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# Ms Di Davidson, Member of the Murray Darling Basin Authority.



As well as being an agricultural scientist and horticulturalist and fourth generation farmer around the Lower Lakes in South Australia, Di Davidson is a member of the Murray Darling Basin Authority, which is responsible for preparing and reviewing the Basin plan, and for encouraging and supporting research and activities to support the fair and sustainable use of Basin resources, and communicating information about this.

As part of this, Di's presentation to the AMETA June meeting, started by highlighting that the Murray Darling Basin covers 16% of the Australian continent, and has 2 million people living within its boundaries. The Basin generates 45% of Australian agricultural Gross Domestic Product.

There is a long history of discussion, politics and agreements put in place around the use of the resources in the Basin, with the first agreement put in place in 1915, and more recently, in 2007 the Water Act passed to manage the water in the Basin, with the Murray Darling Basin Board appointed in 2009.

Di conveyed a great deal of information on the complexities of the Basin system. It is not well known for example that the Darling River enters the Murray on average only once every 17 years. It was pointed out that the 1950's to the 1980's saw increased rainfall across the Basin, with water use and allocation increasing significantly as a result. Allocations were then capped in the 1990's and have since been decreasing. She also made clear that water generally will go to whatever activity generates the most value, with that at the moment being almond production.

The water flows in the system are also important to flush salts out of the system, as well as maintaining flows to manage water for iconic areas such as Chowilla floodplains, and to keep water available for towns and cites like Broken Hill, Adelaide and many other towns in South Australia. And there are also many other significant economic and social benefits through tourism, boating, grazing, and cropping activities.

5.8 billion dollars of funding has been allocated through the Board to improve irrigation practices, particularly in the eastern states, to put in piping, line channels, and improve meterage.

To finish, Di highlighted that the plan for the Basin, passed in Nov 2012, is the first time a major basin of this type is being so comprehensively managed, and this is attracting attention internationally from places such as India, China and Korea who face similar issues.



## Annual rainfall - Murray Darling Basin (1900-2012)

10-year running averages shown by black curve



## ADELAIDE AND HILLS REGION WEATHER SUMMARY JUNE 2013

#### SUMMARY

- Above average monthly rainfall for most locations with some record highest June daily rainfall totals.
- Above average temperatures, though more so throughout the Adelaide hills.

#### Rainfall

The June 2013 rainfall total at Adelaide (Kent Town) was slightly below average, with 76.4 mm received on 10 rain days. This is compared to the long-term average of 78.1 mm typically observed on more than 16 rain days, with median rainfall being 68.8 mm. By comparison, during June 2012, 126.4 mm was recorded.

The heaviest rain days for the Adelaide and Hills region occurred at the beginning of the month, then later between the 12<sup>th</sup> and 14<sup>th</sup> and between the 21<sup>st</sup> and 23<sup>rd</sup>. Adelaide (Kent Town) observed just over half of the June monthly total on the 1<sup>st</sup>, when 38.8 mm was recorded, which was the wettest day observed in Adelaide since December 8, 2010 and the wettest June day since June 12, 2005. Both Parafield Airport and Edinburgh RAAF also observed highest June daily rainfall totals on the 1<sup>st</sup>, recording 59.8 mm and 59.2 mm respectively.

Rainfall totals throughout the month typically ranged from 50 to 80mm across the Adelaide Plains with higher totals in excess of 100 mm observed in the Hills. The wettest location for the month was at Mount Barker in the Adelaide Hills where 140.6 mm was observed, 60 mm of that occurring during the first 2 days of the month.

#### Temperature

Both day and night time temperatures were average, tending above average above throughout the first 2 weeks of June for the Adelaide region. The second half of the month was with cooler conditions, owing to cool southeast to southwesterly airstreams dominating weather across southern districts of the State.

The mean temperature for the month (the combination of maximum and minimum temperature) was slightly above average with 12.5 °C for Adelaide (Kent Town), by comparison June 2012 observed an a mean monthly temperature of 11.6 °C.

