelaide (West Terrace / ngayirdapira)
Wettest overall	212.0 mm at Uraidla
Wettest day	48.0 mm at Uraidla on 4 May
Strongest wind gust	106 km/h at Mount Crawford AWS on 14 Apr

South Australia in autumn 2018: warmer and drier than average

Rainfall during autumn was below average across most of South Australia. Daytime temperatures were very much above average in almost all areas, while overnight temperatures tended to be closer to but still warmer than average in most districts.

Drier than average

- Autumn rainfall for South Australia as a whole was 66% below average
- March, April and May were each drier than average
- After a drier than average first half of the season, the first two weeks of May saw more than 50mm fall across much of the Lower Southeast and in the Mount Lofty Ranges, with totals for May close to average in those regions
- Autumn rainfall was very much below average across many areas of the State
- Heavy rain on 23 March resulted in autumn rainfall totals that were above average around Moomba in the Far North
- Autumn break rainfall totals typically associated with crop production (25mm in three days, or 30mm in seven days) were reached in the Lower Southeast, the Mount Lofty Ranges, Kangaroo Island, and lower parts of the Eyre Peninsula, however many other agricultural districts are still waiting to receive such falls
- More broadly across the whole of southern Australia, autumn rainfall was 56% below average, making it the southern half of the country's second-driest autumn on record_and driest since 1902
- A few sites had their lowest total autumn rainfall for at least 20 years

Warmer than average

- South Australia had its eighth-warmest autumn mean temperature on record during 2018, with the statewide mean temperature 1.42°C warmer than average
- The mean temperature was warmer than for 2017, but cooler than for 2016
- The mean maximum temperature for South Australia as a whole was the third-warmest on record, 2.06°C warmer than average and highest since 2005
- Mean minimum temperatures were also warmer than average, but outside the top ten at 0.76°C warmer than the autumn average
- April was South Australia's warmest on record, so despite closer to average temperatures during March and May, the season was much warmer than average
- South Australia had its overall hottest April day on record on 9 April, with a statewide area average maximum temperature of 38.34°C (previous record for April was 37.70°C on 1 April, 2014)
- There were a total of 44 days during autumn on which the statewide area average maximum temperature was 30°C or more, exceeding the previous record count of 40 days during autumn 2005
- Edithburgh equalled its record highest autumn mean daily maximum temperature
- On 30 May, Nullarbor and Tarcoola Aero had their lowest autumn temperature on record, although the old Tarcoola site recorded a lower temperature of -1.7°C on 27 May, 1937
- Kingscote Aero had its highest autumn mean daily minimum temperature on record_and equalled its highest autumn mean temperature on record

South Australia Extremes in autumn 2018

Hottest day	42.6 °C at Tarcoola Aero on 17 Mar
Warmest days on average	30.6 °C at Oodnadatta Airport
Coollest days on average	18.6 °C at Mount Lofty
Coldest day	8.6 °C at Mount Lofty on 10 May
Coldest night -	1.2 °C at Keith (Munkora) on 16 May
Coollest nights on average	8.7 °C at Gluepot Reserve (Gluepot)
Warmest nights on average	16.5 °C at Moomba Airport
Warmest night	26.2 °C at Moomba Airport on 8 Mar
Warmest on average overall	23.5 °C at Moomba Airport
Coollest on average overall	14.5 °C at Mount Lofty
Wettest overall	212.0 mm at Uraidla
Driest overall	3.1 mm at Marree (Witchelina Station)
Wettest day	61.4 mm at Moomba Airport on 23 Mar
Strongest wind gust	115 km/h at Naracoorte Aerodrome on 13 Apr 115 km/h at Neptune Island on 14 Apr

Some notable statistics for Autumn in South Australia were:

Record highest autumn mean daily maximum temperature

	New record(°C)	Old Record	Years Held	Autumn Average
Edithburgh	22.6	= 22.6 in 2013	25	21.1

Record lowest autumn temperature

	New record(°C)	Oldrecord	Years Held	Autumn Average
Nullarbor	0.5 on 30 May	1.0 on 16 May 1996	32	11.6
Tarcoola	0.0 on 30 May	= 0.0 on 29 May 2004	21	12.2

Record highest autumn mean daily minimum temperature

	New record(°C)	Oldrecord	Years Held	Autumn Average
Kingscote	10.9	10.7 in 2016	23	9.3

