

Regional Weather and Climate Guide

In the last 30 years on Kangaroo Island

- ☁ Annual rainfall has been relatively stable
- ☁ Dry years have occurred 11 times and wet years seven times
- ☁ Rainfall has decreased in the autumn and spring months
- ☁ Winter rainfall is reliable; summer is unreliable
- ☁ The autumn break occurred end May or early June in the east around Cape Willoughby and through the west of the island, mid-June through the centre and not until late June around Kingscote
- 💧 Evaporation has increased in the spring months, but overall water balance remains unchanged
- 🌡 There have been more hot days, with more consecutive days above 40 °C



Kangaroo Island at a glance

Kangaroo Island covers around 1.1 million hectares, of which 49% is under agricultural production. The region supports a diverse mix of agricultural enterprises, including sheep (wool and meat), cattle, broadacre cropping of cereals, pulses and oilseeds, viticulture, fruit and vegetables. The region contributed around \$88 million to the Australian economy in 2017–18.

A guide to weather and climate on Kangaroo Island

Primary producers make decisions using their knowledge and expectations of regional weather patterns. The purpose of this guide is to provide an insight into the region's climate and an understanding of changes that have occurred through recent periods. This information can potentially assist primary producers and rural communities make better informed decisions for their business and livelihoods. This guide is part of a series of guides produced for every Natural Resource Management area around Australia.



A climate guide for agriculture
Kangaroo Island, South Australia





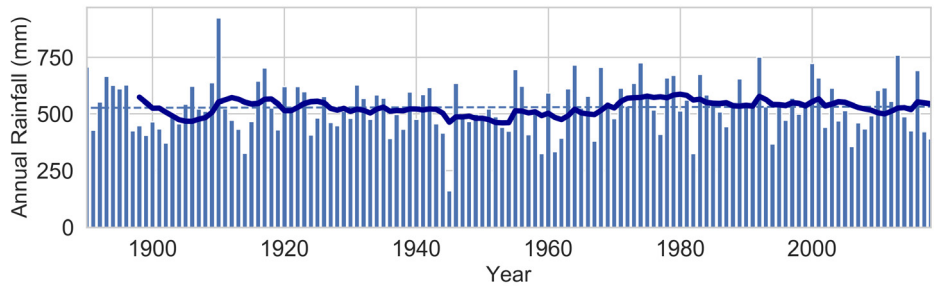
Annual Rainfall

Annual rainfall on Kangaroo Island has been relatively stable

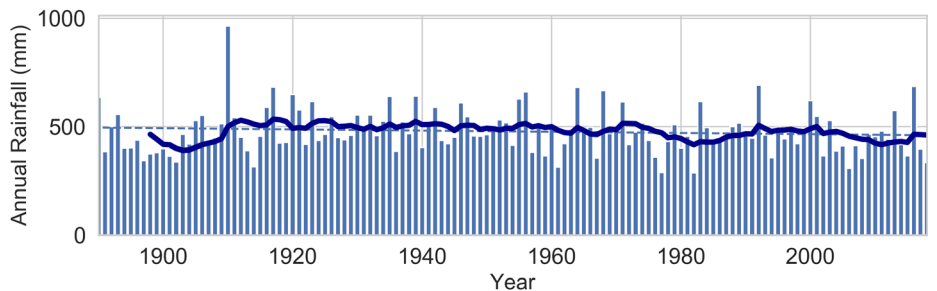
Annual rainfall on Kangaroo Island has been relatively stable, decreasing by around 10 mm (-1%) from about 620 mm to about 610 mm over the past 30 years (1989–2018) when compared to the previous 30 years (1959–1988). The charts show annual rainfall (blue bars), with a 10-year running average (solid blue line) for American River and Kingscote. Although the average annual rainfall has been relatively stable, it still fluctuates from year to year with natural variability.

In the past 30 years (1989–2018), dry years (lowest 30%) have occurred 11 times and wet years (highest 30%) have occurred seven times, while the remaining years were in the average range. Note the Millennium drought accounted for five of these dry years in the recent period. During the previous 30-year period (1959–1988), dry years occurred eight times and wet years occurred 11 times.

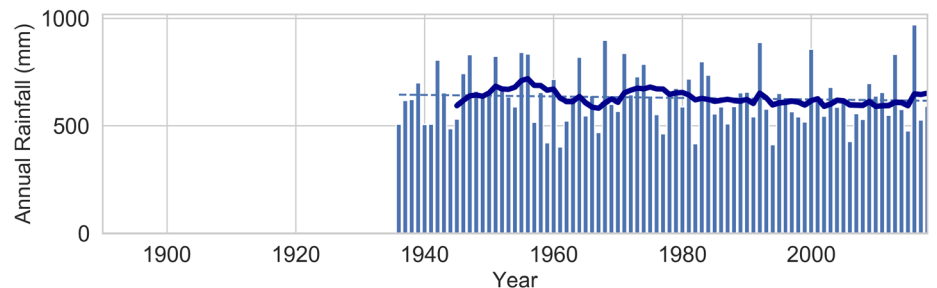
American River Annual Rainfall 1889 - 2018



