



Key Facts of the Angry Summer

Heat Records

- Summer 2012/13 was the hottest on record.
- Temperature records were set in every state and territory; no previous event has resulted in so many temperature records.
- Key heat records include:
 - Hottest January on record for Australia as a whole.
 - Hottest day on record for Australia as a whole on 7 January, at 40.30 °C, surpassing the previous record set on 21 December 1972 (40.17 °C).
 - Record for the consecutive number of days where average daily maximum temperature for the whole of Australia was over 39°C.
 - For seven days running, from 2 to 8 January 2013, Australia experienced average daily maximum temperatures for Australia as a whole over 39 °C, easily breaking the previous record of four consecutive days over 39 °C set in 1972.
 - There have only been 21 days in 102 years of records where the average maximum temperature across Australia has exceeded 39 °C; eight of these days happened this summer (2–8 January and 11 January 2013).
- More than 70% of Australia experienced extreme temperatures at some stage during the heatwave of December - January 2012-13.

Bushfires

- In the first weeks of January, dangerous bushfire conditions occurred in many areas across Australia with major bushfires flaring in Tasmania, New South Wales and Victoria.
 - On 4 January 2013 up to 40 bushfires ignited across Tasmania under severe to extreme fire danger conditions.
 - On 8 January 2013 extreme and catastrophic bushfire conditions were declared across many areas in southeast Australia.

Rainfall

- Between 22 and 29 January 2013 extreme rainfall occurred over the east coast of Queensland and the New South Wales coast north of the Illawarra. The heavy rainfall was the result of former tropical cyclone *Oswald* moving south, just inland of the coast.
- Victoria and South Australia have had the driest summer in decades.
- Since mid-2012 much of Australia has been drier than usual.

Key rainfall records include:

- On 28 January 2013, the most extreme daily rainfall of the event was recorded over the Gold Coast hinterland/New South Wales border ranges catchment, as well as the edge of the Brisbane River catchment.
Sites in both of these catchments recorded rainfall for a 24-hour period in excess of 700 mm.
- Rainfall from 22-29 January alone was heavy enough to break the January monthly rainfall records for the area between Rockhampton and Bundaberg.
- The one-day rainfall averaged over the Burnett catchment in Queensland was nearly 70% higher than the previous record.
- On 25 January 2013 many areas around Rockhampton recorded rainfall for a 24-hour period in excess of 400 mm.

Floods

- Extreme rainfall from former tropical cyclone Oswald triggered severe flooding in many areas within 200 km of the Queensland and far northern New South Wales coastlines.
- Areas most affected were the Burnett catchment near Bundaberg in Queensland, and the Clarence catchment near Grafton in New South Wales. Both of these rivers reached record flood peaks.

The extreme weather continued over February, such as the intense low pressure system that moved along the east coast of New South Wales, leading to flooding and wind damage in places along the coast.

Records State by State

New South Wales

1. **Sydney** had its highest temperature in 155 years of records, 45.8 °C (previous record of 45.3 °C, 1939).
2. Many maximum temperature records were broken in the greater Sydney area including; **Bankstown (46.1 °C), Parramatta North (45.5 °C) and Sydney Airport (46.4 °C).**
3. **Newcastle (Nobbys Head)** had its highest temperature on record 42.5 °C (previous record 41.4 °C, 2006).
4. Many towns throughout the state set records for daily maximum temperature including: **Tibooburra, Brewarrina, Nyngan, Trangie, Mungindi, Walgett, Murrurundi, Williamtown, Gosford (Narara), Lostock Dam, Scone, Oberon, Dunedoo, Nowra, Camden, Tumbarumba and Hay.**
5. **Grafton** had a peak flood height of 8.09 m (previous record of 7.89 m set in 1890).
6. NSW Regional Fire Service Commissioner, Shane Fitzsimmons declared January 8 “One of the worst fire danger days on record for NSW.”
7. Bushfires occurred across the state on January 8, with reports of more than 100 incidents.
8. Tropical cyclone *Oswald* was formed in the Gulf of Carpentaria on 22 January 2013. This low pressure system travelled southwards until moving offshore near Sydney on 29 January 2013. The extreme rainfall triggered severe flooding in many areas within 200 km of the Queensland and far northern New South Wales coastlines.

9. The clean-up from the floods and fires across the state is only just underway and the toll of the summer disasters is yet to be determined.

