



SIGNIFICANT WEATHER – February 2005

SUMMARY

A low pressure system brought severe storms to eastern Australia at the beginning of the month. The system also brought record rain to south east Australia and abnormally low temperatures through much of the eastern half of the country.

Record lowest maximum and minimum temperatures occurred over a wide area of the continent, covering much of inland Queensland, South Australia, northwestern New South Wales and the southern Northern Territory.

Two tropical cyclones were experienced in February. In Western Australia Tropical cyclone *Vivienne* had no impact on the coast. Tropical cyclone *Harvey* affected Queensland and the Northern Territory and made landfall in a remote part of the Northern Territory. The damage estimate from this system is \$1 million.

TROPICAL CYCLONES

Western Australia

Tropical cyclone *Vivienne* formed as a low north of Port Hedland on the 4th associated with a monsoon burst. It reached cyclone intensity on the 8th, but had weakened early on the 9th. Although it had no impact on the coast, some offshore oil and gas operations were disrupted by the threat of the cyclone.

Queensland/Northern Territory

A tropical low formed in the monsoon trough near Groote Eylandt on the 3rd. It initially moved further east out into the central Gulf of Carpentaria, but turned and started to move slowly to the southwest later on the 5th. It

intensified and was named tropical cyclone *Harvey* at midday (CST) on the 6th. Tropical cyclone *Harvey* continued to intensify and was upgraded to category 2 on the morning of the 7th. The cyclone accelerated to the southwest and reached category 3 strength. It maintained this intensity until landfall at 4pm (CST) on the 7th about 30 kilometres west of the Northern Territory/Queensland border. Once over land the system began weakening and was downgraded to below tropical cyclone strength in the early morning of the 8th, before moving east again to the Queensland border.

Harvey made landfall in a remote part of the Northern Territory, and only a few settlements were affected. At Pungalina Station (130 kilometres southeast of Borroloola) wind gusts stronger than 100km/h hit the homestead just before midnight and 60mm of rain fell in a few hours. Many trees were uprooted or snapped, but there was no structural damage to any of the buildings.

At Robinson River, there were some trees down and others stripped of foliage, with some minor structural damage to buildings. Extensive flooding was also reported, causing severe road damage estimated at a cost of \$1 million. The river rose 15 to 16 metres, and came within 1 metre of the power station.

THUNDERSTORMS

Queensland

On the 23rd a 93 km/h wind gust was recorded at Century Mine AWS during a thunderstorm.

On the 25th a 96 km/h wind gust was recorded at Mt Isa AWS during a thunderstorm.

New South Wales

- 1st
Oakdale hail 2cm size in southwest Sydney suburbs including Warrimoo.
- 2nd
Oberon hail 5-6cm size.
Bargo heavy rain, 38mm in 15mins, hail 2-3cm size.
North Ryde A thunderstorm and possible tornado caused severe local wind damage bringing down trees and powerlines and causing power outages to thousands of homes.
Kellyville hail 5cm size.
Blacktown hail 4cm size.
Kings Langley hail 3cm size.
Quakers Hill hail 3cm size.
Greystanes heavy rain, hail 4cm size.
Potts Hill hail 2-3cm size.
Castle Hill hail 4-5cm size.
Greenacre hail 4-5cm size.
St Ives heavy rain, hail 2cm size.
Wahroona heavy rain, hail 3cm size.
Gosford hail 4cm size.
Terrigal hail 4-5cm size.
- 10th
Williamstown heavy rain, 58mm in 35 mins.
- 16th
Dorrigo hail 4cm size.
- 19th
Robertson heavy rain, hail 2cm size.
Faulconbridge hail 3-4cm size.
Blaxland heavy rain, hail 2-3cm size.
Warrimoo hail 2-3cm size.
Castle Hill hail 3-4cm size.
Baulkham Hills hail up to 2cm size. Very strong winds in area destroyed several houses and brought down trees.
Sydney A person was injured when struck by lightning at Bondi Beach.
Central Coast/Newcastle Storms damaged homes and brought down trees and power lines.
- 20th
Singleton Severe hailstorm strong winds, hail up to 8.5cm size. Damage to motor vehicles.
Tocal heavy rain, 34mm in 30 minutes.
Mudgee heavy rain, 21mm in 18 minutes.
- 24th
Armidale - heavy rain, 27mm in 23 minutes.