Kingscote Annual Rainfall 1889 - 2018



Parndana (Pioneer Bend) Annual Rainfall 1936 - 2018



For more information on future projections, visit the Climate Change in Australia website
> www.climatechangeinaustralia.gov.au

Want to know more about the guides? Try Frequently Asked Questions at
> www.bom.gov.au/climate/climate-guides/#faqs

Kangaroo Island winter rainfall is reliable; summer is unreliable

Rainfall reliability maps for the past 30 years (1989–2018) show winter rainfall has been reliable across the region (blue areas) with less variability in the west than the east. Winter seasonal rainfall usually has about 70 mm difference from one year to the next. Autumn rainfall is also moderately reliable from year to year across most of the region. This is in contrast to spring rainfall, which has been less reliable on the east of the island around Kingscote and Cape Willoughby (beige areas). Although there have been some wet summers in the past 30 years, summer rainfall has been unreliable (beige and red areas) and can change by around 60% (40 mm) from year to year.

Winter



Spring



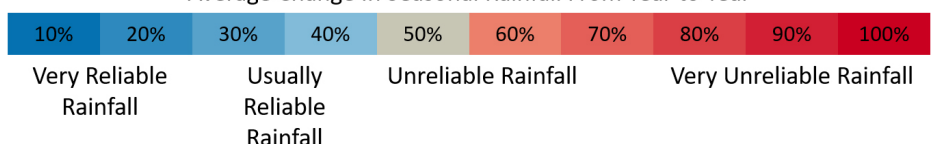
Summer



Autumn



Average Change In Seasonal Rainfall From Year to Year



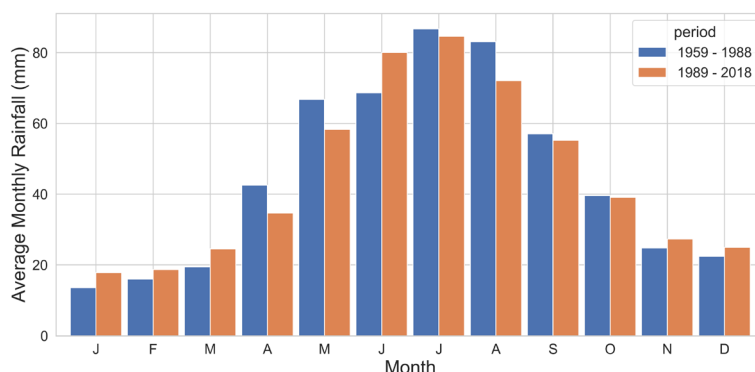


Rainfall Timing

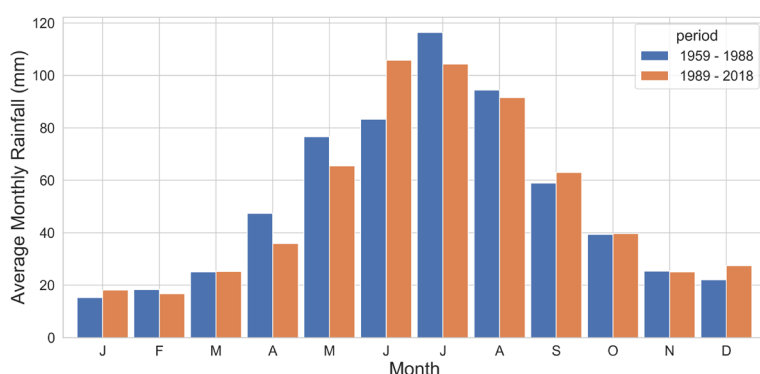
Rainfall has decreased in autumn; increased in spring

Rainfall decreased in the autumn months at American River and Parndana between 1989–2018 (orange bars) compared with 1959–1988 (blue bars), but recorded increases in June and across late spring/early summer. Over the past 30 years, growing season rainfall (May to November inclusive) for American River was 417 mm, decreasing by 10 mm from the 427 mm average for the previous 30-year period (1959–1988). For Parndana, winter rainfall was relatively stable, from 494 mm in 1959–1988 to 495 mm in the period 1989–2018. Over the same 30-year periods, summer rainfall (December to April inclusive) remained relatively stable, at 121 mm for American River (an increase of 7 mm) and 123 mm at Parndana (a reduction of 5 mm).

American River 30-year Average Rainfall by Month

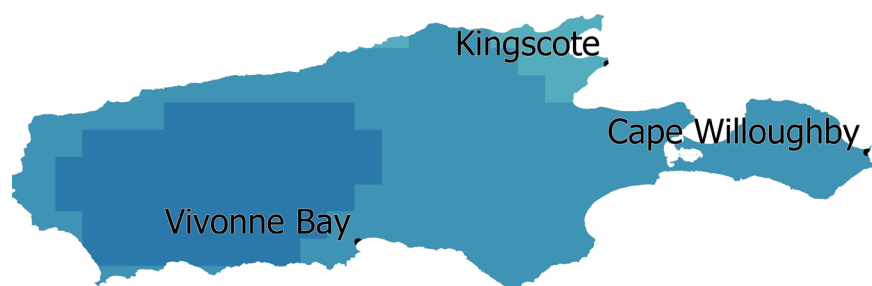


Parndana (Pioneer Bend) 30-year Average Rainfall by Month



For more information on the latest observations and science behind these changes, refer to the State of the Climate Report
> www.bom.gov.au/state-of-the-climate/