The warmest day occurred on the  $10^{\text{th}}$  as light to moderate northerly winds ahead of the low pressure system resulted in above temperatures across the region. The coldest day was observed on the  $22^{\text{nd}}$  as a low pressure system slowly tracked over southern districts of the State.

The average maximum temperature recorded at Adelaide (Kent Town) for June 2013 was 16.4 °C, 0.4 °C above the long-term mean maximum temperature of. In comparison, June 2012 was cooler than normal with and average of 15.3 °C. The record highest June monthly maximum in Adelaide was 20.4 °C, set in 1957 at the West Terrace site.

The hottest day across the Adelaide and Hills region was reported at Edinburgh RAAF with a maximum of 20.1 °C on the 10<sup>th</sup>. The coldest day in the region in was observed at Mount Lofty on the 21<sup>st</sup> when the maximum reached 7.2 °C.

Minimum temperatures were between 0.5 to 1.5 °C warmer than average throughout

the month. The mean minimum temperature for June 2013 at Adelaide (Kent Town) was 8.6  $^{\circ}$ C, 0.5  $^{\circ}$ C warmer than the long term average and the warmest June nights since 2009. By comparison, June 2012 saw minimum temperature for the month average 7.9  $^{\circ}$ C.

The coldest minimum temperature recorded during June 2013 in the Adelaide and Hills region was 0.9 °C on the 19<sup>th</sup> at Parafield Airport, whilst the coolest nights on average were recorded at Mount Barker where nights were still 1.2 °C above the long term average of 5.2 °C. The warmest night was 14.8 °C at Adelaide Airport on the 1<sup>st</sup>. Noarlunga observed the warmest nights on average with a monthly average 9.9 °C



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Rainfall in	24 hours to 9am	шш	38.8	6.8	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	7.2	1.0	2.6			0.4	0.0	0.0	0.0	1.6	12.8	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0			38.8	76.4
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	MSL pressure	hPa	1010.6	1025.1	1027.7	1024.1	1016.7	1015.3	1025.5	1026.0	1019.8	1016.2	1010.1	1011.4	1015.1	1020.6	1023.0	1020.1	1016.8	1020.4	1024.0	1018.9	1013.3	1015.3	1021.3	1023.1	1022.3	1019.6	1020.0	1024.5	1030.4	1029.4	1020.2	1010.1	1030.4	
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	Wind	km/h	NNW 20	W 4	SSW 7	NE 6	ENE 9	N 13	s 7	NE 7	Calm	N 13	ENE 11	SSE 20	SSW 11	WSW 9	Calm	Calm	NE 6	∧ wnw	Calm	Calm	NNE 11	NE 17	ENE 17	NNE 13	NE 4	NE 11	NE 11	Calm	Calm	NE 6	8.0	0	21	
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	Temperature	ç	14.9	13.0	14.2	13.7	12.5	13.2	13.4	11.3	12.5	14.8	14.6	13.1	12.9	11.5	10.7	9.5	9.6	7.8	8.8	8.5	9.8	10.1	12.6	12.8	10.8	12.7	12.5	12.3	8.5	11.8	11.8	7.8	14.9	
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Minimum	emperature	ပ္	14.6	10.8	8.5	10.9	11.0	12.1	10.4	7.2	10.7	11.1	10.7	12.3	10.6	8.1	6.3	5.5	6.2	4.7	3.6	4.1	8.5	9.7	10.0	10.3	7.2	5.3	7.5	7.4	4.1	8.5	8.6	3.6	14.6	
Maximum	emperature	ပ္	16.0	16.5	17.1	16.2	15.1	18.4	16.1	18.1	17.8	20.0	16.1	16.0	15.3	15.5	15.0	15.3	15.2	15.8	17.0	16.2	14.4	13.7	15.0	17.2	18.1	18.0	17.5	16.7	16.3	17.8	16.4	13.7	20.0	
	Day		Sat 1	Sun 2	Mon 3	Tue 4	Wed 5	Thu 6	Fri 7	Sat 8	Sun 9	Mon 10	Tue 11	Wed 12	Thu 13	Fri 14	Sat 15	Sun 16	Mon 17	Tue 18	Wed 19	Thu 20	Fri 21	Sat 22	Sun 23	Mon 24	Tue 25	Wed 26	Thu 27	Fri 28	Sat 29	Sun 30	Mean Daily	Lowest Daily	Highest Daily	Total



