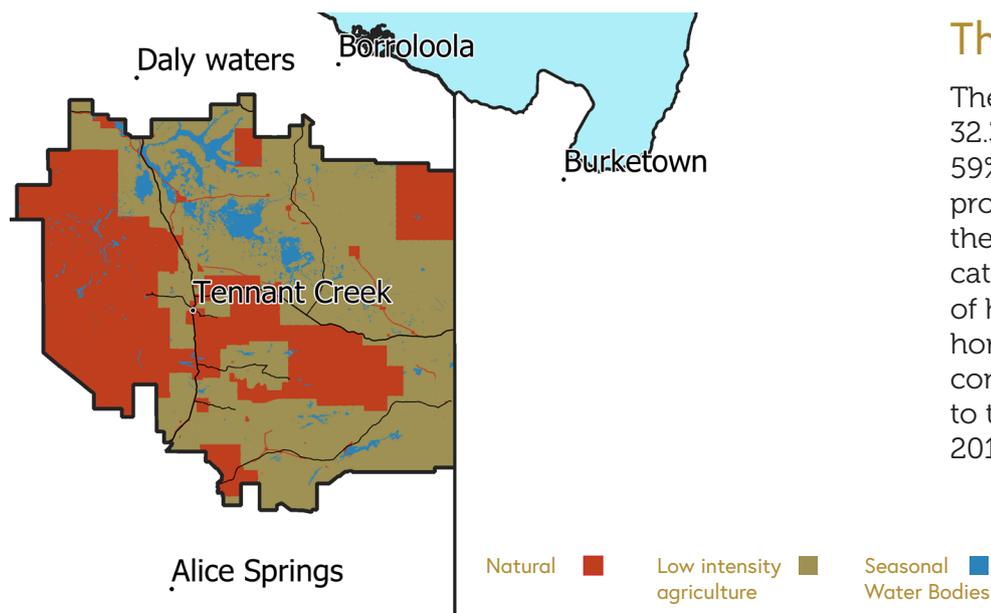




Regional Weather and Climate Guide

In the last 30 years in the Barkly region

- ☁️ Annual rainfall has increased by 14%
- ☁️ Dry years have occurred seven times and wet years 16 times
- ☁️ Rainfall has increased in the peak wet season months
- ☁️ Rainfall has been unreliable across all months of the year
- ☁️ Useful rain events have occurred an average of twice per wet season
- 💧 Evaporation rates have decreased
- 🌡️ There have been more hot days, with more consecutive days above 42 °C



The Barkly at a glance

The Barkly region covers around 32.3 million hectares, of which 59% is under agricultural production. The vast majority of the region's agriculture is grazing cattle, along with a small amount of hay production and horticulture. The region contributed around \$223 million to the Australian economy in 2015-16.