Record highest autumn mean temperature

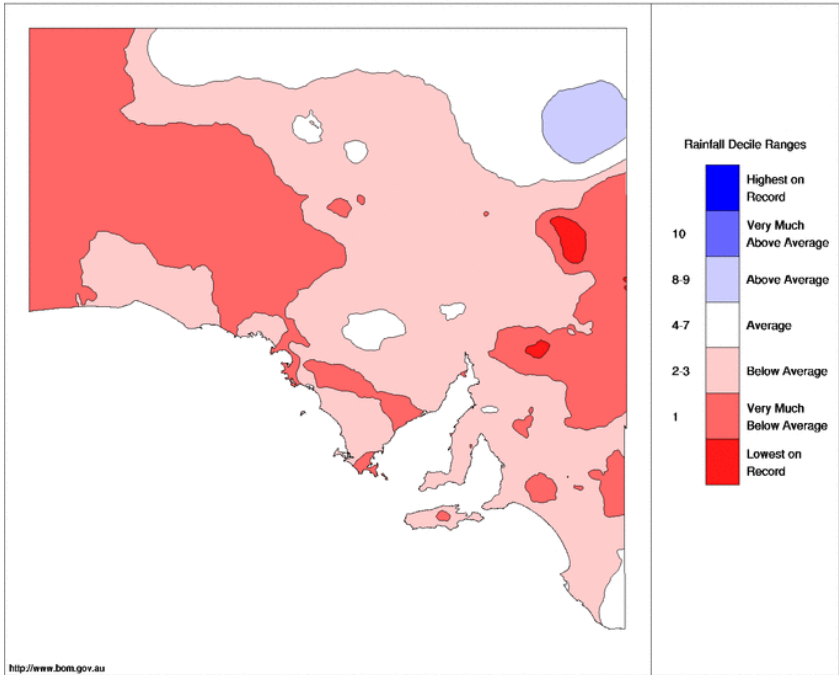
	New record(°C)	Old record	Years Held	Autumn Average
Kingscote	16.9	= 16.9 in 2013	23	15.4

For more information plus a summary of South Australia's Autumn statistics please see:

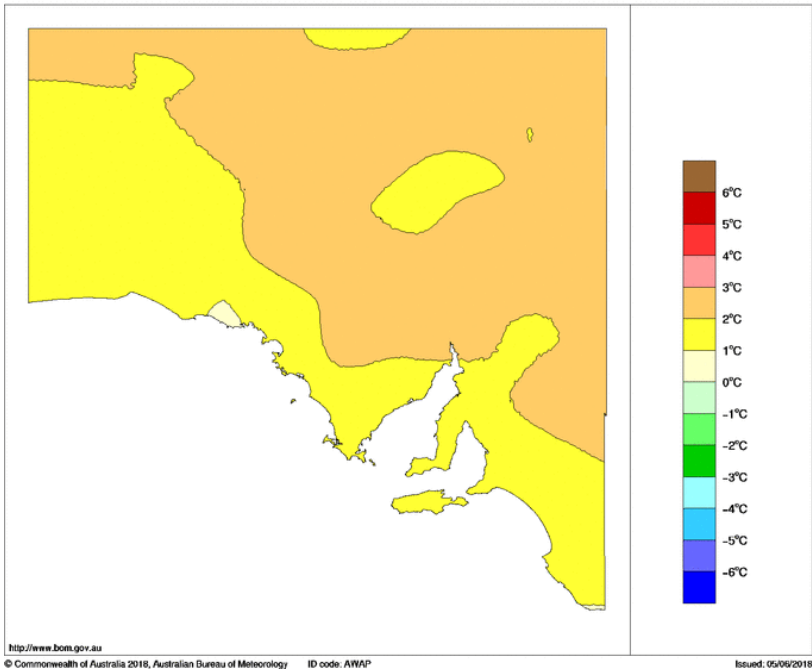
<http://www.bom.gov.au/climate/current/season/sa/archive/201805.summary.shtml>

All the details you could possibly want and more are available on the BoM website.

Visit <http://www.bom.gov.au/climate> and wander through the various archived climate reports and summaries which are available in text and graphical forms.



Maximum Temperature Anomaly (°C) 1 March to 31 May 2018
Australian Bureau of Meteorology





Australian Meteorological Association Inc (AMetA)
www.ameta.org.au

NEXT MEETING

6.00 PM TUESDAY 19 June 2018

*Bureau of Meteorology offices, Level 4, Optus Building, NW corner of
South Terrace & King William Street , Adelaide*

RFDS Pilot Discusses Impact of Weather on Flight Operations "We will always come and get you"

Ever thought of the thrills and challenges Royal Flying Doctor pilots might endure, especially in inclement weather, as they undertake their selfless jobs? RFDS pilot Geoff Aro based in Alice Springs will discuss the impact of weather on his flying operations - how he reacts when fog covers the landing area, what clouds to avoid, how to deal with turbulence and other challenges thrown up by the unique conditions of the Outback.

Last year 63 RFDS aircraft undertook more than 75,000 flights covering a distance of almost 27 million kilometres - enough to fly to the moon and back 35 times. The Alice Springs base is responsible for an area of 1.25 million square kilometres, "Our average week would be about 70 flights out of Alice Springs alone," says Geoff Aro. "Joining the Flying Doctors was like a calling and everyone who works for the organisation has a passion for helping people."

Convenient free street parking is usually available nearby (e.g. South Tce.)

We look forward to seeing you—but please try not to be late!

For further information contact

<i>Secretary:</i>	<i>Darren Ray</i>
<i>Phone:</i>	<i>8366 2664</i>
<i>Fax:</i>	<i>8366 2693</i>

Inquiries or suggestions, please contact the Secretary on the phone number listed above.