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October 2017

The last AMETA meeting, held on Tuesday 15th August, was intended to be the AGM. Agenda items included reports, committee elections and a discussion about the future of AMETA; with particular regard to working with the Australian Meteorological and Oceanographic Society (AMOS) to strengthen meteorological outreach across Australia. Unfortunately a quorum was not available (13 members vs 15 as required) so it was decided to defer the presentation of reports and elections for President, Vice President, Secretary, and 5 Committee members to the October meeting (these were the only matters requiring a vote).

The discussion on the future of AMETA was held and a summary follows:

DISCUSSION ON AMETA / AMOS Collaboration

Reasons for this discussion

- Ongoing lack of depth in our meteorological expertise and network (making it difficult to maintain a regular, relevant speaker program)
- The major impetus for the formation of AMETA – a forum facilitating networks/ contacts between the Bureau and the community is now met in other ways (specialist committees, internet…)
- Integrating with a society with similar interests would strengthen the group and provide a wider meteorological related network for all members.

It is timely to look at how we can continue to provide a robust facility for our members to:

- meet on a regular basis to hear about and discuss meteorological and related topics
- gain greater awareness of a range of diverse aspects of meteorology and recent advances in the science and services
- have access to meteorological and related professionals including staff of the Bureau of Meteorology disposed to this type of collaboration.

Notes from Discussion

We looked at the following questions:

1. Why do we renew our AMetA membership each year?

- The presentations – good topics, expert speakers, diverse range of topics, non-technical.
- Seasonal Updates and BOM website updates each meeting with climatologist Darren Ray – direct contact with the Bureau of Meteorology.
- Meeting in a social context with like-minded people and experts.
- Holding meetings at the Bureau in proximity of the Forecasting Centre. Occasional field trips (RFC, observing stations etc)
- The Citizen Science aspects

2. How could AMETA improve ?

∗ Make more use of social media – both for promotion and for regular communication between members, to share ideas, experiences (particularly in relation to amateur observing and the Weather Observing Website)

: Requires a significant increase in existing level of social media comms skills

∗ Be more flexible with meeting times and formats. Eg pre-meeting nibbles, some meetings at a pub – with a meal, possibly starting at a later time.

: Requires a budget for nibbles and meeting organiser

∗ Occasional workshops – eg cloud identification

∗ Strengthen our Citizen Science Role.

: Eg become a 'hub' for amateur weather observers making use of automatic weather stations, link with science teachers who include weather observing in their science studies

∗ Need to encourage more technical people with appropriate skils to join AMetA (and draw up a set of protocols)

∗ Approach Science teachers, and the Geography community

∗ Make membership more attractive to country weather enthusiasts (eg volunteer rainfall observers)

: Need a dedicated membership officer

Initial Action Arising

1. Test the water with AMOS

- Invite its members to our upcoming meetings and Annual Dinner
- Darrell advise members of upcoming AMOS meetings that AMETA members may attend

2. Check out the Australian Citizen Science Association website

- Look into 'best practice' involvement with volunteers – appropriate protocols etc

3. Current President, Beth, to attend the AMOS 30 year celebrations 21-23 August and the AMOS Executive Council Meeting, 24 August with a view to working more closely with AMOS – for mutual benefits of members, ie:

- Promote AMETA and its strengths (public outreach and citizen science)
- Discuss our similarities (respective visons)/ differences (especially demographics, non-technical nature of AMETA presentations, membership fees)
- Promote the value of non-professional membership and citizen science both data rescue and amateur observers. (Australian Citizen Science Association website)

Desired Outcome: - Commitment to ongoing collaboration between AMetA and AMOS with a view to developing a stronger citizen science focus in meteorology and related sciences in Australia.

AMETA

Vision — *To foster interest in, and advance the knowledge of meteorological and related sciences*

Strengths

A. Focus is on outreach to the community

- 38 fee paying members + 2 Life members
- Membership actually increasing (slowly)
- Runs regular bi-monthly speaker program
- Substantial bi-monthly newsletter with BoM climate input
- Has a developing social media contact list
- Has a functioning and committed executive

B. Has a long-standing relationship with BoM
- meeting facilities
- commitment of speakers
- access to extensive social media resources
- access to BoM's pool of volunteers (eg. observers)

C. Has a strong volunteer involvement—*including a long standing citizen science program and a history research and writing group*
- Experience with engaging and managing volunteers
- International track record of delivery to meteorology
- Track record in obtaining grants
- Strong support of regional BoM office (in kind resources)
- Enriches experience of participants and provides a legacy for future generations

AMOS

Vision—*To advance the scientific understanding of the atmosphere, oceans and climate system and their socio-economic and ecological impacts and promote applications of this understanding for the benefits of all Australians*

Strengths

A. Has national reach and provides a credible independent voice on relevant issues
- More than 500 members – from BOM, CSIRO, Universities, general public
- Attracts highly regarded Australian researchers and other professionals in meteorology, oceanography and related fields
- 'Chapters' which hold regular meetings in most States/Territories
- Has expert groups in Climate variability, weather forecasting and physical oceanography

B. Activities include
- Publications – Qtrly Newsletter Bulletin of AMOS (BAMOS) plus a regular Scientific Journal for peer reviewed research papers.
- Workshops, meetings public events
- Annual conference
- Recently set up an Education and Outreach Committee – to engage the community

Amalgamation

A. Value proposition to AMOS
- Would bring a model of community engagement replicable in AMOS chapters
- Would bring a model for engaging citizen scientists replicable in AMOS chapters
- Could provide valuable support to the recently revitalised SA chapter
- Low/non-existent overheads of operation

B. Value proposition to AMETA
- Membership and focus 'refresh'. Strengthen membership
- Provide a candidate for committee chair (and other positions)
- Engagement with meteorological, oceanographic and related professionals

C1. Amalgamation – Soft (trail period of 1 or 2 years, then review)
- Maintain separate finance, admin and execs but present in SA as AMOS/AMETA
- Membership in one = membership in the other
- AMOS member to Chair AMETA, providing links between the 2 organisations
- Trial a joint SA Region newsletter
- Possible AMETA finance contribution to cover issues of admin, promotion, joint risk management, etc

C2. Amalgamation – Full
- Requires an AMOS membership category for "community member".
- Could operate as a sub-committee of AMOS Exec
- Regional AMOS Exec expanded to include "Community" appointee(s)

Adelaide (West Terrace / Ngayirdapira), South Australia
August 2017 Daily Weather Observations