A guide to weather and climate in the Barkly region

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
Barkly, Northern Territory



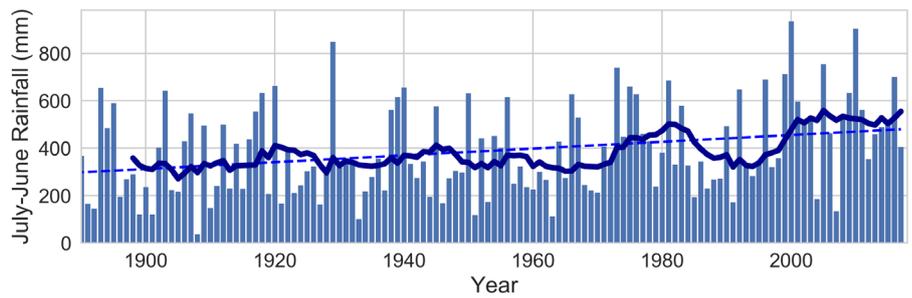


Annual Rainfall

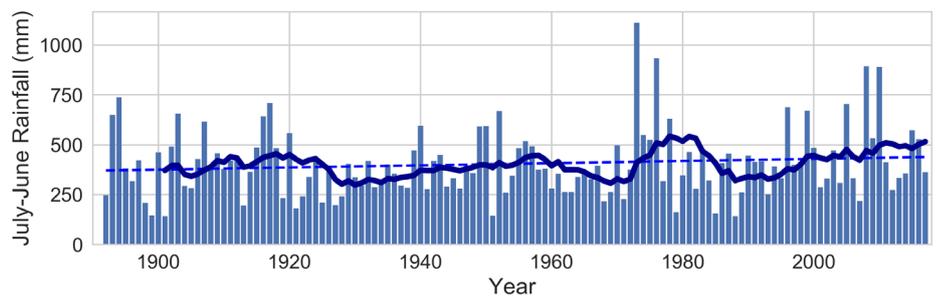
Annual rainfall in the Barkly region has increased by around 14%

Annual rainfall in the Barkly region has increased by around 60 mm (14%) from about 420 mm to 480 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 Tennant Creek and Camooweal. In the past 30 years (1989–2018), dry years (lowest 30%) have occurred seven times and wet years (highest 30%) have occurred 16 times, while the remaining years were in the average range. Note the Millennium drought accounted for one of these dry years in the recent period. During the previous 30-year period (1959–1988), dry years occurred 10 times and wet years occurred nine times.

Tennant Creek Post Office Annual (July-June) Rainfall 1889/90 - 2017/18



Camooweal Township Annual (July-June) Rainfall 1891/92 - 2017/18



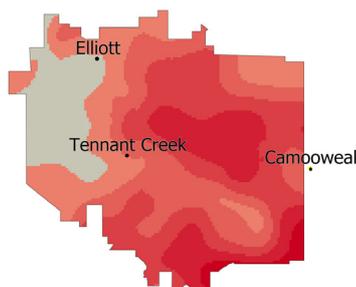
For more information on future projections, visit the Climate Change in Australia website > www.climatechangeinaustralia.gov.au

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

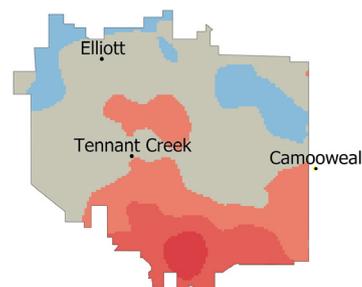
Barkly rainfall is unreliable throughout the year

Rainfall reliability maps represent year-to-year rainfall variability across the region and seasons for the last 30 years (1989-2018). Areas shaded blue represent lower variability, or more reliable rainfall, while beige and red areas show large variability in the rainfall. Low rainfall months are not shown. At the peak of the wet season, when monsoonal weather patterns are most likely, Barkly rainfall is more reliable in the northern and eastern part of the region around Elliot and Camooweal, while rainfall in the south of the region around Tennant Creek is unreliable. During the early wet season months (Oct–Dec), rainfall across the region is unreliable.