Northern Territory

A small squall line (approximately 15 kilometres long) formed just to the south of Darwin Harbour in the early evening of the 15th, and proceeded to move westwards. Squalls felled several large native trees and pushed a horse float 20 metres into a fence.

Damage to large trees was reported in Humpty Doo (25 kilometres southeast of Darwin) in the mid-afternoon of the 18th. Wind gusts from an afternoon storm broke off many large branches, and a few large tree trunks were snapped in half.

In the mid-afternoon of the 24th wind gusts of 109 km/h were produced at Daly Waters (210 kilometres southsoutheast of Katherine) by a single thunderstorm cell. A couple of large trees were felled at Gorrie Station, about 100 kilometres northwest of Daly Waters which may have been caused by the same long-lived storm.

On the 27th a series of storm cells formed into a line which moved over the northwest Top End and though Darwin city in the evening. More than 1,000 households lost power due to surges from lightning strikes or trees and falling branches touching powerlines.

A line of storms crossed the Darwin area in the early evening of the 28th. A large steel tank (about 15 metres high and 13 metres in diameter), that was under construction at East Arm Wharf (southern Darwin), partially collapsed due to the wind gusts from the squall line.

A second squall line formed southeast of Darwin later in the evening of the 28th and also moved over Darwin Harbour. A wind gust of 89 km/h was recorded by the Channel Island AWS (17 kilometres south of Darwin) on the 1st of March. Tree damage was also reported at McMinns Lagoon (17 kilometres southeast of Darwin).

WIND

New South Wales

On the 3rd the Snowy Mountains experienced gale to storm force winds with Thredbo AWS recording sustained wind speeds of over 115 km/h for a 5 hour period. Wind gusts reached 154 km/h, the equal highest speed on record. Strong winds were also recorded over much of the southern half of New South Wales. A person died when a tree was blown over at a camping ground near Mittagong in the Illawarra. A forestry worker also died while clearing trees on the South Coast.

Winds greater than 90 km/h occurred at the following places:

- 2nd Bathurst 93 km/h, Scone 93 km/h,
Kurnell 94 km/h, Newcastle 91 km/h.
- 3rd Thredbo 154 km/h
- 4th Thredbo 96 km/h
- 8th Bombala 98 km/h
- 14th Camden 102 km/h
- 19th Newcastle 109 km/h, Moree 96 km/h
- 20th Paterson 91 km/h

Victoria

On the 2nd/3rd the highest gusts recorded were at Wilsons promontory with gusts to 148 km/h. In the Melbourne area gusts to 104 km/h were recorded at Fawkner Beacon. Extensive building damage was reported and over 7,000 requests for assistance were received over the following few days.

Tasmania

A deep low pressure system rapidly developed to the northeast of Tasmania on the evening of the 2nd. Severe south to southeast winds were experienced in the northeast of Tasmania in the early hours of the 3rd. Winds were highest in exposed areas of the far northeast, but as the low tracked westward towards Melbourne, easterly winds became locally damaging on the northwest coast. The direction of the winds, generally southeasterly caused damage which extended from Devonport in the west through the Tamar Valley to Bridport, Scottsdale and Winnaleah in the northeast, Binalong Bay on the East Coast, and to Flinders Island in Bass Strait. Port Sorell was

particularly hard hit, with many homes badly damaged partially due to the large numbers of fallen trees.

Power had been lost to up to 30,000 premises and some northern premises were without power for up to five days. In the northwest, electricity poles were so badly damaged that they had to be replaced. Half of Hobart's Tasman Bridge was also blacked out for 45 minutes. Up to 25 yachts in the Tamar River broke their moorings, with fourteen reportedly destroyed, causing hundreds of thousands of dollars damage. A resulting diesel slick at Beauty Point caused problems for Tamar River aquaculture industries. In the south, two boats in Sandy Bay also broke their moorings.

The Bass Strait ferry Spirit of Tasmania I was forced to return to Melbourne after sustaining damage in estimated 20 metre seas. Spirit of Tasmania II was delayed on its voyage from Devonport to Melbourne, while Spirit of Tasmania III broke its moorings in Devonport and was also slightly damaged.

Tamar Valley orchardists, particularly apple and pear growers, suffered extensive crop damage with up to 50% of their fruit unmarketable. Poppy and grain farmers were also affected.