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

Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Tu	5.5	16.4	0.4			NE	22	23:58	9.2	84		NNE	6	1026.4	15.9	52		NE	11	1022.3
2	We	9.2	15.6	0			ENE	39	15:46	12.4	51		ENE	17	1020.5	14.1	48		NE	13	1016.6
3	Th	9.0	12.2	13.0			ESE	28	02:43	10.2	77		E	13	1012.0	11.1	73		S	7	1010.5
4	Fr	8.5	13.4	0.4			NW	52	13:47	9.8	88		N	15	1009.1	9.8	86		NW	22	1005.5
5	Sa	8.5	14.9	4.0			NW	57	18:51	10.3	88		NNW	19	1010.8	13.9	70		NNW	28	1006.3
6	Su	8.5	13.7	9.4			WSW	63	13:56	9.9	74		NNW	13	1006.8	8.9	86		WSW	28	1004.9
7	Mo	7.8	15.0	6.4			SW	41	09:04	12.7	72		SW	17	1015.9	13.9	58		WSW	17	1017.7
8	Tu	8.7	14.9	0.2			NE	26	22:25	9.7	96		N	13	1024.1	13.9	63		NW	11	1022.5
9	We	9.7	19.0	0			NNE	50	23:43	14.8	48		NNE	13	1019.2	18.0	44		NNE	22	1012.9
10	Th	13.8	19.1	0			NW	54	14:21	14.3	42		N	13	1007.6	17.5	54		WNW	28	1008.2
11	Fr	10.6	16.2	0			WNW	43	12:45	12.3	76		NW	15	1019.5	15.3	55		WNW	26	1019.0
12	Sa	8.2	17.2	0			NNW	30	12:02	11.0	77		N	11	1022.4	16.1	49		NW	17	1019.5
13	Su	10.6	23.0	0			NNW	41	14:34	15.8	36		NNE	13	1018.1	22.2	30		NNW	26	1014.4
14	Mo	13.9	21.6	0			NW	20	11:28	15.9	57		NNE	6	1016.7	20.4	48		WNW	9	1012.6
15	Tu	15.1	15.8	6.8			N	43	14:17	15.4	94		N	13	1007.5	15.3	94		N	22	1002.4
16	We	11.6	16.6	14.4			WNW	54	18:26	13.1	78		WNW	19	1007.1	15.7	62		NW	20	1007.1
17	Th	11.2	16.5	2.2			WNW	67	13:25	12.6	77		NW	20	1008.9	13.7	68		W	28	1008.8
18	Fr	8.2	14.6	5.8			SW	52	01:03	12.0	60		SW	22	1021.6	13.6	55		SW	24	1023.6
19	Sa	4.2	15.0	3.8			WSW	26	13:20	10.0	75		N	6	1030.3	13.8	60		W	15	1027.0
20	Su	7.8	14.9	0			NNE	46	12:56	11.4	49		NNE	17	1023.3	13.3	46		NE	19	1014.8
21	Mo	8.2	14.2	11.4			NNE	35	05:35	8.8	93		NE	11	1008.7	13.4	78		SSW	15	1011.6
22	Tu	8.5	16.5	0.2			WNW	26	10:25	12.7	68		W	6	1022.1	15.3	55		WNW	15	1020.4
23	We	10.4	16.2	0			NW	35	10:53	10.8	93		N	11	1022.1	15.5	65		SW	17	1021.7
24	Th	6.5	15.0	3.2			SW	31	15:44	10.3	85		SSE	2	1027.9	14.1	59		WSW	19	1026.9
25	Fr	4.4	14.8	0.2			WSW	19	13:39	10.9	63		NNE	7	1030.4	12.9	60		NW	11	1027.6
26	Sa	3.8	14.8	0			W	26	12:52	11.2	67		NE	7	1027.2	13.2	51		WSW	11	1025.3
27	Su	7.6	13.9	0.2			S	35	11:33	11.8	65		SSE	17	1028.1	12.4	47		SSE	15	1027.4
28	Mo	3.7	11.5	0			W	19	12:36	9.4	63			Calm	1028.6	10.6	66		SW	6	1026.0
29	Tu	3.5	14.3	0			WSW	22	11:25	9.2	80		NNE	6	1026.1	13.3	50		SW	9	1024.4
30	We	4.2	16.2	0			SW	24	15:09	11.1	70			Calm	1029.5	15.8	54		WSW	11	1026.8
31	Th	10.8	19.2	0			NNE	31	08:24	14.4	46		NNE	19	1027.3	18.8	36		NE	17	1022.5
Statistics for August 2017																					
Mean		8.5	15.9							11.7	70			11	1019.5	14.6	58			17	1017.3
Lowest		3.5	11.5							8.8	36			Calm	1006.8	8.9	30		SW	6	1002.4
Highest		15.1	23.0	14.4			WNW	67		15.9	96		SW	22	1030.4	22.2	94		#	28	1027.6
Total				82.0																	

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}.

IDCJDW5081.201708 Prepared at 16:09 GMT on 2 Oct 2017

Greater Adelaide in August 2017: wetter than average with cool days

August was wetter than average throughout Adelaide and the Hills. Days were cooler than average in all suburbs, while night time temperatures were closer to average. This summary includes data from observing sites in or near the Greater Adelaide "Greater Capital City Statistical Area" (GCCSA) – see at end.

Above average rainfall

- August rainfall was above average in all Adelaide suburbs and the Hills
- Heavy rain in the first week of the month and in the middle of the month resulted in flood watches and minor flood warnings being issued for Mount Lofty Ranges
- Rainfall totals ranged from 129% of average at Adelaide (Kent Town) to 201% of average at Mount Barker
- Compared with average, Adelaide city had between one and three more raindays for August
- Nairne had its wettest August on record
- Several sites had their highest total August rainfall for at least 20 years

Cooler than average days, nights close to average

- August daytime temperatures were cooler than average for most of Adelaide and the Hills
- Most days for the month were cooler than average, apart from a burst of warmth on the 13th and 14th, and a warm day to end the month on the 31st
- Mean night time temperatures for August were generally close to average, although the last week of the month included several cold nights with frosts in the Hills and suburbs
- The last week of August was much cooler than average in the city. For the Kent Town site, it was the overall coldest final week of August on record and coldest last week of August in the city since 1946 at West Terrace
- August 28 was Adelaide (Kent Town)'s second-coldest maximum temperature so late in the season (11.7 °C), with a slightly colder maximum temperature of 11.6 °C on 28 August, 1981

Adelaide (West Terrace / ngayirdapira)

- Total rainfall for Adelaide (West Terrace / ngayirdapira) was 82.0 mm, which is 133% of the long-term average of 61.6 mm
- The mean daily maximum temperature for Adelaide (West Terrace / ngayirdapira) was 15.9 °C, which is 0.2 °C below the long-term average. The warmest day was 23.0 °C on the 13th, and the coolest day was on the 28th when the temperature reached 11.5 °C
- The mean daily minimum temperature for Adelaide (West Terrace / ngayirdapira) was 8.5 °C, which is 0.5 °C above the long-term average. The coldest morning was 3.5 °C on the 29th, and the warmest morning was on the 15th when the minimum temperature was 15.1 °C