October - December



January - April



Average Change In Seasonal Rainfall From Year to Year





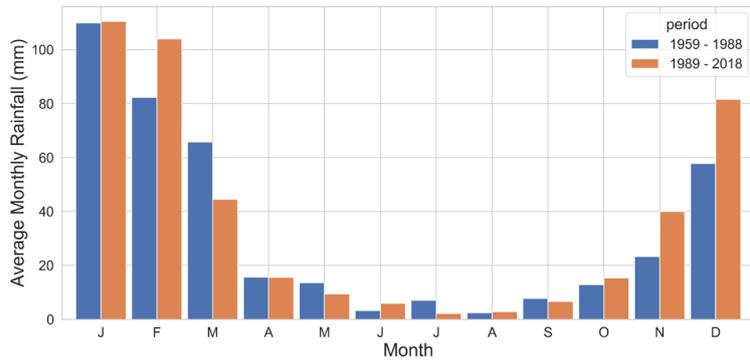
Rainfall Timing

There has been an increase in rainfall in the peak wet season months

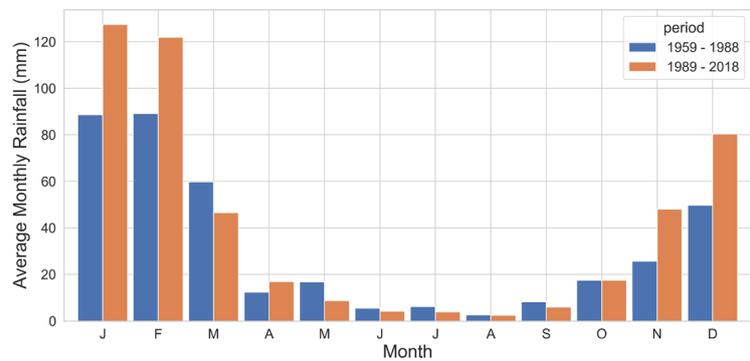
Monthly average rainfall charts show increases in wet season rainfall at Camooweal and Tennant Creek between 1989–2018 (orange bars) compared with 1959–1988 (blue bars).

Over the past 30 years, wet season rainfall (October to April inclusive) for Tennant Creek was 459 mm, 116 mm higher than the 343 mm average for the previous 30-year period (1959–1988). In Camooweal, wet season rainfall increased 44 mm over the same period, from 368 mm in 1959–1988 to 412 mm in 1989–2018.

Camooweal 30-year Average Rainfall by Month



Tennant Creek Post Office 30-year Average Rainfall by Month

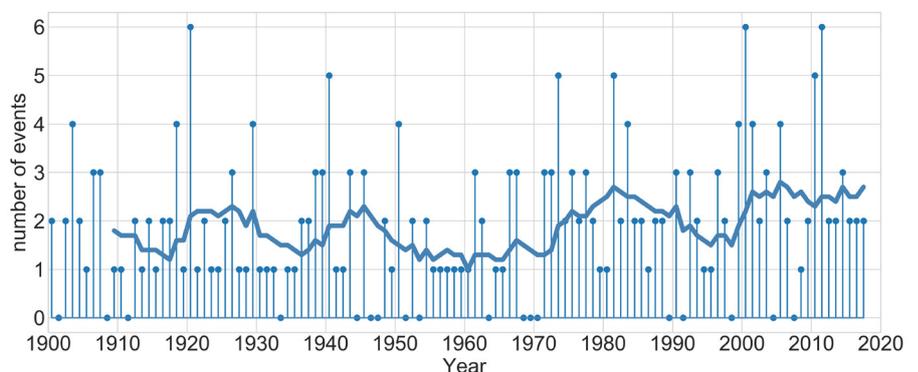


For more information on the latest observations and science behind these changes, refer to the State of the Climate Report > www.bom.gov.au/state-of-the-climate/

Useful rain events have occurred an average of twice a year

Across the Barkly region the first 50 mm of the wet season had usually accumulated by the last week of November in the north and the first week of December in the south. At Tennant Creek, almost all (88%) rain events (single or multi-day) of 50 mm or more occur over the months of December through February. On average, two such events occur every wet season, but this can range from zero to six. There have been 18 wet seasons since 1900 that have not had a 50 mm rain event, which represents about a 15% risk in any year of this occurring.

Tennant Creek Number of 50 mm rain events (July to June)

