



SIGNIFICANT WEATHER – January 2007

SUMMARY

A tropical low brought widespread rainfall to inland and southern parts of Western Australia. Severe damage and stock losses were sustained and many rainfall records were broken. A weak low off the north coast of the Top End caused widespread flooding. There was also flooding in Queensland associated with activity in the monsoon trough.

During the middle of the month thunderstorms developed over all but the more western areas of the South Australia causing localised flash flooding at several locations. Many locations recorded their highest 24-hour rainfall total for January on record. Bushfires continued to burn in New South Wales and Victoria.

TROPICAL LOWS

Western Australia

A low formed in a monsoon trough south of Indonesia in the final days of 2006. It moved in an easterly then southeasterly direction on the 1st and was named Tropical Cyclone *Isobel* on the 2nd, when it was located 600 kilometres north of Port Hedland. However, after the event the low was re-analysed at below tropical cyclone strength. The low moved southward but weakened rapidly off the east Pilbara coast on the 3rd. Tropical moisture associated with the low interacted with a deep trough approaching southern Western Australia to bring widespread rainfall to inland and southern parts of the state over the next two days, as a strong low developed near Esperance.

Northern Territory

On the 5th a weak low developed off the north coast of the Top End, and slowly drifted westward over the next 2 days. On the 7th it was just to the north of the Tiwi Islands, and then began drifting southwestward to be over land in the Kimberley around the 9th/10th. By the 15th, the low was tracking east-southeast across the Tanami Desert, and into the southern parts of the Northern Territory. The low passed just to the northeast of Alice Springs on the 19th, and on the 20th it moved further east into Queensland. After crossing the border, the low began moving slowly northeastward, and weakened significantly.

The main impact from this event was significant rainfall through central Australia. Many stations recorded more than 100mm during the event and several locations received more than half of their annual average rainfall. The highest event total rainfall amount came from Tanami Downs with 456.5mm.

Flooding caused by widespread heavy rainfall was the main impact from this low and the Stuart Highway was cut for a day or two 50 kilometres north of Alice Springs.

THUNDERSTORMS/TORNADOES

Queensland

On the 2nd severe thunderstorms in the central west of the state produced a 91 km/h wind gust at Winton.

On the 10th a thunderstorm occurred at Bell (about 40 kilometres northeast of Dalby), bringing trees and a windmill down and tearing

roofs off homes. A tornado was sighted in the area.

A slow moving heavy thunderstorm formed in a deep, moist tropical air mass at Camooweal, producing 52mm of rain in 26 minutes on the 11th.

On the 13th widespread severe thunderstorms in the central west and south east produced a storm at Warwick with 4cm hail reported. Further west trees and powerlines were brought down and homes were damaged at Dalby and Tara.

The previous day's thunderstorms continued into the night and early hours of the 14th. A 104 km/h wind gust was recorded at Winton and a 100 km/h wind gust was recorded at Longreach.

On the 26th several thunderstorms in the south east of the state moved through Laidley producing winds estimated to 100 km/h. Hail averaging 3 cm in diameter and a tornado were sighted from Mulgowie Oval. Many trees were blown down, roofs torn off homes and a large section of roof was blown off the Laidley Showgrounds. Sheds were demolished and road signs were ripped out of the ground and bent around trees. Winds at Mulgowie were estimated at 111km/h.

Further west at Dalby another severe thunderstorm struck with the worst damage occurring on the southern and eastern sides of town. At least 20 homes sustained roof damage, sheds were demolished and a primary school had several classrooms damaged. Many trees were brought down. At Blaxland (13 kilometres from Dalby) empty coal wagons were found lying on their sides after the storm.

On the 29th/30th a number of thunderstorm cells formed late on the 29th along the coastline from the Sunshine Coast to the Brisbane area in a moist low level northeast flow as a mid level trough moved through the area. Very heavy rainfall was recorded early on the 30th in a number of Brisbane suburbs including 79mm at Gordon Park and 74mm at Hemmant. A wind gust of 87 km/h was recorded at Archerfield Airport.

New South Wales

On the 1st at Broken Hill (Lower Western) a thunderstorm with golf ball sized hail was reported.

At Tingha (Northern Rivers) a tornado was observed on the 9th.