Extremes in August 2017

Hottest day	23.7 °C at Parafield Airport on the 13th
Warmest days on average	16.2 °C at Parafield Airport
Coolest days on average	9.8 °C at Mount Lofty
Coldest day	6.0 °C at Mount Lofty on the 3rd
Coldest night	-1.6 °C at Rosedale on the 28th
Coolest nights on average	4.6 °C at Mount Lofty
Warmest nights on average	8.7 °C at Noarlunga
Warmest night	15.2 °C at Adelaide Airport on the 15th
Warmest on average overall	12.2 °C at Adelaide (West Terrace / ngayirdapira)
Coolest on average overall	7.2 °C at Mount Lofty
Wettest overall	235.1 mm at Bridgewater
Wettest day	54.0 mm at Bridgewater on the 15th
Strongest wind gust	98 km/h at Kuitpo Forest Reserve on the 4th

Some notable statistics for August were:

Record highest August total rainfall

	New record (mm)	Old record	Years held	August Average
Nairne	184.2	= 184.2 in 1984	132	89.0

Highest August total rainfall for at least 20 years

	Observed (mm)	Most recent higher	August Average
Mount Barker	206.0	210.5 in 1955	102.4
Hahndorf	227.7	255.1 in 1955*	118.0
Macclesfield	187.0	192.0 in 1981	95.8
Willunga	124.2	128.9 in 1984*	79.6
Mount Bold	177.4	178.8 in 1992	100.8
Rosedale	93.1	98.4 in 1992*	57.6
Adelaide Airport	86.0	87.2 in 1996*	50.8

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

Note:
In September 2017 this summary was broadened to include data from observing sites in or near the Greater Adelaide "Greater Capital City Statistical Area" (GCCSA). The Australian Bureau of Statistics designed the GCCSAs to "include the population within the urban area of the city, as well as people who regularly socialise, shop or work within the city, and live in small towns and rural areas surrounding the city. It is important to note that GCCSAs do not define the built up edge of the city. They provide a stable definition for these cities and are designed for the output of a range of social and economic survey data."

For more information on August's temperatures and rainfall plus a summary of statistics please see:
http://www.bom.gov.au/climate/current/month/sa/archive/201708.adelaide.shtml

South Australia in August 2017

August rainfall was above average in many agricultural districts, which also helped keep temperatures slightly cooler than average in the southern and eastern agricultural districts. Further north, the pastoral districts were drier than average with warmer than average days and nights, particularly in the State's northwest.

Wetter than average in the south, dry in the north

- August rainfall was 20% below average for South Australia as a whole
- Agricultural areas generally recorded average to above average August rainfall
- Below average rainfall recorded in pastoral districts, particularly in the northwest
- A series of cold fronts crossed the State during August, bringing windy conditions with periods of rain that resulted in localised minor flooding in the Onkaparinga catchment
- Several long-term sites had their wettest August on record
- Many sites had their highest total August rainfall for at least 20 years

Cool in the south, mild in the north

- August temperatures were warmer than average for South Australia as a whole
- August maximum and mean temperatures for the State were their warmest since 2013
- Very much above average daytime temperatures for the Northwest Pastoral district
- Daytime temperatures were close to average in southern agricultural districts
- Night time temperatures were generally warmer than average in the western half of the State and below average in the Flinders and southern parts of the Northeast Pastoral district
- Several sites in the north had their hottest August day on record
- Two short-term sites had their coldest August day (lowest maximum temperature) on record
- Ernabella, with just 21 years of data, had its lowest August temperature on record
- Several sites had their warmest August night (highest daily minimum temperature) on record on the 15th

Strong winds at times

- In the middle of the month, cold fronts and westerly winds brought gale force winds to coastal waters and adjacent land areas
- Maximum wind gusts in excess of 90 km/h were recorded at many sites across southern South Australia from 15-17 August
- The strongest recorded wind gust during August was 124 km/h at Neptune Island on both the 6th and 15th

Extremes in August 2017

Hottest day	35.8 °C at Oodnadatta Airport on the 15th
Warmest days on average	23.9 °C at Oodnadatta Airport
Coolest days on average	9.8 °C at Mount Lofty
Coldest day	6.0 °C at Mount Lofty on the 3rd
Coldest night	-4.5 °C at Yunta Airstrip on the 1st
Coolest nights on average	1.6 °C at Yongala
Warmest nights on average	11.3 °C at Neptune Island
Warmest night	16.6 °C at Coober Pedy Airport on the 15th
Warmest on average overall	16.1 °C at Oodnadatta Airport
Coolest on average overall	7.2 °C at Mount Lofty

Wettest overall	235.1 mm at Bridgewater
Driest overall	0 mm at Ernabella (Pukatja)
Wettest day	54.0 mm at Bridgewater on the 15th
Strongest wind gust	124 km/h at Neptune Island on the 6th
	124 km/h at Neptune Island on the 15th

Record highest August total rainfall				
	New record	**Old record**	**Years held**	**August Average**
Nairne	184.2	= 184.2in 1984	132	89.0
Finniss	127.0	123.0in 1939	104	61.2
Edithburgh	94.6	86.6in 2004	26	47.7
Strathalbyn	126.4	101.4in 2008	22	52.9

Record highest August temperature				
	New record (°C)	**Old record**	**Years held**	**August Average**
Andamooka	34.3 on the 14th	33.6 on the 24th in 1995	48	20.6
Coober Pedy	34.3 on the 14th	33.8 on the 28th in 2013	24	21.0
Marree Aero	34.9 on the 15th	34.8 on the 23rd in 2006	20	21.9
Roxby Downs	34.6 on the 14th	33.0 on the 23rd in 2006	20	20.9

Some notable statistics for August were:

Record lowest August daily maximum temperature				
	New record (°C)	**Old record**	**Years held**	**August Average**
Renmark	9.7 on the 3rd	10.5 on the 16th in 2014	23	18.6
Minnipa	9.6 on the 2nd	10.1 on the 10th in 2003	22	17.8