Queensland

1. **Bundaberg** had a peak flood height of 9.53 m (previous record 9.04 m set in 1890).
2. **Rockhampton** had a January daily rainfall record of 349 mm (previous record – 267.5 mm set in 1896).
3. **Maryborough** had a January daily rainfall record of 258.8 mm (previous record 250.7 mm set in 1893).
4. **Kingaroy** had record daily rainfall of 234 mm (previous record 169 mm set in 1981).
5. **Laidley** had peak flood height of 9.26 m on 28 January (previous record of 8.85 m set in January 2011).
6. Tornadoes with damaging winds hit **Bundaberg** and other coastal Queensland townships on Australia Day.
7. Rainfall between 22-29 January was heavy enough to break the January monthly rainfall records for the area between **Rockhampton and Bundaberg**.
8. The one-day rainfall averaged over the Burnett catchment was nearly 70% higher than the previous record.
9. **Birdsville** had a run of 31 consecutive days of 40 °C or above, a site record and the equal-longest such run on record for Queensland.
10. Tropical cyclone *Oswald* was formed in the Gulf of Carpentaria on 22 January 2013. This low pressure system travelled southwards until moving offshore near Sydney on 29 January 2013. The extreme rainfall triggered severe flooding in many areas within 200 km of the Queensland and far northern New South Wales coastlines.

South Australia

1. One of the driest summers in decades for the State.
2. **Adelaide** reached 45 °C for only the fourth time in its history.
3. **Moomba (near Oodnadatta)** had the 8th hottest temperature ever officially recorded in Australia. 49.6 °C.
4. **Oodnadatta** observed a record run of 7 consecutive days (2 – 8 January) with maximum temperatures above 45 °C. Oodnadatta also broke a record with 46 consecutive days above 35 °C from (27 December – 26 January).
5. **Adelaide Airport** had its highest temperature on record 44.1 °C on 4 January (previous record 44.0 °C set in 2009).

Western Australia

1. **Eucla** had the highest temperature on record 48.2 °C (previous record 47.9 °C set in 1979).
2. **Leonora** had the highest temperature on record 49.0 °C (previous record 47.8 °C set in 1958).
3. **Giles** had the highest temperature on record 45.7 °C (previous record 44.8 °C set in 2011).
 - o **Giles** surpassed its previous record on three separate occasions during the 2012-13 event, peaking at 45.7 °C on 16 January.
4. **Cape Naturaliste** had the highest December temperature on record 37.7 °C (previous record 37.6 °C set in 2007).

5. **Perth** equalled a record when it experienced seven consecutive days above 37 °C from 25–31 December.
6. **Wiluna** (48.0 °C, 8 January) equalled the record for the highest sea-level equivalent temperature ever observed in Australia.
7. Tropical cyclone Rusty threatened the Pilbara coast with high winds, heavy rainfall and a large storm surge. Rusty was a category 4 storm with winds of 230km/h near the storm centre.

Tasmania

1. **Hobart** had its highest temperature on record 41.8 °C (previous record 40.8 °C set in 1976).
2. Many maximum temperatures records were broken around the state including all-time records for **Hobart, Grove, Bushy Park, and Larapuna**.
3. On 4 January up to 40 bushfires ignited across Tasmania under severe to extreme fire danger conditions.
4. The Forcett fire burnt 25,000 hectares, destroyed close to 200 properties and 21 businesses and caused the evacuation of hundreds of people from the Tasman Peninsula.

Victoria

1. The state had one of the driest summers in decades.
2. Major fires occurred throughout the state during numerous days with dangerous fire danger conditions.
3. Grassfires threatened homes in **Melbourne's** northern suburbs.
4. **Dellicknora** recorded an all-time daily rainfall record 136.0 mm on 29 January (previous record 127.0 mm set in 1920).

ACT

1. Canberra set a record January maximum temperature of 42.0 °C on 18 January (previous record 41.4 °C set in 1968).
2. Canberra the long-term average (1961-1990) number of days per year above 35 °C was 5.2, but during the decade 2000-2009 the average number of such days rose to 9.4.

Northern Territory

1. **Alice Springs** had a record 17 consecutive days (1-17/1/2013) above 40 °C, the previous record was 12 days (set in 1971 and again in 2006).
2. **Curtin Springs** had a January record of 46.4 °C on 16 January (previous record 46.0 °C set in 1992).