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Page 1 of 1

## SOUTH AUSTRALIA'S WEATHER SUMMARY JUNE 2013

#### SUMMARY

- A wet start to winter with several locations observing record highest daily and monthly totals.
- State-wide maximum temperatures mostly below average the coolest since 2007, particularly across the northwest pastoral regions
- Minimum temperatures warmer than average, being the warmest since 2004

#### Rainfall

Throughout June 2013, South Australia received above the long term average June rainfall for the state as a whole, resulting in the wettest June for the state since 2004. Apart from the far west and northeast where rainfall was average to below average, most locations recorded a wetter than average start to winter. Parts of Upper North and Flinders Ranges observed new record high June total rainfall. The wettest periods for most districts occurred on between the 1<sup>st</sup> and 3<sup>rd</sup>, between the 11<sup>th</sup> and 14<sup>th</sup> and between the 21<sup>st</sup> and 24<sup>th</sup>. At the beginning of the month, a broad low pressure trough crossed the state producing widespread rain for most districts, several locations observed new record highest daily rainfall totals associated with this event. The passage of a low pressure system on the 11<sup>th</sup> across southern parts of the state resulted in patchy rain and isolated thunderstorms which continued through to the 14<sup>th</sup>. Another slow moving low pressure system crossed south of the state on the 21<sup>st</sup>, producing rain and thunderstorm activity through to the 24<sup>th</sup>.

#### **Pastoral Districts**

Rainfall totals over the pastoral districts were mostly average to above average though tending below average in the far Northeast. Totals typically ranged between 30 to 60 mm, with a number of locations across the Northwest and Far North recording more than double the usual for this time of year. The wettest overall in the Pastoral districts was at Blinman in the Far North, with 96.0 mm; 64.2 mm of which was observed on the 1<sup>st</sup> which is the highest June daily total on record for this location.

#### **Agricultural Districts**

Aside form the far west, above average rainfall was observed across most of the Agricultural districts. Eastern parts of the Eyre Peninsula, the mid north, eastern Kangaroo Island and the lower Murray Valley observed very much above average rainfall for the month. The lower South-east, metropolitan Adelaide, parts of the Mount Lofty ranges and southern parts of the Yorke Peninsula tended more average through June.

Totals were in the range of 60 to 80mm in most locations, but tending higher and in excess of 100 mm across the Mount Lofty and Flinders Ranges, with several locations observing daily and monthly highest on record. The wettest overall for the month in the agricultural districts was at Parawa (Sharon) in the southern part Mount Lofty Ranges with a record high 266.6 mm, surpassing the previous wettest June by nearly 3 mm which was observed in 1955.

#### Temperature

The mean temperature (the average of the maximum and minimum temperatures) for South Australia as a whole in June 2013 was 0.6 °C above the long-term average. By contrast, June 2012 was 0.14 °C below average. Mean temperatures at particular stations ranged from 8.4°C at Yongala in the Upper North to 14.9°C at Neptune Island off the southeast coast of Eyre Peninsula.

#### Maximum

Mean maximum temperatures over South Australia were generally below average across the State throughout June, particularly for the Northwest pastoral. Averaged across the state as a whole, June maximum temperatures were  $0.3 \,^{\circ}C$  below normal. Some locations were as cool as  $2 \,^{\circ}C$  below average across the northwest of the state. Southern coastal regions and eastern parts of the state observed daytime temperature more near average.

Average daily maximum temperatures ranged from 10.8°C at Mount Lofty to 20.6 °C at Mounta Airport in the Northeast district.

The coldest periods for many locations occurred through the third and fourth week of June as low pressure and cold frontal systems crossed south of the state. Mount Lofty recorded the coldest day of the month when its maximum temperature only reached  $7.2^{\circ}$ C on the 21st.