At Woodford (Central Tablelands) a thunderstorm with 2cm hail occurred on the 12th.

On the 15th at Nyngan (Central West Slopes) a thunderstorm with heavy rain and 2cm hail was reported. Many houses were damaged and trees uprooted. Power outages occurred in the town and surrounding areas after power lines were brought down in strong winds. Up to 48mm was recorded in an hour in the Cooma area.

On the 17th at Cooma a thunderstorm with heavy rain caused flash flooding in the township, closing roads. Up to 41mm of rain was recorded in an hour in the Cooma area.

At Broken Hill (Lower Western) on the 20th, a thunderstorm produced 50mm of heavy rain flooded homes.

Victoria

On the 1st flash flooding occurred in a severe thunderstorm in the Trentham/Ballan area, west of Melbourne, producing 30mm of rain. At Trentham 30mm of rain was recorded in 38 minutes and 85mm in 90 minutes at Scotsburn.

On the 6th wind damage at Swan Hill occurred from severe thunderstorms with 104 km/h wind gusts recorded. Flash flooding occurred at Hamilton with 20mm of rain in 45 minutes.

On the 16th a severe thunderstorm at Inverloch and Wonthaggi produced 2cm hail. Trees were uprooted, 3cm hail was reported and 25mm of rain was recorded in 15 minutes at Monbulk.

At Mildura a severe thunderstorm with flash flooding caused damage when 48mm of rain was recorded in 10 minutes

On the 19th a severe thunderstorm at Ararat produced 19mm of rain in 20 minutes.

South Australia

A thunderstorm resulted in a wind gust to 96 km/h at Oodnadatta on the 5th.

On the 6th a thunderstorm resulted in a wind gust to 91 km/h at the Renmark Airport. Extensive damage occurred to the west and south to homes, trees and crops (vines and fruit trees).

On the 18th at Poona, near Coult, a thunderstorm resulted in 58mm of rain in 45 minutes.

Several thunderstorms resulting in heavy rainfalls and severe wind gusts were reported on the 19th. At Parawa 36.8mm fell in 30 minutes. At Cockaleechee severe wind gusts occurred and 53mm fell in about 30 minutes. At Alford 40mm fell in 30 minutes and further rainfall resulted in 61mm in 3 hours. At Mundulla, near Bordertown, 35mm fell in 45 minutes.

Tasmania

Thunderstorms moved across parts of southeastern Tasmania on the afternoon of the 21st, producing heavy rain over a short period. In Hobart, over 25mm of rain fell in 30 minutes from 3pm with a further 40mm falling up to 8pm. There was 96mm recorded at Glenorchy and 54mm at Tasman Island.

Northern Territory

On the 30th, lightning hit a crane which was being used to remove a tree at Nakara. Three men working at the site were affected by the lightning strike.

WIND

New South Wales

Winds greater than 90 km/h were reported on:

8th Green Cape 96 km/h
12th Coonabarabran 124 km/h
16th Trangie 102 km/h
18th Bathurst Airport 104 km/h
21st Thredbo AWS 118 km/h

27th Green Cape 98 km/h

Victoria

Winds greater than 90 km/h were reported on:

6th Grampians 91 km/h, Colac 94 km/h
Kilmore Gap 91 km/h
Swan Hill 104 km/h
Mount Buller 98 km/h
7th Mount Buller 91 km/h
Mt Hotham 115 km/h
Mount Buller 93 km/h
East Sale 96 km/h, Bairnsdale 100 km/h
Wilsons Promontory 117 km/h
8th Wilsons Promontory 104 km/h
Green Cape 96 km/h
11th Grampians 96 km/h
Gabo Island 94 km/h
20th Mt Hotham 105 km/h
Grampians 104 km/h
21st Grampians 91 km/h
Colac 98 km/h
Mt Hotham 100 km/h
Wilsons Promontory 98 km/h
26th Wilsons Promontory 91 km/h
27th Wilsons Promontory 120 km/h
Green Cape 98 km/h
Gabo Island 98 km/h
28th Wilsons Promontory 113 km/h
30th Wilsons Promontory 93 km/h

Tasmania

Winds greater than 100km/h were reported on:

7th Mount Wellington 122 km/h
Hogan Island 113 km/h
Mount Read 109 km/h
Hartz Mountain 100 km/h
Cape Grim 100 km/h
8th Mount Wellington 111 km/h
10th Mount Read 106 km/h
11th Mount Wellington 120 km/h
Mount Read 106 km/h
Tasman Island 100 km/h
21st Mount Read 102 km/h
23rd Maatsuyker Island 107 km/h
27th Hogan Island 109 km/h
Mount Wellington 100 km/h
28th Mount Wellington 126 km/h
Hogan Island 109 km/h
Tasman Island 102 km/h
Maatsuyker Island 100 km/h

29th Mount Wellington 111 km/h
Maatsuyker Island 106 km/h
30th Mount Wellington 131 km/h
Maatsuyker Island 120 km/h
Droughty Hill 113 km/h
Hartz Mountain 102 km/h
Scotts Peak Dam 102 km/h
31st Mount Wellington 113 km/h

South Australia

A developing low passing to the near south of the state on the 20th resulted in a short burst of gale force west winds of 63 km/h in the Port Lincoln region and very gusty conditions over Kangaroo Island. The highest gust reached 98 km/h at Cape Borda and gusts were estimated to be 90 km/h on parts of the north coast. The combination of low pressure, winds and high tide resulted in the stranding of many vehicles on Kingston's Long Beach. The Cape Du Couedic Wave Rider Buoy recorded a peak wave height of 12 metres.

Western Australia

On the 4th Esperance recorded a wind gust of 60 knots (111 km/h), eclipsing the previous highest January gust of 56 knots (104 km/h) that it recorded in 1975.

On the 23rd Norseman reported a wind gust to 104 km/h from a dry microburst. No damage was reported.

On the 25th-28th a series of very hot days coincided with strong easterly winds and periods of thunderstorm activity. Storms developed near the west coast on the evening of the 25th although no reports of damage were received.

Gingin Aero reported a wind gust of 93 km/h on the 26th.

On the 28th thunderstorms enhanced strong easterly winds to cause minor property damage (fences down, tree limbs broken) in the northeastern area of Perth around Ballajura and Malaga. A house was partly unroofed in the hills suburb of Karragullen.

BUSHFIRES

Victoria

On the 11th a fire was started by lightning at Tatong/Watchbox near King Valley in the northeast which burnt 31,810 hectares.

On the 12th lightning started a fire at Hermit Mountain, southeast of Corryong, which burnt 2,770 hectares.

New South Wales

Major fires occurred on the following days:

12th - 23rd At Goonoo near Dubbo a fire burnt 26,000 hectares. Several buildings were destroyed and thick smoke engulfed Dubbo city.

17th - 22nd A fire at Tom Groggin in the Snowy Mountains burnt 5,000 hectares in New South Wales and Victoria. The fires caused the evacuation of Thredbo Village.

27th - 29th At Tingha (Near Inverell) 6,000 hectares were burnt.

13th - 16th A fire at Bobundara (Berridale) burnt 2,500 hectares.

12th - 16th At Kings Road near Narrabri 3,500 hectares was burnt.

12th - 25th Brogo near Bega 2,500 hectares were burnt.

21st - 25th Mt Ku-ring-gai in Sydney 1,000 hectares were burnt closing the freeway for several hours and threatening homes.

FLOODING

Queensland

The trough line that developed from the southern region of the Northern Territory across to southwest Queensland between the 7th and 15th resulted in 25-50 mm rainfall totals recorded across the upper catchments throughout the south west, and which initiated progressive flooding of river basins in the far west of the state.

The development of an active monsoon trough from the 15th and 20th saw continued isolated rain fall across the southwest. A tropical depression developed between the 21st and 25th which tracked over inland Australia through to southwest Queensland. This low triggered record daily rainfall totals and further extensive flooding across the southwest of the state, and extended a trough line over to the far north coast around Cairns resulting in flooding along the northern and central coastline of Queensland.

Paroo River

Minor flooding quickly developed in the Paroo River when isolated rainfall commenced on the 7th, and progressed to moderate flooding as the trough line was maintained in the southwest for 8 days.

Further isolated daily rainfall totals of 20 to 40 mm continued across the upper part of the catchment which resulted in major flood levels recorded at Humbern on the 27th. Major flooding abated on the 30th.