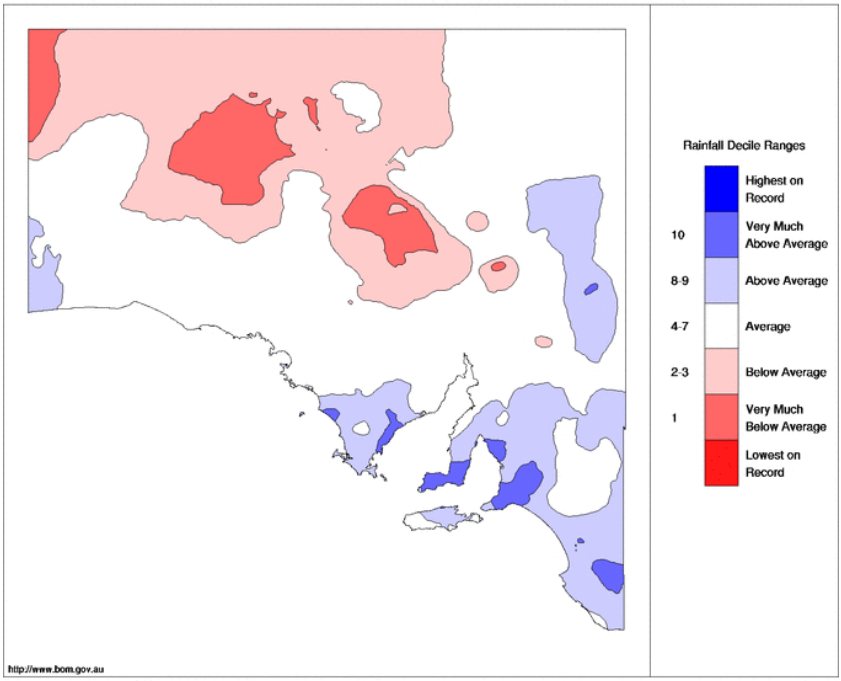
Record highest August daily minimum temperature				
	New record (°C)	**Old record**	**Years held**	**August Average**
Price	15.8 on the 15th	14.5 on the 16th in 2001	52	6.3
Maitland	14.5 on the 15th	14.2 on the 28th in 2005	37	7.2
Clare	13.7 on the 15th	13.5 on the 25th in 1999	24	4.4
Snowtown	14.0 on the 15th	= 14.0 on the 25th in 1999	20	4.3

All the detail you could possibly want and more is 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.

South Australian Rainfall Deciles August 2017

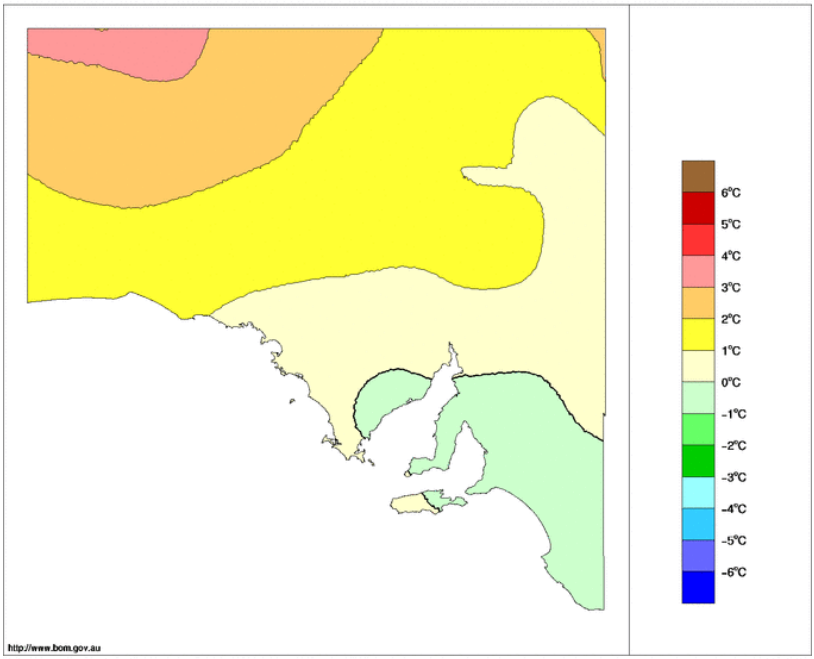
Distribution Based on Gridded Data
Australian Bureau of Meteorology



 ID code: AWAP Issued: 27/09/2017

Maximum Temperature Anomaly (°C) August 2017

Australian Bureau of Meteorology



 ID code: AWAP Issued: 21/09/2017

Greater Adelaide in winter 2017: near-average rainfall and temperatures

Winter rainfall was generally slightly above average around Adelaide and Hills. Despite a cool end to the season, winter mean daytime temperatures were warmer than average throughout the Adelaide region, while nights were generally slightly cooler than the winter average.

This summary includes data from observing sites in or near the Greater Adelaide "Greater Capital City Statistical Area" (GCCSA) – see the notes.

Average to above average rainfall

- Rainfall during winter was generally close to average throughout Adelaide and the Hills
- Winter rainfall totals ranged from 82% of average at Adelaide (West Terrace / ngayirdapira) to 121% of average at Mount Barker
- The wettest sites were in the Hills at Aldgate (530.8 mm), Uraidla (506.0 mm), and Bridgewater (490.7 mm)
- Bridgewater also had the region's wettest days during winter, recording 54.0 mm on both 18 July and 15 August

Close to average temperatures with a cool end to the season

- Winter daytime temperatures were warmer than average for all Adelaide suburbs and the Hills, despite a cool end to the season
- Night time temperatures were generally close to the winter average throughout the Adelaide region
- Temperatures around Adelaide dropped below zero several times during winter, with the coldest recorded minimum temperature being -1.6 °C at Rosedale in the northeast on the morning of 28 August

Adelaide (West Terrace / ngayirdapira)

- Total rainfall for Adelaide (West Terrace / ngayirdapira) was 163.2 mm, which is 82% of the long-term average of 199.4 mm
- The mean daily maximum temperature for Adelaide (West Terrace / ngayirdapira) was 16.4 °C, which is 0.8 °C above the long-term average. The warmest day was 23.0 °C on 13 August, and the coolest day was on 28 August when the temperature reached 11.5 °C
- The mean daily minimum temperature for Adelaide (West Terrace / ngayirdapira) was 7.9 °C, which is 0.1 °C below the long-term average. The coldest morning was 3.2 °C on 3 June, and the warmest morning was on 15 August when the minimum temperature was 15.1 °C

Extremes in winter 2017

Hottest day	24.2 °C at Edinburgh RAAF on 29 Jul
	24.2 °C at Rosedale on 29 Jul
Warmest days on average	16.8 °C at Parafield Airport
Coolest days on average	10.6 °C at Mount Lofty
Coldest day	6.0 °C at Mount Lofty on 3 Aug
Coldest night	-1.6 °C at Rosedale on 28 Aug
Coolest nights on average	4.6 °C at Rosedale
Warmest nights on average	8.6 °C at Noarlunga
Warmest night	15.2 °C at Adelaide Airport on 15 Aug

Warmest on average overall	12.1 °C at Adelaide (West Terrace / ngayirdapira) 12.1 °C at Noarlunga
Coolest on average overall	8.0 °C at Mount Lofty
Wettest overall	530.8 mm at Aldgate
Driest overall	132.6 mm at Morphettville
Wettest day	54.0 mm at Bridgewater on 18 Jul 54.0 mm at Bridgewater on 15 Aug
Strongest wind gust	98 km/h at Kuitpo Forest Reserve on 4 Aug

Some notable statistics for Winter were:

Highest winter mean daily maximum temperature for at least 20 years

	Observed (°C)	Most recent higher	Average for winter
Mount Barker	15.1	=15.1 in 1873*	13.