Wind gusts in excess of 90 km/h were reported on the following days:

- 1st Mount Wellington 104 km/h,
Mount Read 93 km/h,
Droughty Hill (TERSS) 91 km/h
- 2nd Eddystone Point 117 km/h,
Mount Wellington 106 km/h,
Mount Read 106 km/h
- 3rd Eddystone Point 131 km/h,
Mount Read 122 km/h,
Devonport Airport 117 km/h,
Mount Wellington 104 km/h,
Flinders Island Airport 100 km/h,
St Helens Aerodrome 98 km/h,
Sheffield School Farm 98 km/h,
Fingal (Legge Street) 96 km/h,
Launceston (Ti Tree Bend) 96 km/h,
Launceston Airport 94 km/h,
Cape Bruny 91 km/h,
Cressy Research Station 91 km/h
- 6th Hartz Mountain (Keoghs Pimple) 107 km/h,
Mount Wellington 94 km/h,

- Droughty Hill (TERSS) 91 km/h
- 7th Scotts Peak Dam 106 km/h,
Mount Read 94 km/h
- 8th Maatsuyker Island Lighthouse 117 km/h,
Mount Wellington 111 km/h
- 15th Mount Wellington 113 km/h,
Maatsuyker Island Lighthouse 106 km/h,
Mount Read 100 km/h,
Maria Island (Point Lesueur) 98 km/h,
Tasman Island 93 km/h
- 16th Maatsuyker Island Lighthouse 113 km/h,
Mount Wellington 106 km/h,
Cape Bruny 106 km/h,
Droughty Hill (TERSS) 106 km/h,
Tasman Island 91 km/h
- 18th Maatsuyker Island Lighthouse 100 km/h,
Mount Wellington 96 km/h,
Droughty Hill (TERSS) 91 km/h
- 19th Mount Wellington 119 km/h,
Hartz Mountain (Keoghs Pimple) 115 km/h,
Maatsuyker Island Lighthouse 100 km/h
- 26th Tasman Island 102 km/h,
Maatsuyker Island Lighthouse 98 km/h,
Mount Wellington 91 km/h

South Australia

On the 1st, gale force southerly winds of up to 65 km/h occurred at Marree during the evening following a cool change.

On the 2nd, gale force southerly winds of up to 67 km/h blew briefly during the morning at Hindmarsh Island.

Western Australia

On the 26th Southern Cross Airfield recorded wind gusts to 94 km/h during a thunderstorm.

BUSHFIRES

New South Wales

From the 31st of January until the 15th of February a fire burnt out 2,450 hectares in the Coonamble area (Central West Plains).

On the 10th/11th a bushfire in the Barrington Tops area (Upper Hunter) burnt out 1,030 hectares.

Tasmania

The rainfall that occurred in early February was credited with extinguishing a number of bushfires burning on Tasmania's West Coast. Fires were reported at Quinn Creek south of Tullah (approx. 1,000 hectares burnt), Farrell Rivulet (off the Zeehan Highway), and another on the edge of Lake Mackintosh. With the exception of the Farrell Rivulet fire, the others were likely started by lightning strikes in late January. In total approximately 1,150 hectares were burnt.

Northern Territory

A few small fires, mainly lit by lightning strikes, affected the Alice Springs and Elliott-Wauchope Districts of the Northern Territory during February.

FLOODING

Queensland

Georgina River and Eyre Creek

Moderate flooding, which resulted from rainfall during January, continued in Eyre Creek around Glengyle during the first week of February but had eased by the middle of the month.

New South Wales

Thunderstorms caused local flash flooding in Bexley (Metropolitan) on the 2nd and in north west Sydney suburbs on the 19th.

Victoria

On the 2nd and 3rd a low pressure system developed over eastern Victoria, in association with a vigorous cold front. Overnight and early morning of the 2nd and 3rd, the low steadily intensified and tracked slowly westwards over central Victoria. Extreme rainfall was reported over large areas of Victoria with 24 hour rainfall totals exceeding 150mm in many places. Rainfall through the Melbourne area exceeded 100mm with an all time 24-hour record for Melbourne CBD set at 120.2mm (previous record 108mm).

Tasmania

The low that brought strong southeast winds on the 3rd and 4th also brought significant rainfalls. The heaviest falls were initially in northeastern areas, but the locus of heavy rain gradually moved southward during the 3rd. The highest short-duration totals were recorded in the southeast in the early afternoon of the 3rd. In most locations, the duration of the heaviest rain was between 2 and 3 hours.