Bulloo River

Major flooding quickly developed on the 23rd as the monsoonal trough line was maintained in the southwest for 5 days. Daily rainfall totals between 30 to 40 mm were spread across the upper catchment during this period at Adavale and Quilpie. Thargomindah, situated in the lower catchment, recorded a daily total of 62 mm on 21st January.

Cooper Creek

Daily rainfall totals of between 20 to 40 mm around the 13th caused river rises and minor to moderate flooding to develop on the 23rd in the lower Thomson River between Bogewong and Stonehenge.

Further heavy rainfall was recorded in the upper catchment, with 73 mm recorded at Longreach on the 27th. Major flooding developed between the 29th of January and the 1st of February downstream at Windorah on Cooper Creek after 69 mm was recorded on the 27th and upstream floodwaters arrived.

Georgina River & Eyre Creek

Continued daily rainfall across the catchment of between 15 to 30 mm resulted in moderate flooding quickly developing at Glenormiston on the 18th.

Further heavy rainfall was recorded in the period between the 21st and 27th, with some rainfall records broken in the two day period between the 21st and 22nd. Daily rainfall recorded at Eyre Creek included 127mm at Glenglye, 169mm at Bedourie, and 175mm and 229mm on consecutive days at Cluny.

Further river rises reached the major flood level on the 26th on the Georgina River in the Marion Downs area, with major flooding extending downstream to the Bedourie area on Eyre Creek.

Northern Territory

There were two episodes of flooding in the Todd River during the month. The first flood event was on the 7th. Wigley Gorge reached 1.99 metres and Anzac Oval gauging station reached 1.91 metres.

The second flood event was on the 18th. Wigley Gorge peaked at 2.9 metres. The Anzac Oval gauging station recorded a peak of 2.53 metres.

TEMPERATURE

Highest Mean Maximum Temperature for January

<i>Station</i>	<i>Actual</i> °C	<i>Previous</i> <i>Highest</i> °C	<i>Year</i>	<i>Years of</i> <i>Record</i>
<i>New South Wales</i>				
<i>Taralga</i>	29.6	29.2	1985	51
<i>Western Australia</i>				
<i>Eyre</i>	29.2	28.6	1908	49

Highest Mean Minimum Temperature for January

<i>Station</i>	<i>Actual</i> °C	<i>Previous</i> <i>Highest</i> °C	<i>Year</i>	<i>Years of</i> <i>Record</i>
<i>Queensland</i>				
<i>Lockhart River A/P</i>	24.5	24.4	2001	34
<i>Tasmania</i>				
<i>Flinders Island A/P</i>	15.2	15.0	1974	44
<i>Northern Territory</i>				
<i>Pirlangimpi AWS</i>	25.6	25.4	2002	23

RAINFALL

Highest Daily Maximum Temperature for January

Station	Actual °C	Date	Previous Highest °C	Year	Years of Record
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New South Wales

Jerry Plains	44.6	12	44.4	2001	50
Burrinjuck Dam	42.5	12	42.4	2001	42

Lowest Daily Maximum Temperature for January

Station	Actual °C	Date	Previous Lowest °C	Year	Years of Record
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New South Wales

Glen Innes	15.1	03	15.6	1971	45
Grafton	20.4	03	20.5	1996	40

Western Australia

Carnamah	20.5	03	21.2	1990	39
Cunderdin	17.9	03	18.5	2000	57
Dalwallinu Comp	16.2	03	17.9	1967	50
Gascoyne Junction	26.0	03	26.1	1961	30
Hyden	14.8	04	16.4	2000	33
Katanning Comp	15.4	04	15.6	1960	51
Lake Grace Comp	15.2	04	16.4	2000	44
Merredin	15.8	04	16.2	1967	42
Narrogin	15.8	03	16.6	1999	40
Northam	18.2	03	19.2	2000	43
Ongerup	15.0	04	15.2	1999	41
Perth Airport	20.1	03	20.6	2000	63
Salmon Gums RS	16.4	05	16.9	2006	37
Wagin	16.2	04	17.3	2006	33
Wongan Hills RS	17.3	03	19.9	1978	42

Highest Daily Minimum Temperature for January

Station	Actual °C	Date	Previous Highest °C	Year	Years of Record
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New South Wales