* note: the site has moved in recent years and there are gaps in the historical record at this site, so despite the long history is it difficult to compare the temperatures over the years and it is possible a higher value has gone unreported

For more information on Winter's temperatures and rainfall plus a summary of statistics please see:
http://www.bom.gov.au/climate/current/season/sa/archive/201708.adelaide.shtml

"Anticipating the atmosphere: a look at the modern weather forecast process"

Benjamin Owen, Meteorologist, SA Regional Forecasting Centre, Bureau of Meteorology

2nd Nov 2017 6:30pm Kerr Grant Lecture Theatre, Physics Bldg., Uni. of Adelaide

This public lecture is a joint Australian Meteorological & Oceanographic Society (AMOS) and AMetA, and Australian Institute of Physics event

Entry is via the eastern door of the Physics building, from the roadway between the Scott Theatre and the Hub Building. There will be a person at the door to let people into the building until 6:30 p.m. Refreshments will be available in Room G13 on the ground floor from 6:00 p.m. For more details, contact Murray Hamilton, chair of the AMOS South Australia branch (murray.hamilton@adelaide.edu.au). If there are issues with access on the night, please phone 0478 453 642.

Bureau of Meteorology heatwave service kicks off for summer 2017/18

Each summer the Bureau of Meteorology produces maps across Australia of 3 day periods of excessive heat. This service has just started up for this summer at:

http://www.bom.gov.au/australia/heatwave/index.shtml

South Australia in winter 2017

Winter was generally drier than average for South Australia, despite some localised flooding events at times. Daytime temperatures were warmer than average across the whole State, while night time temperatures were cooler than average in agricultural and southern pastoral districts.

Generally drier than average

- For South Australia as a whole, winter rainfall was 37% below average, despite localised flooding at times
- After a dry start to the season, above average rainfall in August meant that agricultural districts in the southeast, Yorke Peninsula, and in parts of the southern Eyre Peninsula recorded near-average rainfall for winter overall
- Very much below average rainfall in southern Pastoral districts
- Penneshaw had its highest winter daily rainfall on record on 4 July
- Some sites had their lowest total winter rainfall for at least 20 years

Warmer than average days and some frosty nights

- Statewide maximum temperatures during winter were the second-warmest on record: 1.70 °C warmer than average (record was in winter 2002)
- The entire State recorded winter daytime temperatures that were above the long-term average
- Highest on record daytime temperatures in the northwest pastoral districts
- Mean temperature in July was equal-second-highest on record for the State as a whole
- Night time temperatures were slightly cooler than average during winter
- Winter nights were very much cooler than average in the Flinders district and southern parts of the northern pastoral districts
- Nights were cooler than average during June, and very warm in the west during August
- On 14 and 15 August, several sites in the north had their highest winter temperature on record
- Hawker and Leigh Creek had their highest winter mean daily maximum temperature on record
- Three sites had their highest winter mean daily maximum temperature for at least 20 years
- Price had its warmest winter night (highest daily minimum temperature) on record
- Marree Aero, with just 20 years of data, had its lowest winter temperature on record, although the old Marree site recorded colder nights of -2.8 °C on both 15 July 1970 and 30 June 1948
- Edithburgh, with 24 years of data, had its lowest winter mean daily minimum temperature on record
- Hawker had its lowest winter mean daily minimum temperature since 1989

Extremes in winter 2017

Hottest day	35.8 °C at Oodnadatta Airport on 15 Aug
Warmest days on average	22.4 °C at Oodnadatta Airport
Coolest days on average	10.6 °C at Mount Lofty

Coldest day	6.0 °C at Mount Lofty on 3 Aug
Coldest night	-5.7 °C at Yunta Airstrip on 4 Jun
Coolest nights on average	1.3 °C at Yongala
Warmest nights on average	12.1 °C at Neptune Island
Warmest night	16.6 °C at Coober Pedy Airport on 15 Aug
Warmest on average overall	14.5 °C at Oodnadatta Airport
Coolest on average overall	8.0 °C at Mount Lofty
Wettest overall	530.8 mm at Aldgate
Driest overall	4.0 mm at Roxby Downs (Olympic Dam Aerodrome)
Wettest day	60.0 mm at Penneshaw on 4 Jul
Strongest wind gust	124 km/h at Neptune Island on 6 Aug 124 km/h at Neptune Island on 15 Aug

Some notable statistics for Winter were:

Record highest winter daily rainfall

Record highest winter temperature				
	New record (°C)	**Old record**	**Years held**	**Winter Average**
Andamooka	34.3 on 14 Aug	33.6 on 24 Aug 1995	48	19.2
Coober Pedy	34.3 on 14 Aug	33.8 on 28 Aug 2013	24	19.3
Marree	34.9 on 15 Aug	34.8 on 23 Aug 2006	20	20.2
Roxby Downs	34.6 on 14 Aug	33.0 on 23 Aug 2006	20	19.3

	New record (mm)	**Old record**	**Years held**
Penneshaw	60.0 on 4 Jul	46.7 on 16 Jun 1955	106

Record highest winter mean daily maximum temperature				
	New record	**Old record**	**Years held**	**Winter Average**
Hawker	18.2	18.1 in 1977	43	16.7
Leigh Creek	19.2	= 19.2 in 2002	33	17.6

Record lowest winter temperature

	New record (°C)	**Old record**	**Years held**	**Winter Average**
Marree	-2.4 on 4 Jun -	1.6 on 3 Aug 2014	20	5.9

Record highest winter daily minimum temperature

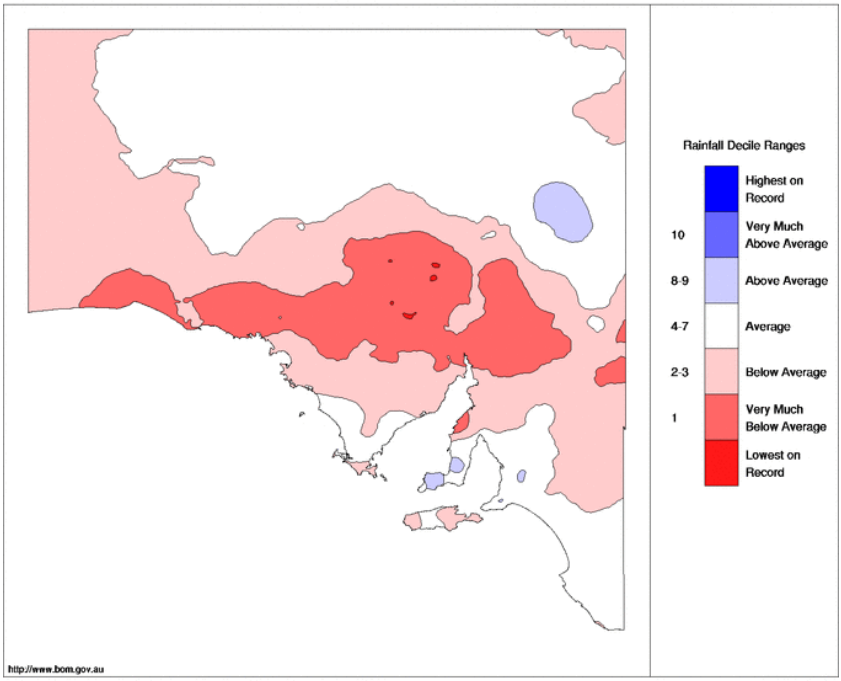
New record (°C)	**Old record**	**Years held**	**Winter Average**
Price 15.8 on 15 Aug	= 15.8 on 30 Jul 1975	53	6.5