The warmest day for much of the state occurred on the  $10^{th}$  and  $11^{th}$  in the northerly air stream ahead of low pressure trough. Moomba Airport observed the hottest day for any location in the State, reaching 29.3°C on the  $11^{th}$ 

#### Minimum

Mean minimum temperatures were widely above average across South Australia through June; with a state-wide average at 1.6 °C above normal, June 2013 is the warmest with respect to night-time temperatures since 2004. The warmest part of the state with respect to overnight temperatures was across the far north of the northwest pastoral district where minimum temperatures were in excess of  $2^{\circ}$ C warmer than normal.

The warmest nights for most of South Australia occurred through the first 2 weeks of June, while the latter half of the month saw cooler conditions prevail. Moomba Airport observed the warmest night for any location in the state on the 1<sup>st</sup>, with a minimum of 18.5 °C. Coonawarra, in the Southeast of the state, observed the coldest night with a minimum of -2.8 °C on June 20<sup>th</sup>.

The warmest nights on average were observed at Neptune Island with 13.2°C, while Yongala observed the coolest nights on average with a monthly average 3.9 °C.

Maximum Temperature Anomaly (°C) June 2013 Product of the National Climate Centre





Maximum Temperature Anomaly (°C) July 2013 Product of the National Climate Centre

## ADELAIDE AND HILLS REGION WEATHER SUMMARY JULY 2013

#### SUMMARY

- Above average monthly rainfall for most locations with Adelaide having its wettest July in 18 years (since 1995).
- Above average day and night temperatures, with new record warm nights across the Plains.

#### Rainfall

Adelaide (Kent Town) received 119.2 mm of rainfall on 17 rain days throughout July 2013, well above the long term average July rainfall of 74.7 mm, and the median of 68.8 mm, typically received on 16 rain days. The well above normal rainfall results in the wettest July since 1995. By comparison, the record highest July rainfall for Adelaide was in 1986 with 159.8 mm recorded for the month.

The wettest days during July 2013 across the Adelaide and Hills region occurred between the 5<sup>th</sup> and 8<sup>th</sup>, between the 13<sup>th</sup> and 15<sup>th</sup> and later between the 18<sup>th</sup> and 23<sup>rd</sup>. Adelaide (Kent Town) observed nearly half of the monthly total in the latter period owing to the passage of a deep low pressure system located to the south of the State, around which a frontal rainband extended across the state.

Rainfall totals across the Adelaide region typically ranged from 60 to 110mm across the Adelaide Plains, with higher totals in excess of 150 mm observed in the Adelaide Hills. The wettest location for the month was at Mount Lofty in the Adelaide Hills where 220.4 mm was observed, more than 100 mm of that occurring between the 18<sup>th</sup> and 22<sup>nd</sup> of the month.

#### Temperature

Both day and night time temperatures were above average across the Adelaide region, particularly throughout the period between the 10<sup>th</sup> and 18<sup>th</sup> and later in the month between the 26<sup>th</sup> and 28<sup>th</sup>. With respect to the above average day time temperatures, the relatively warm spells were due to high pressure systems located to the east of South Australia directing moderate to fresh northerly winds across the State. The warmest nights were between the 13<sup>th</sup> and 18<sup>th</sup> and between the 28<sup>th</sup> and 31<sup>st</sup> owing to increased cloud cover associated with the passage of low pressure troughs.

The mean temperature for the month (the combination of maximum and minimum temperature) was slightly above average with 12.7 °C for Adelaide (Kent Town); by comparison July 2012 observed a mean monthly temperature of 11.6 °C.

The warmest day occurred on the 28<sup>th</sup> as light to moderate northerly winds ahead of the low pressure system resulted in above temperatures across the region. The coldest day was observed on the 20<sup>th</sup> as a deep low pressure located to the southeast of the Mount Gambier directed a cool unstable southerly airstream across the region.

The average maximum temperature recorded at Adelaide (Kent Town) for July 2013 was 16.3 °C, 1.0 °C above the long-term mean maximum temperature. In comparison, July 2012 was cooler with an average of 15.3 °C. The record highest July monthly

maximum in Adelaide was 17.5°C, set in 1957 at the West Terrace site.