As a consequence, flash flooding occurred in several areas during the 3rd, particularly down the East Coast, around the city and suburbs of Hobart, and into the southeast. The Browns River at Kingston broke its banks causing local flooding with several minor landslides also reported in the south.

The Insurance Council of Australia estimated the total cost of the wind and rain event in Tasmania to be around \$5 million with in excess of 1,500 claims, possibly constituting Tasmania's most expensive insurance bill ever, for such an event.

SNOW

New South Wales

It was unseasonably cold in southern New South Wales between the 2nd and the 4th. About 10-15cm snow fell in the Snowy Mountains and temperatures reached as low as -5°C. Snow settled several centimeters deep on the Brindabella Ranges near Canberra on the Southern Tablelands. As a result there were many record low maximum and minimum temperatures, especially in the southern inland.

DUST

Queensland

A vigorous front swept across the state on the 2nd and 3rd bringing strong gusty southwest winds and widespread dust storms, many severe. Thick dust affected western Queensland and also spread through central and southern coastal districts until the 4th.

New South Wales

On the 2nd dust storms were reported at Brewarrina and Mungindi (Upper Western) with visibility reduced to 800 metres.

TEMPERATURE

Highest Mean Maximum Temperature for February

Station	Actual °C	Previous Highest °C	Year	Years of Record
Queensland				
Taroom PO	36.7	35.9	1969	50
Applethorpe	27.9	27.8	1998	35
Charleville Aero	37.4	37.3	1983	62
Western Australia				
Kalumburu Mission	35.9	35.6	1952	61

Highest Mean Minimum Temperature for February

Station	Actual °C	Previous Highest °C	Year	Years of Record
Western Australia				
Marble Bar Comp	27.9	27.8	1929	104
Northern Territory				
Galiwinku	26.5	26.1	1986	37

Lowest Mean Maximum Temperature for February

Station	Actual °C	Previous Lowest °C	Year	Years of Record
Victoria				
Benalla	26.6	27.2	1996	103
Mangalore Airport	25.8	26.0	1996	47
Wonthaggi	22.2	22.2	1996	36
Castlemaine Prison	24.4	25.0	1993	34
Lake Eildon	25.2	26.1	1996	34
Goulbourn Murray Water				
Warracknabeal Museum	27.3	28.4	1996	32

Lowest Mean Minimum Temperature for February

Station	Actual °C	Previous Lowest °C	Year	Years of Record
Queensland				
Mount Isa Aero	21.8	22.0	1984	38
New South Wales				
Tocumwal	13.5	13.7	1988	34
Narrandera	14.1	14.3	1996	35
Hillston	15.1	15.2	1907	98

Highest Daily Maximum Temperature for February

Station	Actual °C	Date	Previous Highest °C	Year	Years of Record
Queensland					
Miles PO	42.1	8	41.8	2004	47
Western Australia					
Badgingarra RS	46.0	15	45.5	1985	37
Carnamah	47.2	15	46.3	1991	46
Morowa	47.4	15	47.1	1998	39
Mullewa	46.5	15	45.1	1962	33
Northern Territory					
Yuendumu	43.2	18	43.0	1994	34

Highest Daily Minimum Temperature for February

Station	Actual °C	Date	Previous Highest °C	Year	Years of Record
Queensland					
Gympie	25.6	9	25.3	2004	39
Texas PO	27.9	9	26.8	1993	34
Surat	29.4	9	28.0	2004	43