Record lowest winter mean daily minimum temperature

	New record (°C)	**Old record**	**Years held**	**Winter Average**
Edithburgh	6.6	6.7 in 2006	24	7.9

South Australian Rainfall Deciles 1 June to 31 August 2017

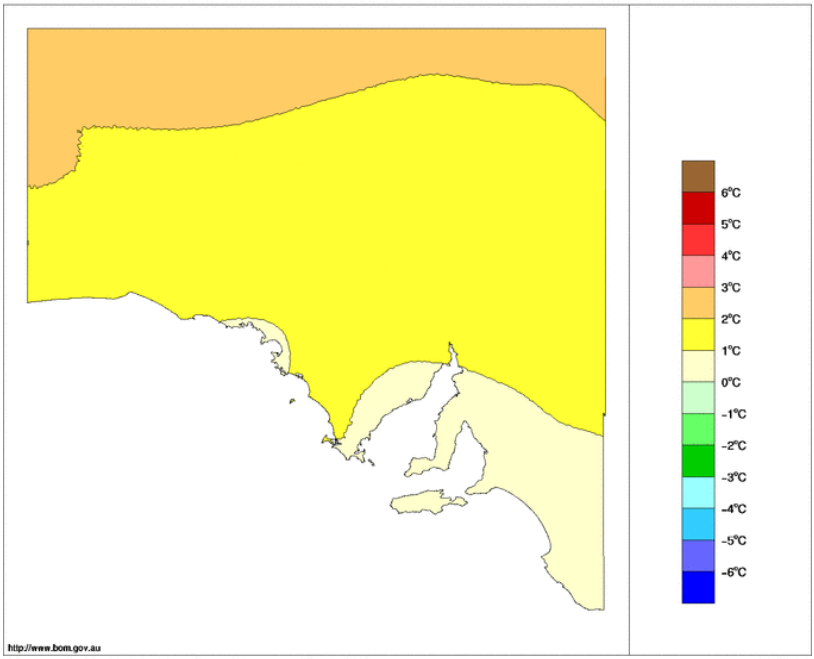
Distribution Based on Gridded Data
Australian Bureau of Meteorology



 ID code: AWAP Issued: 27/09/2017

Maximum Temperature Anomaly (°C) 1 June to 31 August 2017

Australian Bureau of Meteorology



 ID code: AWAP Issued: 21/09/2017

Greater Adelaide in September 2017: slightly warmer than average

September rainfall in and around Adelaide was generally close to average. Both daytime and overnight temperatures were generally warmer than average for September.

Near-average rainfall

- September rainfall was average to above average throughout Adelaide and the Hills
- Most of the rainfall for the month fell during the first two weeks
- Rainfall totals ranged from 86% of average at Rosedale to 119% of average at Kuitpo Forest Reserve

Generally warmer than average

- Overall daytime temperatures were generally close to the September average
- Days were generally cooler than average during the first half of the month, with the 22nd the hottest day of the month throughout Adelaide and the Hills
- Daily mean maximum temperatures ranged from 0.4°C cooler than average at Noarlunga to 1.6 °C warmer than average at Mount Barker
- Overnight temperatures were generally warmer than average
- Nights were 2.0°C warmer than average at Mount Barker, but 0.1°C cooler than average at Mount Crawford

Adelaide (West Terrace / ngayirdapira)

- Total rainfall for Adelaide (West Terrace / ngayirdapira) was 44.8 mm, which is 88% of the long-term average of 51.1 mm
- The mean daily maximum temperature for Adelaide (West Terrace / ngayirdapira) was 19.1 °C, which is 0.7 °C above the long-term average. The warmest day was 29.8 °C on the 22nd, and the coolest day was on the 4th when the temperature reached 13.7 °C
- The mean daily minimum temperature for Adelaide (West Terrace / ngayirdapira) was 10.8 °C, which is 1.6 °C above the long-term average. The coldest morning was 4.9 °C on the 10th, and the warmest morning was on the 27th when the minimum temperature was 15.2 °C

Strong winds on the 3rd

- A series of cold fronts passed over the south of the State early in the month bringing rain and strong winds at times
- Strong and gusty winds ahead of a cold front on the 3rd resulted in Mount Crawford recording the region's strongest wind gust of 104 km/h

Extremes in September 2017

Hottest day	30.3 °C at Adelaide (Kent Town) on the 22nd
Warmest days on average	19.6 °C at Parafield Airport
Coolest days on average	12.9 °C at Mount Lofty
Coldest day	6.5 °C at Mount Lofty on the 4th
Coldest night	2.0 °C at Rosedale on the 9th
Coolest nights on average	6.3 °C at Mount Lofty
Warmest nights on average	10.8 °C at Adelaide (West Terrace / ngayirdapira)
	10.8 °C at Adelaide Airport
	10.8 °C at Noarlunga
Warmest night	15.6 °C at Noarlunga on the 23rd
Warmest on average overall	15.0 °C at Adelaide (Kent Town)
Coolest on average overall	9.6 °C at Mount Lofty
Wettest overall	156.8 mm at Aldgate
Driest overall	30.8 mm at Gawler

Adelaide (West Terrace / Ngayirdapira), South Australia
September 2017 Daily Weather Observations