The hottest day across the Adelaide and Hills region was reported at Kent Town with a maximum of 20.8  $^{\circ}$ C on the 28<sup>th</sup>. The coldest day in the region was observed at Mount Lofty on the 20<sup>th</sup> when the maximum reached only 5.5  $^{\circ}$ C.

Minimum temperatures were between 1 to 2 °C warmer than average throughout the month. The mean minimum temperature for July 2013 at Adelaide (Kent Town) was 9.1 °C, 1.6 °C warmer than the long term average. By comparison, July 2012 saw minimum temperatures for the month averaging 7.8 °C.

The coldest minimum temperature recorded during June 2013 in the Adelaide and Hills region was 0.9 °C on the 20<sup>th</sup> at Mount Lofty, with the coolest nights on average also recorded at Mount Lofty. The warmest night was 14.8 °C at Kent Town on the 28<sup>th</sup>. Noarlunga observed the warmest nights overall with average 9.8 °C



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		Bright	Sunshine	hours	7	7.1	9.1	0.8	6.6	1.9	2.7	6	6.2	9.3	6.5	0	0.3	4.1	2.9	4.9	5	1.2	1.6			0.8	9	9.1	4.1	9.6	1.2	7.3	4.6	-	3.7	4.6	0.0	9.6	133.6
		Evaporation	in 24 hrs to 9am	тт	0.6	2.0	1.2	2.8	1.2			2.4	1.0	1.8	1.2	0.6			2.4	0.8	1.2	2.2	1.4			4.4	0.4	0.8	1.6	0.8			7.4	1.0	2.0	1.8	0.4	7.4	41.2
		Rainfall in	24 hours to 9am	шш	0.0	0.0	0.0	0.0	8.4	2.8	24.2	0.8	0.0	0.2	0.0	0.0	18.8	1.6	3.8	1.4	0.0	14.4	2.0	12.0	7.4	13.2	6.2	0.2	0.0	0.0	0.0	0.0	1.0	1.8	0.0			24.2	120.2
		Maximum	Wind Gust	km/h	WNW 48	NW 35	NW 44	WSW 59	W 59	NNW 39	W 26	SW 22	N 30	N 24	N 22	NE 31	NNW 37	WNW 43	W 30	N 28	NNE 57	NNW 76	WNW 61	SW 65	NW 44	SW 48	W 24	W 26	WNW 35	N 24	N 43	NW 56	W 41	W 24	WNW 22			76	
			MSL	hPa	1026.4	1025.0	1017.1	1005.2	1016.4	1020.9	1026.9	1033.4	1030.4	1027.2	1026.0	1022.2	1015.3	1014.7	1020.9	1019.2	1007.2	999.9	1009.8	1012.7	1012.0	1020.7	1031.0	1031.2	1025.1	1023.0	1015.5	1012.6	1019.4	1023.9	1022.1	1019.8	999.9	1033.4	-
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vn) for	138 °37'18"E		mperature R	ပ္	17.6	17.1	17.1	12.3	14.0	10.5	12.7	14.7	15.0	15.7	18.3	15.5	17.3	16.5	14.6	16.5	19.3	15.2	13.7	8.7	11.6	11.1	14.0	13.9	14.9	17.9	16.8	18.3	15.5	13.4	13.8	15.0	8.7	19.3	-
it Tov	ongitude		VISL Te essure	Ъа	128.7	127.4	122.4	08.8	16.2	121.2	126.8	34.5	34.4	129.5	129.1	125.6	017.0	015.0	021.3	123.4	113.5	01.4	08.6	12.5	14.1	018.0	30.9	34.5	128.4	126.7	119.6	11.1	19.2	125.9	024.9	021.6	01.4	34.5	
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ation	an 1977 • S		Temperatur	ပ္	15.1	10.5	12.7	12.5	10.9	9.7	9.3	8.4	8.5	10.6	8.6	14.3	16.0	14.4	13.8	12.5	15.1	13.6	12.8	8.3	8.0	10.8	8.3	10.8	9.5	12.2	14.4	17.4	12.4	12.4	11.6	11.8	8.0	17.4	
bserv	<ul> <li>Opened J<sup>3</sup></li> </ul>	Minimum	Terrestrial Temperature	ŝ																																			
gical C	y: Adelaide	Minimum	emperature	ပ္	11.8	9.9	7.7	11.4	7.9	8.9	8.4	4.6	4.1	4.8	7.9	8.6	13.8	13.7	12.6	11.9	10.3	11.3	12.1	5.7	5.9	7.9	4.7	6.2	7.2	8.2	9.7	14.3	10.2	10.9	10.5	9.1	4.1	14.3	
eorolo	90 • Localit	Maximum	emperature	ç	18.4	17.4	17.6	15.0	14.9	15.3	14.0	15.2	15.7	16.1	19.3	16.4	18.9	18.1	16.8	17.3	19.7	15.4	13.9	11.9	12.7	12.9	15.1	15.3	15.6	18.2	19.3	20.8	16.5	14.2	14.8	16.2	11.9	20.8	
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Australian Government

