

Title: Temperature and water supply

Instructions

You have been tasked with investigating the effect of temperature on Melbourne's water supply. Follow the steps below to find out if and how the mean highest temperature has changed over the decades.

Explore the Interactive Map for some background information on:

- [Water Supply for Melbourne](#)
- [Climate change and it's impacts on Melbourne's Water](#)
- [Reservoir levels](#)

Step 1.

Take a look at the historical temperature data for an area of your choice in Victoria with help from the Bureau of Meteorology:

Visit the BOM's Climate Change data, [here](#). Select "Temperature" from the drop down box and then "Mean maximum temperature" below. Then select a weather station of your choice by using the search. Once selected, click the "Get data" button.

Text search

Select your data type, your location, then select from the list of stations.
If you prefer to see the station locations, use the map search instead.

[Help](#)

1: Selected: Monthly mean maximum temperature

Data about: Temperature

Type of data:

Observations: ☐ Daily ☒ Monthly

Statistics: ☐ Daily ☐ Monthly

Mean maximum temperature

Mean maximum temperature data and graphs for all available years.

2: Select a weather station in the area of interest

OR - search by Position

Matching towns (click one to select it)

Ballarat, VIC, 37.56°S, 143.85°E

Ballarat East, VIC, 37.57°S, 143.89°E

Ballarat North, VIC, 37.54°S, 143.85°E

Ballarat South, VIC, 37.57°S, 143.84°E

Nearest Bureau stations (click one to select it)

☒ Only show open stations (may no longer report all data types)

089002 Ballarat Aerodrome VIC (7.4km away)

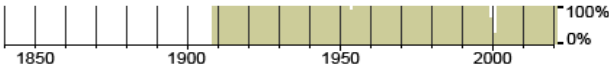
088019 Creswick VIC (15.9km away)

088015 Clunes VIC (28.9km away)

089092 Warrambine No 2 VIC (35.5km away)

088021 Eberys VIC (42.4km away)

Data available for the selected station



3: Get the data

Station number: (Opens in new window)

Note, most stations do not collect all data types. Searching will ensure relevant stations.

Step 2.

Click the graph button in the 'Annual' column to produce a graph from the data:

Monthly mean maximum temperature

Ballarat Aerodrome

[About this page](#)

[All years of data](#) [PDF](#)

The Monthly mean maximum temperature is the average of all available daily maxima for the month. The Daily maximum air temperature is nominally recorded at 9 am local clock time. It is the highest temperature for the 24 hours leading up to the observation, and is recorded as the maximum temperature for the previous day. Temperature data prior to 1910 should be used with extreme caution as many stations prior to that date used non-standard shelters. [About temperature data](#)

Station: Ballarat Aerodrome

Number: 89002

Opened: 1908

Now: Open

Lat: 37.51°S

Lon: 143.79°E

Elevation: 435m



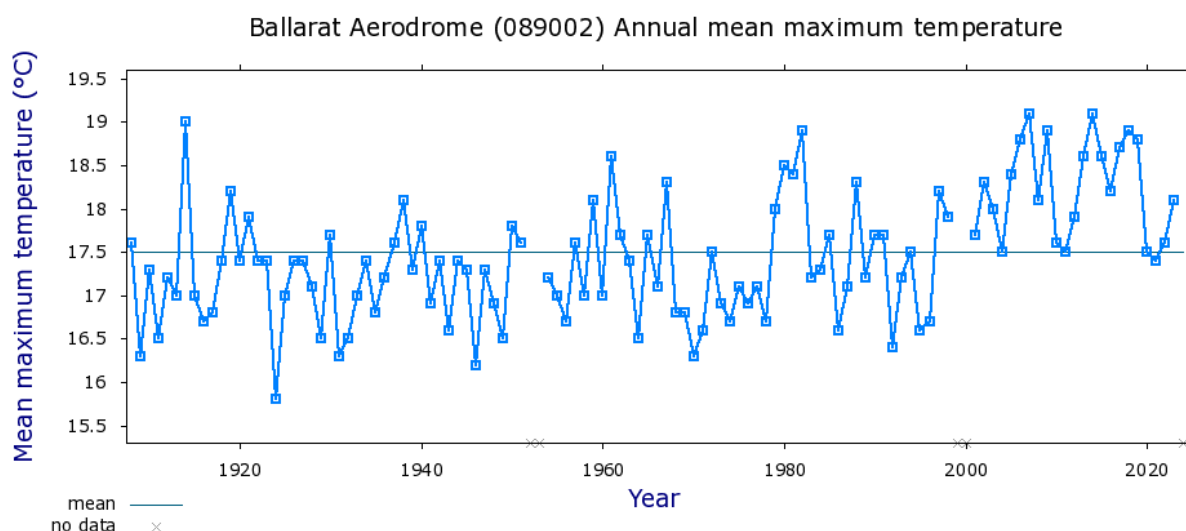
No highlight

Key: Units = °C. 12.3 = Not quality controlled or uncertain, or precise date unknown

[Period for calculating statistics:](#) ☒ All years ☐ 1961-1990

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Graph													
1908	30.1	26.4	20.8	18.2	12.0	8.6	9.2	10.3	11.9	17.7	21.9	24.5	17.6
1909	23.3	24.2	20.9	14.7	11.9	9.4	8.7	9.9	12.9	17.0	21.4	21.3	16.3
1910	25.3	27.4	21.9	18.6	13.4	10.6	9.4	11.8	13.7	14.3	20.3	20.4	17.3
1911	24.1	22.5	19.4	15.2	12.8	8.8	9.6	12.6	14.2	15.8	22.6	20.2	16.5
1912	24.8	27.4	23.1	15.1	14.1	10.7	9.6	11.7	13.0	16.9	18.1	21.8	17.2
1913	25.1	25.4	18.4	18.3	11.8	10.4	9.9	10.8	13.3	17.0	17.8	25.3	17.0
1914	25.8	29.2	24.7	17.2	13.8	11.3	9.5	12.9	14.8	22.4	23.6	23.2	19.0
1915	25.3	25.9	21.3	16.7	12.2	9.8	11.1	11.3	13.4	14.9	18.4	23.3	17.0

This will generate a graph like the one shown below:



1. Has the temperature for _____ (your location) changed in the last 50 years?

In this location, the average temperature over the last 50 years was _____.C.
This average temperature is higher | lower than last year's average temperature by _____.C.

The hottest year(s) on record for this area were in _____ with a temperature of _____.C.

2. Do you see a general trend or pattern in the graph you generated from the mean temperature data? Explain and use data in your response.

3. What impacts do you think this change in temperature will have on:

a) Melbourne's water supply?

b) The demand for water?

3. With help from the Interactive Map, create a mind map/visual display showing what impacts a restricted water supply in Melbourne would have (e.g. less water for the environment).