Timing of the autumn break on Kangaroo Island



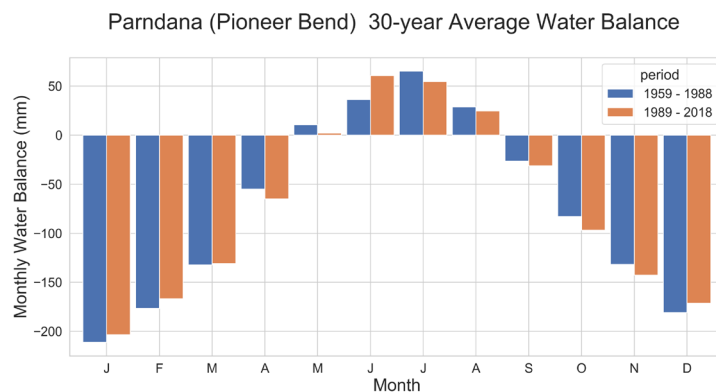
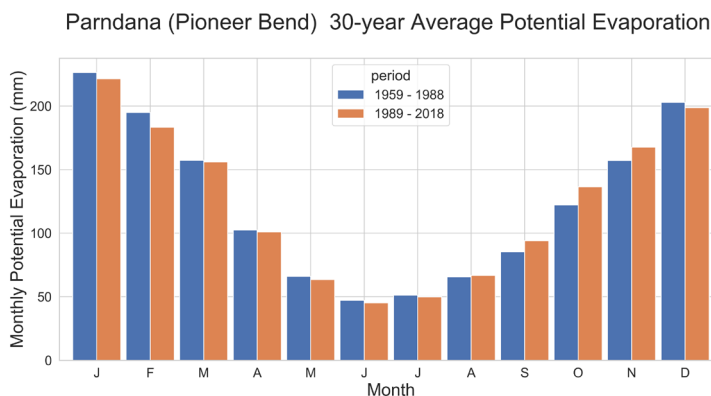
On Kangaroo Island, the autumn break can be defined as at least 15 mm of rainfall over three days, prior to the commencement of sowing. The map shows that over the past 30 years (1989–2018), the break typically occurred in early May. The autumn break usually arrived at the west of the island about two weeks earlier than the area around Kingscote.

Weeks after 1 April	4	5	6
Autumn Break Usually Occurred After...	5 May	12 May	19 May

Evaporation

Evaporation rates remained stable

The graphs show the mean monthly evaporation and water balance (rainfall minus evaporation) between 1989-2018 (orange bars) compared with 1959-1988 (blue bars) for Parndana. There has been no significant change in the annual water balance.



Temperature

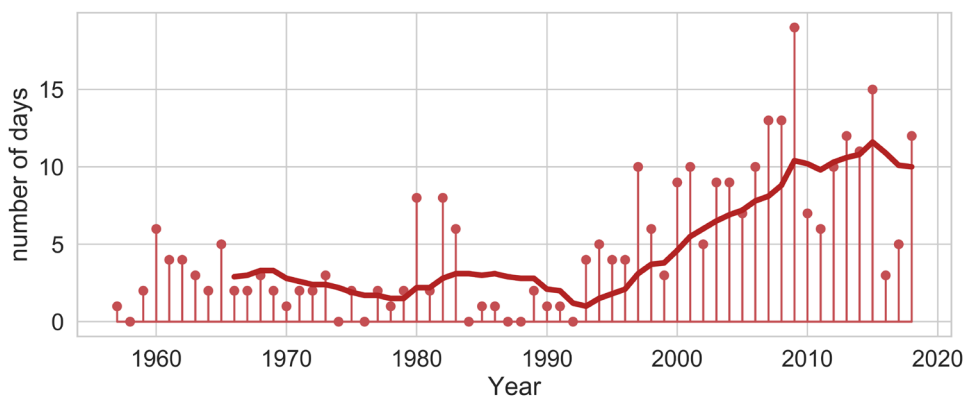
Kangaroo Island has experienced more hot days in the past 30 years

The chart shows the annual number of days above 35 °C (red bars), with a 10-year running average (solid red line) for Kingscote.

Kingscote experienced an average of eight days per year above 35 °C between 1989–2018, compared to an average of three days per year above 35 °C between 1959–1988. Since 2004, temperatures of 42 °C have been recorded for Kingscote 13 times, including twice in 2019.

Prior to 2004, the recorded temperature exceeded 42 °C at Kingscote only once, in 1982. Instances of consecutive days

Kingscote Aero Days Over 35 °C



above 30 °C have also been more frequent.

In 2008, 2009 and 2013, Kingscote experienced periods of nine or

more days in a row above 30 °C. A run of nine or more days above 30 °C at Kingscote had not been recorded before 2008.