Page 1 of 1

## SOUTH AUSTRALIA'S WEATHER SUMMARY JULY 2013

#### SUMMARY

- Wet conditions continue for agricultural areas with record daily and monthly totals.
- State-wide maximum temperatures mostly above average with new daily records
- Warmest July nights in 38 years at Kent Town and warmest July days in 11 years

#### Rainfall

South Australia received above the long term average July rainfall for the State as a whole, resulting in the wettest July since 2006. Apart from the northwest pastoral district where rainfall was average to below average, most locations recorded a wetter than average July. Parts of Upper North and Flinders Ranges observed new record high June total rainfall. The wettest periods for most districts occurred between the 5th and 8th, between the 13th and 15th and later between the 18th and 23rd. Heaviest falls were reported through the latter periods as low pressure systems located to the Great Australian Bight extended rain bands across southern parts of South Australia. Several locations in the western agricultural and pastoral areas observed new record highest daily rainfall totals associated with the event on the 13th. The passage of another low pressure system late in the month resulted in scattered showers and isolated thunderstorms across the agricultural areas, with isolated showers further north. The cold southerly airstream associated with the low also produced light snowfall across Parts of the Mount Lofty Ranges on the 20<sup>th</sup>.

#### **Pastoral Districts**

Rainfall totals over the pastoral districts were mostly average to above average though tending below average in the far Northeast. Totals typically ranged between 10 to 25 mm, with higher totals, in excess of 50mm for southern parts of the pastoral areas. The wettest overall in the Pastoral districts was at Yardea in the Northwest, with 93.2 mm; 38 mm of which was observed in the 24 hours to 9am on the 13<sup>th</sup>. Moonaree (Kangaroo Well) located in the southern part of the Northwest pastoral reported the wettest day for any location across the State, with 46.6 observed on the 13<sup>th</sup>.

#### **Agricultural Districts**

Most parts of the agricultural areas reported above average rainfall throughout the month, particularly across western and coastal areas. Totals were in the range of 25 to 50mm across northern parts of the agricultural areas, tending higher and in the 50 to100 mm range large parts of the Eyre and Yorke Peninsula, the Mount Lofty and Flinders Ranges and across the Murray Valley districts. Locations across the southern tips of the Eyre and Yorke Peninsula, Kangaroo Island, the Mount Lofty ranges and the lower Southeast observed monthly rainfall totals in the 100 mm to 200 mm range. The wettest overall for the month in the agricultural districts was at Uraidla in the Mount Lofty Ranges, reporting 293.6 for month, nearly half of which was observed between the 18<sup>th</sup> and 23<sup>rd</sup>.

#### Temperature

The mean temperature (the average of the maximum and minimum temperatures) for South Australia as a whole in July 2013 was 1.2 °C above the long-term average. Mean temperatures at particular stations ranged from 8.3°C at Mount Lofty to 14.7°C at Moomba Airport in the Far North pastoral.