Ivanhoe	31.6	17	31.1	1982	48
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Lowest Daily Minimum Temperature for January

Station	Actual °C	Date	Previous Lowest °C	Year	Years of Record
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Queensland

Monto Township	12.9	05	13.3	1983	34
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Tasmania

Scottsdale (West Minstone Road)	2.8	29	2.9	1983	35
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Western Australia

Cocos Island Airport	21.0	02	21.1	1965	55
Emu Creek Stn	16.1	03	18.2	1992	33
Eneabba	9.2	05	9.8	1982	34
Karnet	6.5	05	7.0	1990	35
Katanning Comp	5.4	20	5.5	1994	51
Learmonth Airport	16.1	04	16.3	1988	32
Pemberton	4.0	20	5.0	1960	49
Roebourne	16.6	03	18.6	1988	51
Telfer Aero	18.8	05	19.0	1992	32

South Australia

A tropical air mass slowly extended from the north of South Australia to most areas of the state from the 14th to the 17th. The slow approach and passage of a stronger frontal system from the 18th to the 21st resulted in more general rain with thunderstorms, developing over all but the more western areas of the state. Localised flash flooding occurred at several locations in the Pastoral Districts and northern Agricultural Districts as a result.

Many locations recorded their highest 24-hour rainfall total for January on record. This included Hawker with 125.4mm to 9am on the 20th, Corny Point 107mm to 9am on the 20th and Parawa 105.4mm to 9am on the 20th. Arcoona homestead, near Woomera, recorded 143mm in the 24 hours to 9am on the 20th, with much of this falling in a 4-hour period from 11am to 3pm on the 19th.

Western Australia

Tropical moisture associated with a tropical low (Tropical Cyclone *Isobel*) that weakened near 80 Mile Beach in the Pilbara on the 3rd, interacted with a deep mid-latitude trough resulting in heavy rain across the Goldfields, Eucla and Southeast Coastal Districts. As a result, the South Coastal Highway west of Esperance was cut with two bridges washed away, whilst preliminary reports indicate that approximately 50,000 sheep died. Floodwaters also damaged fences, scoured top-soil and inundated some properties. Bandy Creek boat harbour, east of Esperance, was severely affected as floodwaters caused a weir to fail. Strong winds also downed power lines, and high tides and heavy surf caused beach erosion. The storm surge was measured at 60cm.

Many rainfall records were broken. Notable 24 hour falls to 9am on the 5th included: Stokes Inlet 180.0mm, Esperance Aero 177mm (estimated), Cheadanup 161.4 mm, Esperance 153.2 mm, Munglinup Town 153.6 mm, Telina Downs 138.6 mm, Merivale Farm 137.8 mm, Erinair 135.0 mm, Ravensthorpe 112.8 mm and Salmon Gums 91.6 mm, whilst Balladonia recorded 134.1 mm on the 4th. Notable cumulative 48-hour falls were: 226.0 mm at Esperance Aero (estimated), 210.0mm at Stokes

Inlet, 204.2 mm at Cheadanup, and 184.2 mm at Esperance.

Highest Monthly Rainfall on Record for any Month

Station	Actual mm	Previous Highest mm	Year	Years of Record
Queensland				
Bedourie Police Sm	296.4	254.4	Feb/1977	61
Cluny	483.0	200.6	Jan/1995	68

Highest Monthly Rainfall on Record for January

Station	Actual mm	Previous Highest mm	Year	Years of Record
Queensland				
Bedourie Police Sm	296.4	254.4	1984	61
Cluny	483.0	200.6	1995	68
Glengyle	227.0	170.2	1984	86
Tasmania				
Premaydena Hatchery	147.6	145.2	1975	101
South Australia				
Georgetown	119.5	111.8	1941	133
Port Pirie Zinifex	130.5	101.0	1974	131
Crystal Brook	113.0	103.4	1941	127
Hawker	176.1	157.0	1937	126
Frances	93.2	86.8	1946	118
Wolseley	92.4	92.1	1963	117
Corny Point	116.2	95.5	1972	115
Panaramitee	114.8	110.2	1937	101
Freeling	64.4	53.8	2002	45
South Para Res	75.6	72.0	1974	40
Policemans Point	87.4	57.4	1970	36
Caliph	79.0	52.8	1996	33
Western Australia				
Balladonia	140.0	129.6	2000	97
Dalyup Park	157.6	155.6	1999	69
Erinair	185.0	164.8	1999	40
Esperance Aero	240.0	209.3	1999	37
Esperance Downs	209.0	189.4	1999	56
RS				
Katta Barega	170.6	149.2	1999	45
Lorinna	205.6	186.0	1999	35
Myrup	234.0	207.9	1999	82
Oake Marsh Farm	184.6	159.6	1999	53
Northern Territory				
Tanami Downs	456.5	275.8	1974	32
Numery	374.6	110.6	2001	24