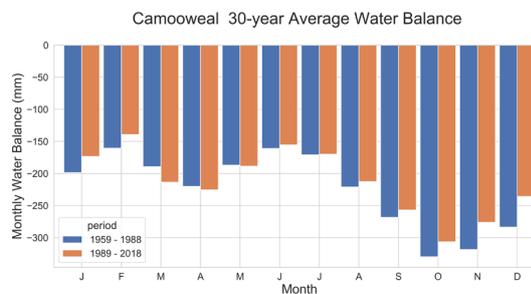
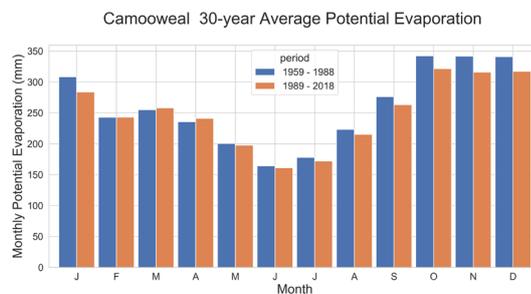
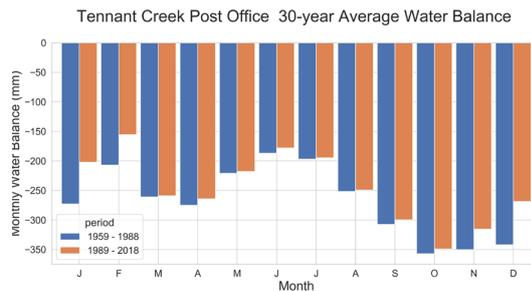
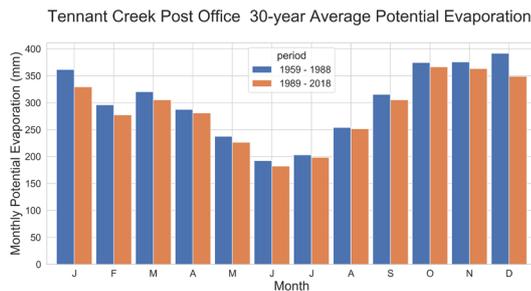




Evaporation

Evaporation rates have decreased

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 Tennant Creek and Camooweal. There has been a decrease in annual evaporation totals across the region. At Tennant Creek, evaporation rates have decreased for each month in the past 30 years (1989-2018) when compared to the previous 30 years (1959-1988). The cooler months, June through August, show a decrease in evaporation, by about 5–10 mm each month while the warmer months show a decrease of more than 20 mm. Evaporation rates increased slightly in Camooweal in March and April, but decreased across the rest of the year.

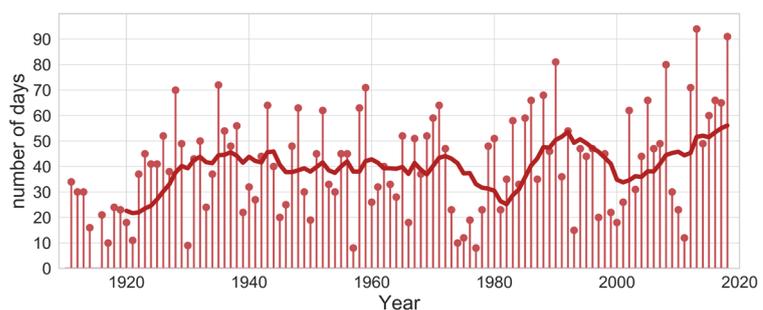


Temperature

The Barkly region has experienced more hot days in the past 30 years

The chart shows the annual number of days above 38 °C (red bars), with a 10-year running average (solid red line) for Tennant Creek. Tennant Creek experienced an average of 48 days per year above 38 °C between 1989–2018, compared to an average of 39 days per year above 38 °C between 1959–1988. Since 1989, temperatures of 44 °C have been recorded for Tennant Creek seven times, twice in 2007 and 2014 and once each in 2013, 2018 and 2019. Prior to 2007, a temperature of 44 °C had not been recorded at Tennant Creek.

Tennant Creek Airport Days Above 38 °C



Instances of consecutive days above 42 °C have also been more frequent in the past 30 years. In 2007, 2014, 2018 and three times in 2019, Tennant Creek experi-

enced periods of three or more days in a row above 42 °C. A run of three or more days above 42 °C is unusual at Tennant Creek and had not been recorded before.

Regional Weather and Climate Guides are produced as a partnership between Bureau of Meteorology, CSIRO and FarmLink



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