#### Maximum

Mean maximum temperatures over South Australia were generally above average across the State throughout July, particularly for the pastoral districts. Across the state as a whole, monthly maximum temperatures were 1.4 °C above the long term average, the warmest since 2007. Some locations were as warm as 1.5 °C above average across northern parts of the State. Agricultural regions observed daytime temperature more near average.

Average daily maximum temperatures ranged from 10.3°C at Mount Lofty to 22.3 °C at Mounta Airport in the Far North.

The coldest periods for many locations occurred through the third week of July as low pressure and cold frontal systems crossed the State. Mount Lofty recorded the coldest day of the month when its maximum temperature only reached 5.5 °C on the  $20^{\text{th}}$ .

The warmest day for much of the state occurred during the second and the last week of July in the northerly air stream ahead of low pressure trough. Moomba Airport observed the hottest day for any location in the State, reaching 30.9°C on the 13<sup>th</sup>

#### Minimum

Mean minimum temperatures were widely above average across South Australia through July; with a state-wide average at 1.2 °C above normal, July 2013 is the warmest with respect to night-time temperatures since 2009. The warmest part of the state with respect to minimum temperatures was across the far north of the northwest pastoral district and through the southeast of the State where minimum temperatures were up to  $2^{\circ}C$  warmer than normal.

The warmest nights for most of South Australia occurred during the second and third week of July. Moomba Airport observed the warmest night for any location in the state on the  $18^{th}$ , with a minimum of 16.2 °C. Gluepot Reserve, in the Northeast, observed the coldest night with a minimum of -4.9 °C on June  $10^{th}$ .

The warmest nights on average were observed at Neptune Island with  $12.3^{\circ}$ C, while Arkaroola observed the coolest nights on average with a monthly average  $3.0^{\circ}$ C.

The August meeting of AMETA is the Annual General Meeting, with this falling on Monday 19th August in 2013. Elections for positions on the AMETA Committee come up for election every two years, with this year being an election year.

The positions of AMETA President, Vice-President, Treasurer, Secretary, and some additional committee members for those in interested in assisting in a general way, will all become vacant at the meeting, and up for election.

## **AMETA Committee Nomination Form 2013**

We would like to receive nominations from interested members for the following positions on the committee of the Australian Meteorological Association.

Elections for these positions will be held at the August 2013 meeting, and are valid until August 2015.

President:									
Vice President:									
Secretary:									
Treasurer:									
Committee Members ( 5 additional positions):									
Details: ( Please print clearly)									
Name:									
Address:									
Postcode:	Email:								
Signature:		Date:							

Just a reminder... AMETA Membership annual subscriptions of \$15 are due at the August 2013 Annual General Meeting.



Australian Meteorological Association Inc (AMetA)

# NEXT MEETING ANNUAL GENERAL MEETING 5.30 PM MONDAY 19<sup>th</sup> August 2013

Conference room, Bureau of Meteorology 25 College Road, Kent Town

# Subject: Charles Todd: the early years

# Speaker: Dr. Tony Rogers.

Dr Tony Rogers looks at Todd's early years in England and the societal developments that helped to form him. When he arrived in Australia, disembarking at Port Adelaide at 5pm on 8 November 1855, Todd had 14 years of work experience at two of the foremost observatories in Britain, and possibly the world, and had grown up at a time of unprecedented industrial and social development. Tony looks at Todd and his world and puts him within the context of his times.

Tony is a social and educational historian, and AMETA member who lectured at UniSA for nine years, and previously was at the University of British Columbia where he also studied for his Ph.D. He has been involved in a number of books on the history of weather, editing "Floods in South Australia: 1836 to 2005" for the Bureau of Meteorology and writing "Weather Prophets of South Australia", as well as "South Australia's Extreme Weather: its human impact" and "Weather and the Science of Settlement" for AMETA, in association with the Bureau of Meteorology. He is currently working on two further books on the history of weather and climate in South Australia.

We look forward to seeing you.

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

For further information contact

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

# AMETA Membership annual subscriptions of \$15 are due at the August 2013 Annual General Meeting.