Lowest Daily Maximum Temperature for February

Station	Actual °C	Date	Previous Lowest °C	Year	Years of Record
New South Wales					
Balranald	12.5	3	17.3	1996	98
Ivanhoe	19.5	3	19.7	1977	65
Yass	14.5	3	15.0	1966	39
Charlotte Pass	1.8	3	2.8	1996	37
Thredbo AWS	0.3	3	4.0	2002	38
Thredbo Village	5.4	3	6.5	1993	34
Tumbarumba	8.9	3	11.4	1996	39
Wagga Wagga	13.4	3	17.2	1996	63
Burrinjuck Dam	13.6	3	13.9	1966	39
Wyalong	15.5	3	16.0	1993	40
Corowa	12.0	3	16.0	1990	35
Tocumwal	13.8	2	16.6	1990	34
Narrandera	13.0	3	17.8	2002	35
Hay	13.0	2	17.7	1996	48
Hillston	16.0	2	19.5	1992	48
Griffith	13.0	3	15.6	1992	34
Victoria					
Ouyen	15.1	3	16.8	1987	48
Walpeup	16.1	3	17.2	1987	40
Horsham	15.5	3	17.2	1996	48
Longerenong	16.6	2/3	17.1	1987	40
Echuca	11.8	2	16.8	1996	48
Kerang	11.7	2	17.0	1987	41
Kyabram	12.5	2	15.9	1990	40
Tatura	13.1	2	15.6	1990	40
Benalla	12.5	3	16.4	1996	48
Corryong	13.1	3	15.4	1993	33
Rutherglen	12.0	3	16.0	2002	40
Strathbogie	10.5	3	13.0	1990	31
Omeo	9.8	3	11.1	2002	48
Scoresby	14.0	2	15.5	1998	37
Melbourne Airport	13.5	2	14.9	1990	34
Lake Eildon	11.9	3	14.0	1996	34
Maryborough	11.3	2	14.2	1996	40

Mangalore	12.8	2	14.3	1990	46
Castlemaine	10.5	2	14.0	1993	38
Ballarat	10.0	2	11.1	1996	48
Ararat	11.9	2	13.2	1990	35
South Australia					
Mount Barker	15.5	3	15.8	1987	48
Meningie	17.7	4	18.0	1993	38
Murray Bridge	17.4	3	18.3	1972	38
Keith	16.2	3	17.2	1965	43
Lameroo	16.5	3	17.8	1960	48

Lowest Daily Minimum Temperature for February

Station	Actual °C	Date	Previous Lowest °C	Year	Years of Record
Queensland					
Barcaldine PO	15.2	5	15.3	1962	43
Isisford PO	13.6	4	14.0	1976	47
Longreach Airport	14.5	4	15.0	1999	37
Camooweal Town's	14.3	5	15.6	1964	46
Urandangi	14.3	5	14.4	1989	46
Cunnamulla PO	11.5	3	12.8	1964	47
Thargomindah PO	13.0	3	13.3	1964	46
New South Wales					
Brewarrina	9.5	3	11.5	1998	40
Collarenebri	8.4	3	8.9	1993	40
Condobolin	5.0	3	6.6	1985	40
Coonamble	7.9	3	9.5	1972	40
Baradine	6.4	3	7.1	1972	40
Barraba	5.0	4	7.0	1993	38
Woolbrook	1.0	4	1.0	1993	35
Coonabarabran	3.6	3	5.6	1993	48
South Australia					
Nonning	6.5	3	7.5	1990	34
Cleve	8.3	2	8.5	1964	48
Hawker	9.4	2	9.9	1972	32
Cape Willoughby	9.0	2	9.2	1985	37
Northern Territory					
Jervois	12.1	3	13.0	1988	31

RAINFALL

Highest Monthly Rainfall on Record for February

Station	Actual mm	Previous Lowest mm	Year	Years of Record
New South Wales				
Jerilderie	116.6	111.8	1969	119