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

Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Fr	13.9	22.7	0			NNE	41	10:40	16.9	31		NNE	15	1019.5	20.8	29		NW	19	1016.4
2	Sa	13.3	21.3	5.4			WNW	33	22:56	15.6	83		NE	13	1013.7	20.5	36		NNE	9	1008.1
3	Su	9.4	15.4	16.4			WNW	52	00:11	12.7	67		W	20	1012.2	11.9	75		WNW	19	1012.7
4	Mo	8.7	13.7	6.2			WSW	59	11:49	11.5	72		W	20	1014.3	11.8	69		WSW	28	1014.6
5	Tu	8.8	14.5	3.8			WSW	48	11:10	11.8	68		SW	20	1018.1	13.5	63		WSW	24	1018.3
6	We	10.0	14.2	0.2			WSW	37	10:26	12.8	71		W	17	1022.6	13.4	72		W	13	1022.2
7	Th	10.9	15.9	0			WSW	37	14:25	12.7	75		W	17	1025.3	14.2	65		WSW	19	1024.9
8	Fr	10.5	15.7	0.4			SW	35	14:30	13.3	72		S	9	1028.2	14.7	56		SW	17	1027.5
9	Sa	7.4	15.9	0.2			NNE	20	14:02	11.7	60		NNE	7	1029.0	14.4	57		SW	13	1025.5
10	Su	4.9	20.8	0			NW	26	14:10	12.5	65			Calm	1022.2	19.3	47		NNW	13	1018.2
11	Mo	12.5	24.7	0			NNW	54	12:16	19.4	38		N	19	1013.5	24.0	29		NW	24	1010.2
12	Tu	13.4	21.9	0.6			WSW	37	13:39	19.6	60		NW	4	1010.2	19.2	63		W	19	1008.4
13	We	9.7	14.4	4.8			WSW	61	08:43	11.5	73		WSW	19	1013.3	12.2	60		SW	26	1016.2
14	Th	9.2	16.3	2.4			SW	41	00:25	11.5	83		W	13	1024.8	14.5	66		W	17	1023.3
15	Fr	8.9	16.8	0.4			WNW	33	10:19	12.2	86		N	9	1024.6	15.7	63		WNW	13	1022.5
16	Sa	8.8	18.0	0.4			SW	26	01:36	13.1	55		SE	11	1027.1	16.9	51		W	11	1025.1
17	Su	11.5	24.3	0			NNE	54	23:23	17.0	35		NNE	17	1023.2	23.9	28		N	20	1017.2
18	Mo	14.3	17.2	0						15.6	77		NW	20	1013.6	14.5	56		SW	30	1015.9
19	Tu	10.1	16.6				SW	31	00:06	12.8	60		SW	13	1025.0	15.2	53		W	11	1023.0
20	We	9.0	22.3	0			NNE	35	22:51	16.6	49		N	9	1019.3	21.4	38		NNW	13	1013.1
21	Th	14.4	21.3	0			NNE	31	00:03	16.7	71		W	11	1011.1	18.2	66		SSE	7	1009.9
22	Fr	10.7	29.8	0			NW	39	14:13	21.3	48		NNE	15	1006.8	29.7	23		NW	20	1002.8
23	Sa	13.6	22.7	0			NW	52	11:31	19.7	58		N	13	996.8	19.2	53		WNW	26	1002.1
24	Su	13.0	18.1	0			NNW	48	08:15	14.9	68		NW	22	1005.3	16.9	49		W	26	1005.7
25	Mo	11.2	17.8	0			W	26	03:12	13.8	70		W	13	1013.9	16.9	50		SW	13	1013.7
26	Tu	8.4	23.1	0			ENE	37	23:37	15.4	50		ENE	13	1014.2	21.5	35		NE	15	1008.2
27	We	15.2	24.2	0			W	48	18:46	22.1	37		NW	9	1005.2	22.5	34		W	20	1003.7
28	Th	12.5	16.4	1.8			W	33	02:10	13.8	72		SW	15	1014.8	16.0	59		SW	17	1015.3
29	Fr	8.7	17.9	1.6			WNW	39	10:06	13.2	80		NNW	7	1017.5	16.9	51		W	22	1016.4
30	Sa	10.6	17.8	0.2			SSW	33	11:47	14.8	60		SSW	17	1023.1	16.8	51		WSW	17	1023.1
Statistics for September 2017																					
	Mean	10.8	19.1							14.9	63			13	1016.9	17.6	51			18	1015.5
	Lowest	4.9	13.7							11.5	31			Calm	996.8	11.8	23		SSE	7	1002.1
	Highest	15.2	29.8	16.4			WSW	61		22.1	86		NW	22	1029.0	29.7	75		SW	30	1027.5
	Total			44.8																	

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}.

South Australia in September 2017: wet in the north; warmer than average

Rain across the State's north towards the end of the month resulted in South Australia as a whole having above average September rainfall. Monthly totals were very much above average across northern pastoral districts, but remained below average south of Lake Eyre and east of Ceduna. Daytime temperatures during September were warmer than average for all but the far southeast of the State.

Late rain in the north

- Until the last week of September, pastoral districts had received little or no rainfall
- In the last three days of the month, the northern pastoral districts received more than 25 mm of rain, with the month ending as one the region's wettest Septembers on record
- The rainfall at the end of the month in the State's north didn't extend very far south, with southern pastoral districts and northern agricultural districts having a drier than average September
- It was the wettest September on record in an area west of Oodnadatta
- There were patches in the northern agricultural districts and southern parts of the pastoral districts that reported their driest September on record
- Several sites in the north had their wettest September day record
- Todmorden had its highest total September rainfall on record and Mount Dare had its highest total September rainfall for at least 20 years
- Several sites around the Riverland and southern pastoral districts had their lowest total September rainfall on record
- Bower and Yongala had their lowest total September rainfall for at least 20 years

Warmer than average

- South Australia's mean temperature was 1.51 °C warmer than average
- Daytime temperatures were warmer than average for all but the far southeast
- Overnight temperatures were warmer than average in most areas, but tended to be average to below average around Port Augusta and in parts of the far east of the State
- South Australia had its fifth-warmest September day on record on the 22nd, with the mean maximum temperature reaching 35.59 °C compared to the September record of 36.46 °C from 24 September 1990.

Extremes in September 2017

Hottest day	40.5 °C at Moomba Airport on the 27th
Warmest days on average	28.0 °C at Oodnadatta Airport
Coolest days on average	12.9 °C at Mount Lofty
Coldest day	6.5 °C at Mount Lofty on the 4th
Coldest night	-2.3 °C at Renmark Aero on the 17th
Coolest nights on average	4.8 °C at Yongala
Warmest nights on average	11.9 °C at Moomba Airport
	11.9 °C at Oodnadatta Airport
Warmest night	23.8 °C at Moomba Airport on the 23rd
Warmest on average overall	20.0 °C at Oodnadatta Airport
Coolest on average overall	9.6 °C at Mount Lofty
Wettest overall	156.8 mm at Aldgate
Driest overall	0 mm at Hawker
	0 mm at Leigh Creek Airport

	0 mm at Tarcoola Aero
Wettest day	58.0 mm at Todmorden on the 30th
Strongest wind gust	104 km/h at Mount Crawford AWS on the 3rd

Some notable statistics for September were:

Record highest September daily rainfall

	New record (mm)	Old record	Years held
Todmorden	58.0 on the 30th	55.9 on the 29th in 1968	68
Mount Dare	42.2 on the 30th	38.0 on the 14th in 1975	64
Ernabella	36.2 on the 30th	26.8 on the 29th in 2004	21
Mount Barry	45.0 on the 30th	=45.0 on the 30th in 2004	36
Oodnadatta	40.6 on the 30th	31.8 on the 20th in 2009	69
Tieyon	32.0 on the 30th	24.8 on the 13th in 2016	23

Record highest September total rainfall

	New record (mm)	Old record	Years held	September Average
Todmorden	85.2	55.9 in 1968	69	11.3

Record lowest Setember total rainfall

	New record (mm)	Old record	Years held	September Average
Loxton	5.0	5.8 in 2008	34	28.0
Morgan	1.0	1.6 in 2008	26	27.1
Renmark	2.6	= 2.6 in 2008	23	25.3
Yunta	0.2	0.6 in 2003	20	16.2

Highest September total rainfall for at least 20 years

	Observed (mm)	Most recent higher	September Average
Mount Dare	51.0	73.2 in 1975*	7.7

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

Lowest September total rainfall for at least 20 years

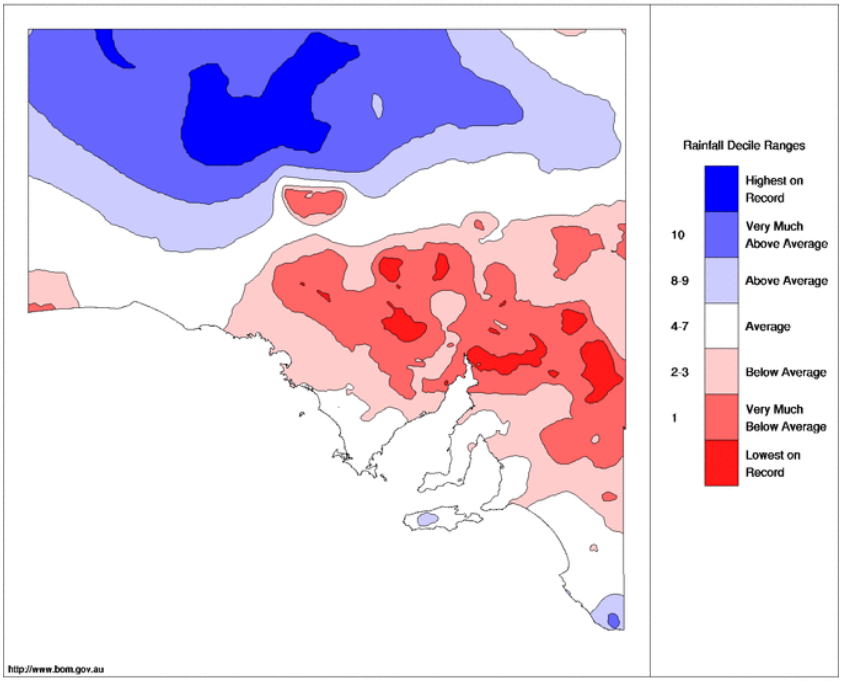
	Observed (mm)	Most recent lower	September Average
Bower	3.0	2.5 in 1939*	25.0
Yongala	4.2	4.1 in 1944	38.0

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

For more information on temperatures and rainfall in September for both Adelaide and South Australia plus a summary of statistics please see:
http://www.bom.gov.au/climate/current/month/sa/archive/201709.adelaide.shtml
and
http://www.bom.gov.au/climate/current/month/sa/archive/201709.summary.shtml

South Australian Rainfall Deciles September 2017

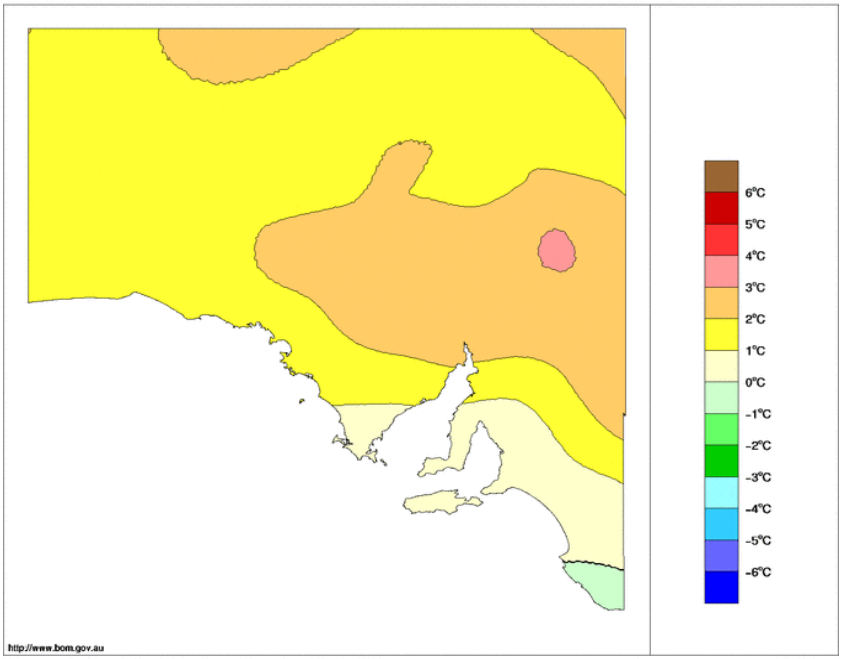
Distribution Based on Gridded Data
Australian Bureau of Meteorology



 ID code: AWAP Issued: 03/10/2017

Maximum Temperature Anomaly (°C) September 2017

Australian Bureau of Meteorology



 ID code: AWAP Issued: 03/10/2017

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

NEXT MEETING

5.30 PM TUESDAY 17 October 2017

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

Please note the earlier meeting time due to the need to present AGM reports and hold committee elections.

Also, subscriptions for 2017/2018 ($15) are now due

5:30pm Presentation of 2017 AGM reports and election of committee members.

6:00pm –7:00pm

Darren Ray, Senior Climatologist -South Australian Region on recent weather and what to expect over the next few months.

Meeting Presentation: Space Meteorology by Mark Little, AMetA Member, BAE Systems

Space Weather can be thought of as "the weather above the weather". It deals with effects on the Earth's magnetosphere, ionosphere and thermosphere, due to the Sun and the solar wind. These parts of the Earth's atmosphere can affect navigation, satellites, long distance communications, power lines and other space and ground based activities. Space Weather events also cause the Aurora Australis and Aurora Borealis lights in the sky. Mark works for BAE Systems and has spent over 30 years associated with the Australian Over The Horizon Radar (OTHR) program, living in Alice Springs and Adelaide.

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

We look forward to seeing you.
For further information contact

Secretary:	*Darren Ray*
Phone:	*8366 2664*
Fax:	*8366 2693*

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