Lowest Monthly Rainfall on Record for January

Station	Actual mm	Previous Lowest mm	Year	Years of Record
Queensland				
Coolsha	11.8	13.3	1921	85
Nobby Jackson St	4.0	4.8	1997	67
Pittsworth	2.0	2.4	1994	121
Springside	6.0	8.6	1994	48
Navilloween	9.4	14.0	1966	48
Glenrive	9.0	11.0	1997	49
New South Wales				
Comboyne PO	24.0	25.4	1909	101

Highest Daily Rainfall on Record for January

Station	Actual Date mm	Previous Highest mm	Year	Years of Record
Queensland				
Iron Hurst Station	154.0 27	154.0	1986	35
Almaden	176.0 27	158.0	1991	35
Bedourie Police Stn	169.1 21	150.0	1984	61
Cluny	229.0 22	154.4	1995	68
Glengyle	127.0 21	107.7	1964	86
Theodore Cotton	88.4 27	74.6	1977	40
South Australia				
Tarcoola Apt	62.2 19	44.5	1937	102
Motpena	63.0 20	56.2	1980	39
Ungarra	47.2 22	42.4	1993	94
Hawker	125.4 20	112.3	1937	127
Mambray Creek	33.4 19	32.8	1974	38
Wilpena Pound	123.5 21	102.0	1980	35
Canopus Stn	72.0 21	63.6	1991	38
Panaramitee	66.2 21	65.0	1937	102
Crystal Brook	81.2 22	69.4	1995	128
Georgetown	67.0 20	59.4	1995	134
Gladstone	69.6 22	67.3	1941	131
Pt Pirie	90.2 20	78.7	1921	132
Corny Point	107.0 20	60.5	1946	117
Parawa	105.4 20	42.0	1981	67
Yankalilla	76.2 22	59.9	1941	116
Blanchetown	53.2 20	32.4	1974	40
Wolseley	61.4 20	55.4	1963	118
Frances	56.0 20	48.8	1941	119
Lucindale	81.0 20	51.6	1981	129
Naracoorte Apt	55.0 20	48.3	1963	141
Penola PO	83.8 22	46.2	1960	148
Policemans Point	73.6 20	35.2	1981	37
Western Australia				
Adina	125.0 05	119.6	1999	39
Balgo Hills	118.6 16	98.0	1986	62
Balladonia	134.1 04	58.0	1987	84
Carlingup	90.8 05	64.0	1999	30
Dalyup Park	123.2 05	86.6	1999	61
Erinair	135.0 05	90.2	1999	40
Esperance	153.2 05	106.6	1999	38
Esperance Aero	177.0 05	101.4	1999	37
Esperance Downs RS	152.0 05	104.2	1999	56
Hopetoun	78.0 05	72.0	1990	101
Katta Barega	101.6 05	84.4	1999	38
Lorinna	141.0 05	114.6	1999	35
Lort River	89.6 05	89.0	1999	39
Myrup	174.0 05	105.9	1999	77
Oake Marsh Farm	134.2 05	85.0	1999	53
Orleans Farm North	49.0 05	46.6	1999	33
Pleasant Valley	125.4 05	124.4	1999	58
Ravensthorpe	112.8 05	102.9	1939	101
Telfer Aero	65.0 04	55.0	2001	34
Telina Downs	138.6 05	56.6	2006	45
Northern Territory				
Artlunga	111.5 18	80.8	1925	60
Tanimi Downs	147.0 15	54.8	1987	32
Atula	114.0 20	69.0	2001	25
Numery	246.0 18	59.0	1980	21

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