Lowest Monthly Rainfall on Record for February

Station	Actual mm	Previous Lowest mm	Year	Years of Record
Queensland				
Pinnacle	19.8	46.0	1990	36
Solway Downs Stn	17.0	20.4	1978	38
Julatten	59.6	64.7	1932	70
Bambaroo	25.2	63.3	1952	86
South Johnstone	94.2	145.7	1952	79
Exp Stn				
Tully Sugar Mill	126.8	136.8	1990	81
Upper Stone Exelby	52.6	58.0	1983	66
Weona	6.6	11.2	1983	44
Paluma Ivy Cottage	40.5	91.0	1983	35
Lassie Creek Station	0.4	13.0	1990	37
Stirling	39.8	52.0	1983	32
El Arish Post Office	105.9	117.2	1983	33
Dunk Island Resort	74.0	111.0	1983	30
Dalrymple Heights	41.0	67.0	1983	67
Kelsey Creek	37.6	42.4	1983	42
Dittmer Rd				
Lansdown CSIRO	12.2	21.3	1965	42
Cape Moreton LH	10.0	13.3	1904	136
Howard Post Office	1.1	10.4	1932	107
Lake Manchester	4.0	6.2	1919	88
Mt Nebo Post Office	15.0	38.0	1963	56
Somerset Dam	6.4	16.0	1984	69
Archerfield Airport	17.0	24.4	1932	73
Yarraman Post Office	2.8	8.6	1920	90
Mt Glorious	10.0	52.9	1938	72
Fahey Rd				
Ashgrove Bowls Club	33.2	40.6	1996	41
Maleny Denning Rd	54.6	58.4	1944	78
Miami Bardon Ave	36.0	40.0	1987	37
Capalaba Water	34.2	39.2	1988	34
Treat				
Oxley	14.6	27.3	1987	33
Cannon Hills	22.8	38.6	1997	32
Bowls Club				
Highvale	5.0	24.6	1963	40
Dunmore State	6.6	9.2	1974	66
Forest				
New South Wales				
Byrock	0.0	0.0	Numerous	114
Bourke	0.0	0.0	Numerous	98
Tibooburra PO	0.0	0.0	Numerous	118
Wanaaring	0.0	0.0	Numerous	120
Cobar (Tambua)	0.0	0.0	Numerous	117
Girilambone (Ampol)	0.0	0.0	Numerous	122
Hermidal Tank	0.0	0.0	Numerous	99
Tabulam (Muirne)	39.4	66.0	2000	34

Brays Creek	36.0	47.7	1965	54
Western Australia				
Ord River Dam	45.6	46.5	1996	37
Northern Territory				
Galiwinku	93.4	94.4	1973	61
Wave Hill	13.4	23.6	1989	31
Keep River Ranges	57.4	64.8	1984	22

Highest Daily Rainfall on Record for Any Month

Station	Actual mm	Date	Previous Highest mm	Year	Years of Record
Victoria					
Epping	137.0	3	131.8	1946	92
Essendon	118.0	3	112.8	1963	59
Melbourne City	120.2	3	108.0	1963	149
Oakleigh	109.0	3	97.8	1939	91
Prahran	102.0	3	96.8	1963	111
Scoresby	145.4	3	89.4	1970	54
Toorourrong Res.	129.6	3	112.2	1977	113
Ventnor	114.0	3	104.4	1973	85
Wonthaggi	117.5	3	102.9	1934	93
Duridwarrah	128.4	3	118.4	1973	131
Avenal	129.4	4	110.5	1950	102
Kinglake West	166.8	3	135.4	1934	122
Forrest	142.6	3	118.1	1946	99

Highest Daily Rainfall on Record for February

Station	Actual mm	Date	Previous Highest mm	Year	Years of Record
New South Wales					
Jerilderie	69.0	4	68.8	1969	116
Mathoura	65.0	3	53.1	1887	106
Victoria					
Dookie	103.4	4	67.6	1939	125
Benalla	78.4	3	64.3	1939	122
Euroa	80.0	3	68.6	1973	119
Strathbogie	110.0	3	89.7	1973	102
Mansfield	98.2	3	68.6	1928	104
Whitlands	144.8	4	136.9	1939	75
Mount Buffalo	181.2	4	134.4	1939	94
Leongatha	78.2	3	66.3	1973	113
Toora	105.0	3	64.3	1928	99
Brighton	97.2	3	89.7	1973	78
Flemington	115.0	3	83.3	1973	101
Lilydale	140.6	3	111.3	1973	115
Mornington	96.4	3	91.4	1939	120
Preston	126.4	3	99.1	1946	95
Springvale	110.4	3	75.7	1973	57
Laverton	99.8	3	90.2	1973	63
Alexandra	91.6	3	72.9	1973	127
Bonnie Doon	115.2	3	96.0	1939	102
Lake Eildon	80.0	3	72.1	1919	117
Broadford	81.0	3	76.2	1973	100
Weeaprounah	141.0	3	139.6	1990	103
Tasmania					
Waterworks	74.0	4	72.6	1996	100
Reserve (Hobart)					
Hastings Chalet	101.0	4	91.0	1996	60
Levendale	56.4	4	43.9	1970	56
Whitemark PO (King Island)	51.0	3	42.9	1971	42

<i>Margate</i>	88.2	4	74.8	1999	37
<i>(Sunnyside)</i>					
Western Australia					
<i>Denbarker</i>	37.2	15	35.4	2000	33
<i>Ellendale</i>	136.0	10	121.0	2002	48

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